Sri Indu
College of Engineering & Technology
UGC Autonomous Institution
Recognized under 2(f) & 12(B) of UGC Act 1956,
NAAC, Approved by AICTE &
Permanently Affiliated to JNTUH

Estd.2001

HANDOUT

I Year II Semester

DEPARTMENT OF HUMANITIES AND SCIENCES

ACADEMIC YEAR 2023-2024

SRI INDU COLLEGE OF ENGINEERING & TECHNOLOGY

(An Autonomous Institution under UGC, New Delhi)

(Permanently Affiliated to JNTUH, Approved by AICTE, New Delhi and Accredited by NBA, NAAC)
Sheriguda Village, Ibrahimpatnam Mandal, Ranga Reddy Dist. – 501 510

DEPARTMENT OF HUMANITIES AND SCIENCES

HANDOUT- INDEX

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INSTITUTION VISION

To evolve into a center of excellence in Science and Technology through creative and innovative practices in teaching & learning, towards promotion of academic achievement & research excellence to produce globally accepted, competitive and world class professionals, who are psychologically strong and emotionally balanced, imbibed with social consciousness and ethical values.

INSTITUTION MISSION

To provide high quality academic programs, training activities, research facilities and opportunities supported by continuous industry-institute interaction aimed at promoting employability, entrepreneurship, leadership and research aptitude among students and contribute to the economic and technological development of the region, state and Nation.

Department Of Humanities and Sciences

DEPARTMENT VISION

To empower the students to be technologically adopt, innovative, self motivated and responsible global citizens possessing human values and contribute significantly towards high quality with ever changing world.

DEPARTMENT MISSION

DM$_1$ To offer high quality education in the computing fields by providing an environment where the knowledge is gained and applied to participate in research, for both students and Faculty.

DM$_2$ To develop the problem solving skills in the students to be ready to deal with cutting edge Technologies of the industry

DM$_3$ To make the students and faculty excel in their professional fields by inculcating the Communication Of skills, leadership skills, team building skills with the organization various co curricular programmes

DM$_4$ To provide the students with theoretical and applied knowledge, and adopt an education Approach that promotes lifelong learning and ethical growth.

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Department Of Humanities and Sciences

Program Educational Objectives (PEO's)

PEO 1: Graduates with strong foundation in mathematical and core concepts, which enable them to participate in research, in the field of computer science and engineering.

PEO 2: Graduates with application development and problem solving skills by learning the computer programming methods of the industry and related domains.

PEO 3: Graduates with multidisciplinary knowledge by understanding the scope of association of Information Technology with other engineering disciplines.

PEO 4: Graduates with communication skills, soft skills, organizing skills which build the professional qualities, understand the social responsibilities and ethical attitude.

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Department Of Humanities and Sciences
PROGRAM OUTCOMES (POs) & PROGRAM SPECIFIC OUTCOMES (PSOs)

PROGRAM SPECIFIC OUTCOMES (PSOs)

Program Specific Outcomes	
PSO 1	To develop software projects using standard practices and suitable programming environment.
PSO 2	To identify, formulate and solve the real life problems faced in the society, industry and other areas by applying the skills of the programming languages, networks and databases learned.
PSO 3	To apply computer science knowledge in exploring and adopting latest technologies in various inter-disciplinary research activities.

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PROGRAM OUTCOMES (POs)

PO	Description
PO 1	**Engineering Knowledge:** To be able to apply knowledge of computing, mathematics, Science and Engineering appropriate to the discipline
PO 2	**Problem Analysis:** To be able identify, formulate & analyze a problem, and ascertain and define the computing requirements appropriate to its solution.
PO 3	**Design & Development Solutions:** To be able to design, implement, and evaluate a computer-based system, process, component, or program to meet desired needs.
PO 4	**Investigation of complex problems:** To be able to identify and analyze user needs and consider them in the selection, creation, evaluation and administration of computer-based systems for providing valid solutions to complex problems.
PO 5	**Modern Tool Usage:** To posses skills for creating and in using contemporary techniques, skills, and tools necessary for computing practice.
PO 6	**Engineering & Society:** To apply conceptual knowledge relevant to professional engineering practices in societal, health, safety, legal and cultural issues and their consequences
PO 7	**Environment & Sustainability:** To be able to analyze the local and global impact of computing on individuals, organizations, and society and work towards sustainable development.
PO 8	**Ethics:** To understand contemporary professional, ethical, legal, security and social issues and responsibilities.
PO 9	**Individual & Team work:** To Be able to function effectively as an individual and on teams to accomplish a common goal.
PO 10	**Communication:** To communicate precisely and effectively both in oral and written form with a range of audiences.
PO 11	**Project management & finance:** To apply engineering and management principles for managing and leading economically feasible projects in multi-disciplinary environments with an effective project plan.
PO 12	**Life Long Learning:** To recognize the need for and an ability to engage in independent & lifelong learning for continuing professional development.

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Department Of Humanities and Sciences
COs and POs & PSOs Mapping

SUB Name: IT WORKSHOP LAB

SUB CODE: R22INF1229

Course out comes (COs):

C21L2.1	Distinguish software's and their installation.
C21L2.2	Design word documents by learning word processing.
C21L2.3	Create presentations by using different styles.
C21L2.4	Introduce different way of hooking the PC on to the internet from home and Workplace and effectively usage of the internet
C21L2.5	Define usage of web browsers, email, news groups and discussion forums would be covered
C21L2.6	List of tools & modules would enable the students in crafting professional word document.

Mapping of Course Outcomes(CO's) with PO's / PSO's:

COURSE NAME: IT WORKSHOP LAB
Mapping of Course Outcomes(CO's) with PO's:

Course Outcomes	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PO 9	PO 10	PO 11	PO 12	PSO 1	PSO 2	PSO 3
C21L2.1	3	3	-	-	-	-	-	-	-	-	-	-	3	3	-
C21L2.2	3	-	3	-	-	2	-	-	3	3	-	-	3	3	-
C21L2.3	3	-	2	--	-	3	-	-	3	3	-	-	3	3	-
C21L2.4	3	3	-	3	2	-	-	-	-	-	-	-	3	3	-
C21L2.5	3	-	-	2	2	3	-	-	-	-	-	-	3	3	-
C21L2.6	3	3	2.5	2.5	2	3	0	0	3	3	0	0	3	3	-

High (3)   **Medium (2)**   **Low (1)**

Department Of Humanities and Sciences
JUSTIFICATION OF COS VS POS & PSOS MAPPING

(SUB CODE: R22INF1229)- IT WORKSHOP LAB

C21L2.1	Distinguish software's and their installation.

Mapped POs (PO1, PO2)

PO1	Student able to Gain Knowledge of basic SW engineering methods and practices, and their appropriate application.
PO2	Student understand software engineering layered technology and Process frame work

C21L2.2	Design word documents by learning word processing.

Mapped POs (PO1, PO3, PO6, PO9, PO10)

PO1	Student have an Understanding of software requirements and the SRS documents
PO3	Student able to Describe data models, object models, context models and behavioral models.
PO6	Student can able to differentiate the requirements
PO9	Understanding of the role of project management including planning, scheduling, risk management, etc.
PO10	Effective communication helps to discover requirements

C21L2.3	Create presentations by using different styles.

Mapped POs (PO1, PO3, PO6, PO9, PO10)

PO1	Student gain knowledge about design process and quality
PO3	Understand of different software architectural styles and Process frame work.
PO6	Component level design by applying engineering practices
PO9	Student able To perform interface design multi disciplinary action needed
PO10	Effective communication produce a good design

C21L2.4	Introduce different way of hooking the PC on to the internet from home and Workplace and effectively usage of the internet

Mapped POs (PO1, PO2, PO4, PO5)

PO1	Student gains Knowledge about testing strategies
PO2	Understand to verification and validation including static analysis, and reviews
PO4	Describe software measurement and software risks.
PO5	Use Metrics for Process and Products

C21L2.5	Define usage of web browsers, email, news groups and discussion forums would be covered

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B. Tech. - I Year — II **Semester**

L T P C
0 0 3 1.5

(R22INF1229) IT Workshop Lab

Course Objectives: The IT Workshop for engineers is a training lab course spread over 60 hours. The modules include training on PC Hardware, Internet & World Wide Web and Productivity tools including Word, Excel, PowerPoint and Publisher.

Course Outcomes:
- Perform Hardware troubleshooting
- Understand Hardware components and inter dependencies
- Safeguard computer systems from viruses/worms
- Document/ Presentation preparation
- Perform calculations using spreadsheets

PC Hardware
Task 1: Identify the peripherals of a computer, components in a CPU and its functions. Draw the block diagram of the CPU along with the configuration of each peripheral and submit to your instructor.

Task 2: Every student should disassemble and assemble the PC back to working condition. Lab instructors should verify the work and follow it up with a Viva. Also students need to go through the video which shows the process of assembling a PC. A video would be given as part of the course content.

Task 3: Every student should individually install MS windows on the personal computer. Lab instructor should verify the installation and follow it up with a Viva.

Task 4: Every student should install Linux on the computer. This computer should have windows installed. The system should be configured as dual boot with both Windows and Linux. Lab instructors should verify the installation and follow it up with a Viva

Internet & World Wide Web
Task1: Orientation & Connectivity Boot Camp: Students should get connected to their Local Area Network and access the Internet. In the process they configure the TCP/IP setting. Finally students should demonstrate, to the instructor, how to access the websites and email. If there is no internet connectivity preparations need to be made by the instructors to simulate the WWW on the LAN.

Task 2: Web Browsers, Surfing the Web: Students customize their web browsers with the LAN proxy settings, bookmarks, search toolbars and pop up blockers. Also, plug-ins like Macromedia Flash and JREfor applets should be configured.

Task 3: Search Engines & Netiquette: Students should know what search engines are and how to use the search engines. A few topics would be given to the students for which they need to search on Google. This should be demonstrated to the instructors by the student.

Task 4: Cyber Hygiene: Students would be exposed to the various threats on the internet and would be asked to configure their computer to be safe on the internet. They need to customize their browsers to block pop ups, block active x downloads to avoid viruses and/or worms.

LaTeX and WORD

Task 1 – Word Orientation: The mentor needs to give an overview of LaTeX and Microsoft (MS) office or equivalent (FOSS) tool word: Importance of LaTeX and MS office or equivalent (FOSS) tool Word as wordProcessors, Details of the four tasks and features that would be covered in each, Using LaTeX and word – Accessing, overview of toolbars, saving files, Using help and resources, rulers, format painter in word.

Task 2: Using LaTeX and Word to create a project certificate. Features to be covered:- Formatting Fonts in word, Drop Cap in word, Applying Text effects, Using Character Spacing, Borders and Colors, Inserting Header and Footer, Using Date and Time option in both LaTeX and Word.

Task 3: Creating project abstract Features to be covered:-Formatting Styles, Inserting table, Bullets and Numbering, Changing Text Direction, Cell alignment, Footnote, Hyperlink, Symbols, Spell Check, Track Changes.

Task 4: Creating a Newsletter: Features to be covered:- Table of Content, Newspaper columns, Images from files and clipart, Drawing toolbar and Word Art, Formatting Images, Textboxes, Paragraphs and Mail Merge in word.

Excel

Excel Orientation: The mentor needs to tell the importance of MS office or equivalent (FOSS) tool Excel as a Spreadsheet tool, give the details of the four tasks and features that would be covered in each. Using Excel – Accessing, overview of toolbars, saving excel files, Using help and resources.
Task 1: Creating a Scheduler - Features to be covered: Gridlines, Format Cells, Summation, auto fill, Formatting Text
Task 2 : Calculating GPA - Features to be covered:- Cell Referencing, Formulae in excel – average, std. deviation, Charts, Renaming and Inserting worksheets, Hyper linking, Count function, LOOKUP/VLOOKUP.
Task 3: Split cells, freeze panes, group and outline, Sorting, Boolean and logical operators, Conditional formatting
Powerpoint
Task 1: Students will be working on basic power point utilities and tools which help them create basic powerpoint presentations. PPT Orientation, Slide Layouts, Inserting Text, Word Art, Formatting Text, Bullets and Numbering, Auto Shapes, Lines and Arrows in PowerPoint.
Task 2: Interactive presentations - Hyperlinks, Inserting –Images, Clip Art, Audio, Video, Objects, Tables and Charts.

Task 3: Master Layouts (slide, template, and notes), Types of views (basic, presentation, slide slotter, notes etc), and Inserting – Background, textures, Design Templates, Hidden slides.

REFERENCE BOOKS:
1. Comdex Information Technology course tool kit Vikas Gupta, *WILEY Dreamtech*
2. The Complete Computer upgrade and repair book, 3rd edition Cheryl A Schmidt, *WILEY Dreamtech*
3. Introduction to Information Technology, ITL Education Solutions limited, *Pearson Education.*
4. PC Hardware - A Handbook – Kate J. Chase *PHI* (Microsoft)
5. LaTeX Companion – Leslie Lamport, *PHI/Pearson.*
6. IT Essentials PC Hardware and Software Companion Guide Third Edition by David AnfinsonandKen Quamme. – *CISCO Press, Pearson Education.*
7. IT Essentials PC Hardware and Software Labs and Study Guide Third Edition by Patrick Regan– CISCO Press, *Pearson Education.*

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Department Of Humanities and Sciences

LESSON PLAN

Year & Branch	: I B. Tech II semister
Academic Year	: 2023 -24
Name of the Subject	: IT Workshop Lab
Name of the Faculty	: Y.Meghamala,D.Chitty,J.Bhargavi,E.Rajendara
Designation	: Assistant Professor
Department	: Humanities and Sciences

Text Books (to be acquired by the Students)
Book 1 Comdex Information Technology Course tool kit _Vikas Gupta WILEY Dreamtech
Reference Books
Book 2 Introduction to Information Technology, ITL Education Solutions limited, Pearson Education.
Book 3 LaTeX Companion – Leslie Lamport, PHI/Pearson
Book 4 Comdex Information Technology course tool kit Vikas Gupta, WILEY Dreamtech
Book 5 IT Essentials PC Hardware and Software Companion Guide Third Edition by David Anfinson and Ken Quamme. – CISCO Press, Pearson Education.
Book 6 PC Hardware and A+ Handbook – Kate J. Chase PHI (Microsoft)

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Department Of Humanities and Sciences
LIST OF EXPERMENT
IT Workshop Lab
2023-2024 I Year –II Semester

S. No	Experiment Name	Number of Weeks	Page No.
1	**PC Hardware:** **Week 1** – **Task 1**: Every student should identify the peripherals of a computer, Components in a CPU and its functions. Draw the block diagram of the CPU along With the configuration of each peripheral and submit to your instructor. Every student should Disassemble and assemble the PC back to working condition.	1-3	4-16
2	**Week 2 -Task 2**: Every student should individually install operating system like Linux or MS windows on the personal computer. The system should be configured as dual boot with both windows and Linux.	4-5	17-33
3	**Week 3 - Task 3**: Hardware Troubleshooting: Students have to be given a PC which does not boot due to improper assembly or defective peripherals. They should identify the problem and fix it to get the computer back to working condition.	6-8	34-35
4	**Week 4 - Task 4**: Software Troubleshooting: Students have to be given a malfunctioning CPU due to system software problems. They should identify the problem and fix it to get the computer back to working condition.	9-10	36-37
5	**Internet & World Wide Web** **Week 5 - Task 1**: Orientation & Connectivity Boot Camp: Students should get connected to their Local Area Network and access the Internet. In the process they configure the TCP/IP setting. Finally students should demonstrate how to access the websites and email.	11-13	38-40
6	**Week 6 - Task 2**: Web Browsers, Surfing the Web: Students customize their web browsers with the LAN proxy settings, bookmarks, search toolbars and pop up blockers. Also, plug-ins like Macromedia Flash and JRE for applets should be configured	14-16	41-43
7	**Week 7 - Task 3**: Search Engines & Netiquette: Students should know what search engines are and how to use the search engines. Usage of search engines like Google, Yahoo, ask.com and others should be demonstrated by student.	17-18	44-46
8	**Week 8 - Task 4**: Cyber Hygiene: Students should learn about viruses on the internet and install antivirus software. Student should learn to customize the browsers to block pop ups, block active x downloads to avoid viruses and/or worms.	19-20	47-48
9	**Week 9 Task 5:** Develop home page: Student should learn to develop his/her home page using HTML consisting of his/her photo, name, address and education details as a table and his/her skill set as a list.	21-22	49-51

10	**Productivity tools: LaTeX and Word** **Week 10 - Task 1**: Using LaTeX and Word to create project certificate. Features to be covered:-Formatting Fonts in word, Drop Cap in word, Applying Text effects, Using Character Spacing, Borders and Colors, Inserting Header and Footer, Using Date	**23-25**	**52-53**
11	**Week 11 - Task 2**: Creating project abstract Features to be covered:-Formatting Styles, Inserting table, Bullets and Numbering, Changing Text Direction, Cell alignment, Footnote, Hyperlink, Symbols, Spell Check, Track Changes.	**26-27**	**54-58**
12	**Week 12 - Task 3**: Creating a Newsletter: Features to be covered:- Table of Content, Newspaper columns, Images from files and clipart, Drawing toolbar and Word Art, Formatting Images, Textboxes, Paragraphs in word.	**28-29**	**59-67**
13	**Week 13 - Task 4**: Spreadsheet Orientation: Accessing, overview of toolbars, saving spreadsheet files, Using help and resources. Creating a Scheduler:- Gridlines, Format Cells, Summation, auto fill, Formatting Text	**30-31**	**68-69**
14	**Week 14 - Task 5**: Calculating GPA - .Features to be covered:- Cell Referencing, Formulae in spreadsheet – average, std. deviation, Charts, Renaming and Inserting worksheets, Hyper linking, Count function, Sorting, Conditional formatting.	**32-34**	**70-75**
15	**Week 15 - Task 6**: Creating Power Point: Student should work on basic power point utilities and tools in Latex and Ms Office/equivalent (FOSS) which help them Create basic power point presentation. PPT Orientation, Slide Layouts, Inserting Text, Formatting Text, Bullets and Numbering, Auto Shapes, Lines and Arrows, Hyperlinks, Inserting Images, Tables and Charts	**35-37**	**76-80**

Text Books (to be acquired by the Students)	
Book 1	Comdex Information Technology Course tool kit _Vikas Gupta WILEY Dreamtech
Reference Books	
Book 2	Introduction to Information Technology, ITL Education Solutions limited, Pearson Education.
Book 3	LaTeX Companion – Leslie Lamport, PHI/Pearson
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Book 6	PC Hardware and A+ Handbook – Kate J. Chase PHI (Microsoft)

DEPARTMENTOFCOMPUTER SCIENCE AND ENGINEERING

B. Tech II Year I Semester

IT WORKSHOP LAB MANUAL

SubjectCode   :   **R22INF1229**
Regulations   :   **R22-JNTUH**

PC Hardware:
Week 1 – Task 1: Every student should identify the peripherals of a computer, components in a CPU and its functions. Draw the block diagram of the CPU along with the configuration of each peripheral and submit to your instructor. Every student should disassemble and assemble the PC back to working condition.
Week 2 -Task 2: Every student should individually install operating system like Linux or MS windows on the personal computer. The system should be configured as dual boot with both windows and Linux.
Week 3 - Task 3: Hardware Troubleshooting: Students have to be given a PC which does not boot due to improper assembly or defective peripherals. They should identify the problem and fix it to get the computer back to working condition.
Week 4 - Task 4: Software Troubleshooting: Students have to be given a malfunctioning CPU due to system software problems. They should identify the problem and fix it to get the computer back to working condition.
Internet & World Wide Web
Week 5 - Task 1: Orientation & Connectivity Boot Camp: Students should get connected to their Local Area Network and access the Internet. In the process they configure the TCP/IP setting. Finally students should demonstrate how to access the websites and email.
Week 6 - Task 2: Web Browsers, Surfing the Web: Students customize their web browsers with the LAN proxy settings, bookmarks, search toolbars and pop up blockers. Also, plug-ins like Macromedia Flash and JRE for applets should be configured
Week 7 - Task 3: Search Engines & Netiquette: Students should know what search engines are and how to use the search engines. Usage of search engines like Google, Yahoo, ask.com and others should be demonstrated by student.
Week 8 - Task 4: Cyber Hygiene: Students should learn about viruses on the internet and install antivirus software. Student should learn to customize the browsers to block pop ups, block active x downloads to avoid viruses and/or worms.
Week 9 Task 5: Develop home page: Student should learn to develop his/her home page using HTML consisting of his/her photo, name, address and education details as a table and his/her skill set as a list.
Productivity tools: LaTeX and Word

Week 10 - Task 1: Using LaTeX and Word to create project certificate. Features to be covered:-Formatting Fonts in word, Drop Cap in word, Applying Text effects, Using Character Spacing, Borders and Colors, Inserting Header and Footer, Using Date
Week 11 - Task 2: Creating project abstract Features to be covered:-Formatting Styles, Inserting table, Bullets and Numbering, Changing Text Direction, Cell alignment, Footnote, Hyperlink, Symbols, Spell Check, Track Changes.
Week 12 - Task 3: Creating a Newsletter: Features to be covered:- Table of Content, Newspaper columns, Images from files and clipart, Drawing toolbar and Word Art, Formatting Images, Textboxes, Paragraphs in word.
Week 13 - Task 4: Spreadsheet Orientation: Accessing, overview of toolbars, saving spreadsheet files, Using help and resources. **Creating a Scheduler**:- Gridlines, Format Cells, Summation, auto fill, Formatting Text
Week 14 - Task 5: Calculating GPA - .Features to be covered:- Cell Referencing, Formulae in spreadsheet – average, std. deviation, Charts, Renaming and Inserting worksheets, Hyper linking, Count function, Sorting, Conditional formatting.
Week 15 - Task 6: Creating Power Point: Student should work on basic power point utilities and tools in Latex and Ms Office/equivalent (FOSS) which help them create basic power point presentation. PPT Orientation, Slide Layouts, Inserting Text, Formatting Text, Bullets and Numbering, Auto Shapes, Lines and Arrows, Hyperlinks, Inserting Images, Tables and Charts

TASK 1:

Every student should identify the peripherals of a computer, components in a CPU and its functions. Draw the block diagram of the CPU along with the configuration of each peripheral and submit to your instructor. Every student should disassemble and assemble the PC back to working condition.

AIM: To identify the peripherals of a computer, assemble and disassemble the system.
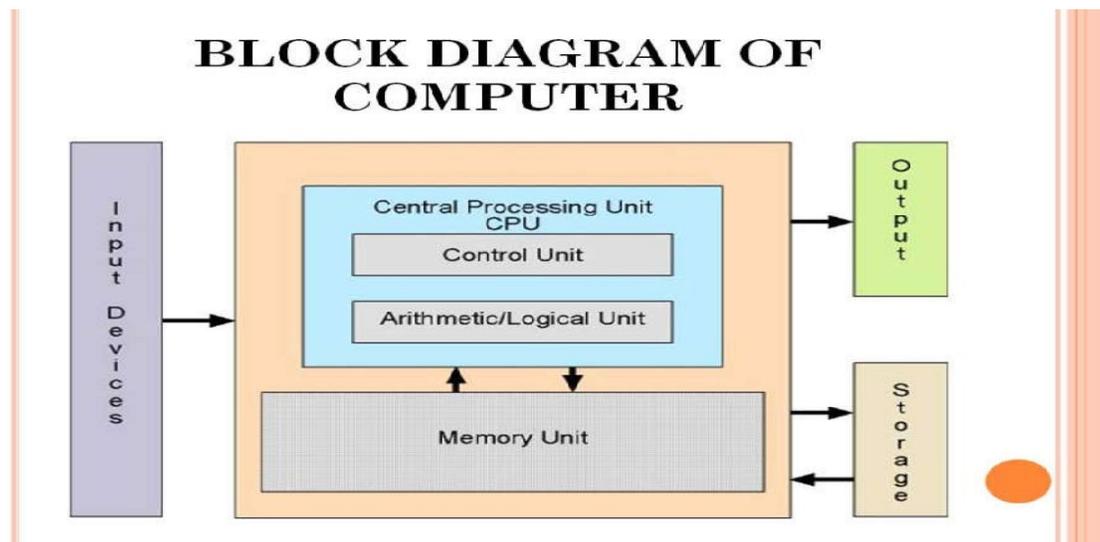
Software Requirement: No Software Required.

Hardware Requirement: Desired Configuration for the above task is
- System unit
- CPU
- Mother Board
- FDD
- CD ROM Drive
- HDD
- Ethernet Card
- Monitor, Keyboard, Mouse & Speakers

Safety Precautions:

1. Beware of electrostatic discharge (ESO)
2. Build computer on a hard surface, away from concepts.
3. Wear shoes and the short sleeved cotton wear.
4. Use Phillips, head screw driver.
5. Keep the components away from moisture.
6. Avoid using pressure while installing.

BLOCK DIAGRAM OF COMPUTER

BLOCK DIAGRAM OF COMPUTER

Input Devices → Central Processing Unit CPU [Control Unit, Arithmetic/Logical Unit] → Output

Memory Unit → Storage

Peripherals of a computer:

1. Cabinet:
- It is used to install all hardware devices like(mother board, SMPS,HDD, CD Rom, FDD)
- It has Start, Restart Button, Led's, Audio and USB Connecters are available at front side.

2. Monitor:

- Monitor of a computer is like a television screen.
- It displays text characters and graphics in colors or in shades of grey.
- The monitor is also called as screen or display or CRT (cathode ray tube). In the monitor the screen will be displayed in pixels format.

  i. 800 by 600 pixels
  ii. 1024 by 768 pixels

3. Key Board:

- Key board is like a type writer, which contains keys to feed the data or information into the computer
- Keyboards are available in two modules. These are

  ❖ standard key board with 83-88 keys
  ❖ enhanced key board with 104 keys or above

4. Mouse:

- Every mouse has one primary button (left button) and one secondary button (right button).
- The primary button is used to carry out most tasks, where as secondary button is used in special cases you can select commands and options

5. Printer:

- A device that prints images (numbers, alphabets, graphs, etc…) on paper is known as Printer.
- We have different types of printers to take printouts. These are as follows:

  i. Dot matrix printer   ii. Inkjet printer

6. Speakers:

- Speakers make your system much more delightful to use entertain you while you are working on computer

7. Scanner: Scanner used to scan images and text.

8. System board/Motherboard

- This is the major part of the PC hardware
- It manages all transactions of data between CPU peripherals.
- which holds the Processor, Random Access Memory and other parts, & has slots for expansion cards
- It is rectangle shape
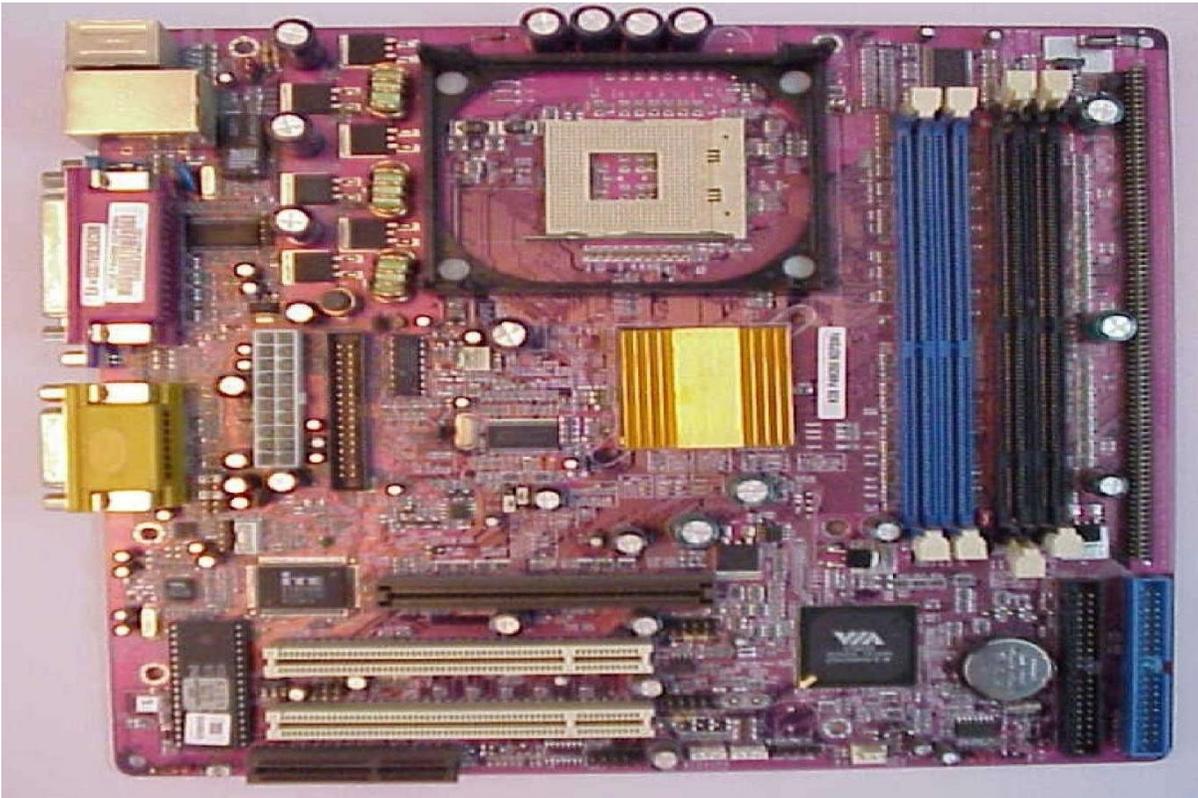
9. Socket 478:

It use 478 – PIN MICROPGA package it is used installing CPU
It is square type design.
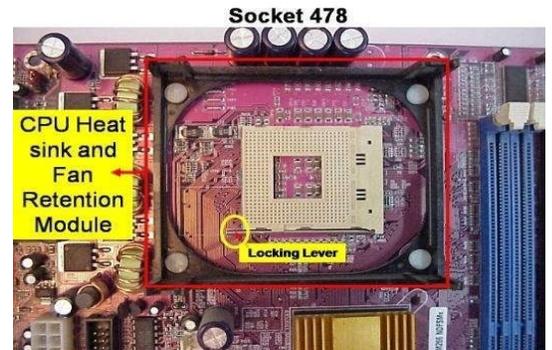
10. CPU

- The central processing unit contains the heart of any computer, the processor. The processor is fitted on to a Mother Board. The Mother Board contains various components, which support the functioning of a PC.
- It is brain of the computer
- It is square shape

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11. Ram Slots:

- Ram slots are used to install the rams
- It is large rectangle shape and each ending has small clips.
- There two type ram slots
- SD Ram ----------Two Gaps (synchronous DRAM) is a generic name for various kinds of dynamic random access memory (DRAM) that are synchronized with the clock speed that the microprocessor is optimized for. This tends to increase the number of instructions that the processor can perform in a given time.
- DDR Ram ------- One Gap (Double Data Rate Synchronous DRAM: A clock is used to read data from a DRAM. DDR memory reads data on both the rising and falling edge of the clock, achieving a faster data rate.)
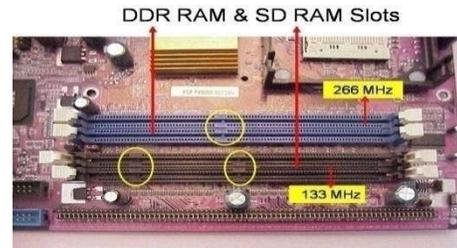
12. North Bridge:

- It is also called as controller
- It is nearby socket 478
- It placed middle of the mother board
- It converts electronic signals to binary values and binary values to electronic signals

13. South Bridge:

- It is controls major components mother board and it back bone of the input out devices
- It is communicates PCI slots, IDE-1, IDE-2, floppy connecter, BIOS chip.
- It nearby CMOS battery

14. CMOS Battery:

- Computer is using a coin shape battery
- It generates the clock signal and it manage system continues time.
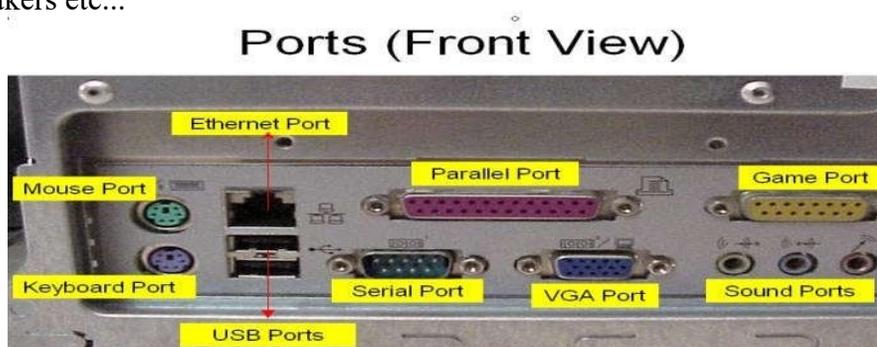

15. Primary & Secondary (IDE-1 & IDE-2):

- It is also called as IDE-1, IDE-2.
- It used to connecting Hard Disk Drive, CD ROM, DVD ROM.
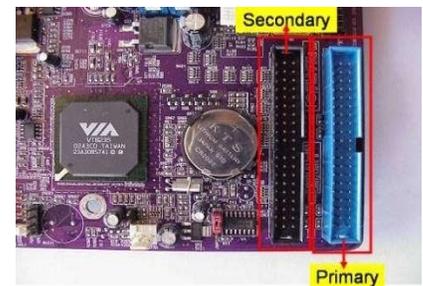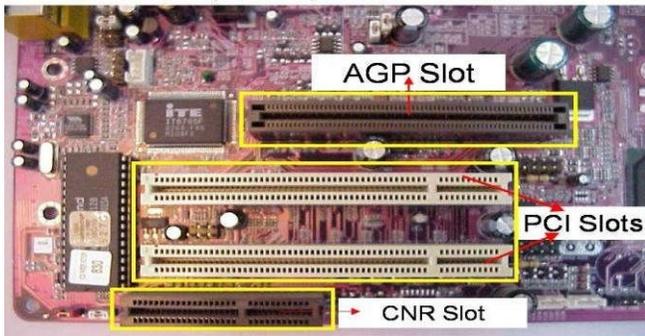

16. Input & Output ports:

- IO ports are used to connecting IO device such as key boards, mouse, monitor, printer, scanner, speakers etc...
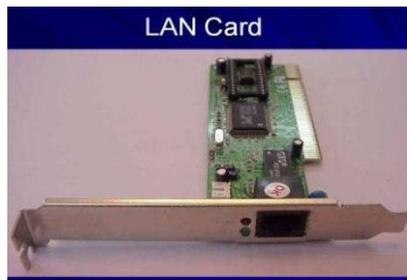

17. AGP Slot & AGP Card:

- AGP Slot is used install the AGP card.
- AGP back view same as VGA port (15-female pins) and used to connecting the monitor's c. This slot is above PCI slots and its color is Black or Brown

---

CNR, PCI, AGP Slots

AGP Card

18. CI Slots &PCI (Expansion) Cards:

- PCI slots are used to install the PCI cards such as

  i. LAN (Ethernet) Card---Back view Ethernet port

LAN Card

  ii. Sound Card- Back view Audio pin connectors)

  iii. TV Tuner (Internal) Card - Dish Pin connecter
 iv. PCI Slots are white or yellow color
  v. PCI Card has Single gap only

19. BIOS Chip:

- BIOS controls how the operating system and hardware wok together
- BIOS identification is BIOS name is available on chip or mother board

20. ATX Power connecter:

- ATX power connecter is used to connect ATX power plug (This is from SMPS)
- It is white color and it has ATX Name is available on Mother Board
- ATX Power connecter has 20/24 pins available.
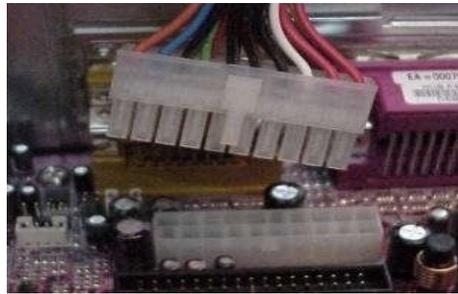
- Typical ATX 1.3 power supply. From left to right, the connectors are 20-pin motherboard, 4-pin "P4connector", fan RPM monitor (note the lack of a power wire), SATA power connector (black), "Molex connector" and floppy connector.

21. Floppy connecter:

- Floppy connecter is used to connect Floppy Disk Drive.
- This is beside of ATX power connecter and Name FDD is available on the mother board.

22. Bus Cables or Data cables:

- A Bus is a collection of wires through which data is transmitted from one device to another device cables are two types
- IDE cable: it used to connect HDD, CD ROM, DVD ROM
- FDD cable: it used to connect FDD (braking or manufacture defecting)
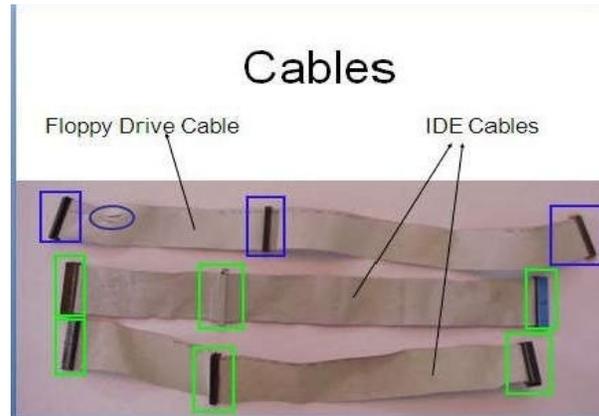

23. Hard Disk Drive:

- The hard disk drive is the main, and usually largest, data storage device in a computer
- The operating system, software titles and most other files are stored in the hard disk drive
- Identifications is the panel name is Hard Disk dive
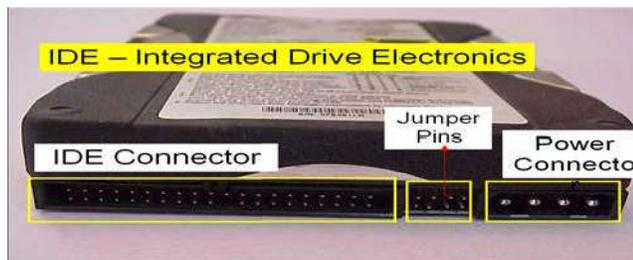
24. CD ROM Drive & CD-Writer:

- CD-Rom (Compact Disk Read only Memory) Drive is a device that reads the information from Compact Disks (CD).
- CD-Writer is used to write the data into Compact Disks.
- Identification is the panel name is CD Writer
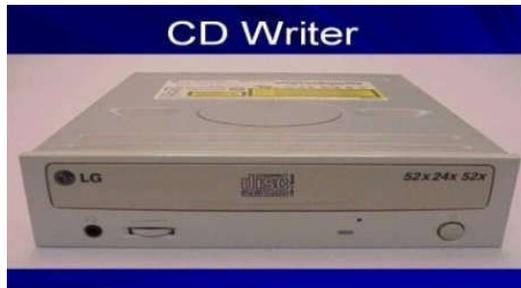
CD Writer

25. Floppy Disk Drive:

- The floppy disk drive is used to read the information stored in floppy disks.
- Floppy disks also called as a diskette.
- Identification is smaller than CD Writer.

26. SMPS:

- SMPS is used to supply the power to Mother Board HDD,CD ROM, FDD
- In SMPS holds a transformer, voltage control and fan
- Identification is the rectangular box shape and panel name is switching mode power supply.

SMPS

Assembling & Disassembling the System Hardware Components of the Personal Computer

1. Setting the Cabinet ready:-

- Check how to open the cabinet and determine where to fix the components.
- Determine if the case has the appropriate risers installed.

2. Fitting the Mother board.

- Line up the patch on the motherboard (ps/l, USB, etc) with the appropriate holes in the block panel I/O shield of the case.
- Check the points where you and to install
- Install them and make the mother board sit on them and fix screws if required.

3. Installing the CPU

- Raise the small lever at the side of the socket.
- Notice that there is a pin missing at one corner, determine the direction to fit in the processor.
- You should not force the CPU. When inserting it. All pins should slide smoothly into the socket.
- Lock the lever back down.

4. Installing CPU fan

- Install the heat sink over it (Different type for each processor). Heat sink /CPU fan.

5. Fitting the RAM:

- The RAM must be suitable for motherboard.
- There are currently 3 types of RAM available.
    - a) SD RAM.
    - b) DDR SD RAM.
    - c) RD RAM.
- The mother board's chipset determines which type of RAM may be used.

6. Installing SMPS

7. Installing the ATX Power Connector

ATX Connectors:

- PS, Mouse.
- Key board.
- USB.
- Parallel (Prints)
- Serial COM1.
- Serial COM 2.
- Joystick.
- Sound.

8. Installing the HDD and Floppy disk:

1. Place the floppy and hard disks in their slots.
2. Leave some space above HDD to prevent heat building.
3. Check the jumper configuration.
4. Fix the screws.

9. CD ROM Drive :

- CD-ROM drive is similar to installing a hard disk.
- 1st check that the jumper configuration is correct.
- Fix the screw.

10. LAN Card

11. Connecting the ribbon Cables and Front panel connections

- Attach the long end of the cable to the IDEU connector on the motherboard first. The red stripe on the IDE cable should be facing the CD Power.

12. Final Check:

- Mother board jumper configurations are the settings for the processor operator.
- Drive jumper settings, master/ slave correct?
- Is the processor, RAM modules and plug in cards finally seated in their sockets?
- Did you plug all the cables in? Do they all fit really?
- Have you frightened all the screws in plug- in cards or fitted the clips?

- Are the drive secure?

- Have u connected the power cables to all driver?

Powering up for the first time:

1. Ensure that no wires are touching the CPU heat sink fan.

2. Plug your monitor, mouse and keyboard.

3. Plug in power card and switch the power supply.

4. If everything is connected as it should be

   - All systems, fans should start spinning

   - U should hear a single beep and after about 5-10 sec

   - Amber light on monitor should go green

   - You will see computer start to boot with a memory check

   - Now check front LED'S to see if u plugged them in correctly

   - Check all other buttons

   - Power afford change any wrong settings

Why should one learn about hardware?

1. Troubleshoot you and save time.

2. Knowing about system internals and components.

3. Very easy installation for modern hardware.

4. Install extra memory.

5. Removing components.

TEST DATA: No Test Data for This Experiment
ERROR: No Errors for this Experiment
RESULT: Assembling and disassembling the system is completed

Viva Q & A:

1) Define hardware?
2) Define software?
3) What are the functional units of a computer?
4) IDE Stands for
5) What are the other names for LAN card
6) What is the use of LAN card?
7) What are the input and output devices?
8) No display. What is the problem?
9) Differentiate SRAM and DRAM.
10) SLMM full name.
11) What is CMOS and CMOS battery?
12) What are the full names of ATA, SATA, PATA and ATX?

TASK 2:

Every student should individually install operating system like Linux or MS windows on the personal computer. The system should be configured as dual boot with both windows and Linux.

AIM: To install Windows XP

Software Requirement: Windows XP Compact Disc **Hardware Requirement:** Personal computer

PROCEDURE:

1. Keep on press the delete button and go to advanced BIOS feature [BIOS- Basic Input Output System]
2. And go to boot sequence. Select first boot drivers. CD ROM and press F10 to save the bios feature. Yes and then enter. Press any key to boot from CD. Press enter to setup windows XP.

   F8 = To agree the license.
3. Press ESC to don't repair the windows XP setup.
4. Press _p'to delete the previous partitions. Then press enter.
5. Press _L'to delete the partition.
6. Press _C'to create the partition in the UN partition space.
7. Press enter to setup windows XP on the selected items.

BASIC FILE SYSTEMS:

FAT: File Allocation Table.

NTFS: New Technology File System.

Format the create using NTFS partition.

BASIC STEPS IN INSTALLATION:-

1. Collecting information.
2. Dynamic update
3. Preparing installation
4. Installing windows.
5. Tracking installation

**Screen shots of windows XP Installation**

1. Insert the Windows XP CD into your computer and restart your computer. If prompted to start from the CD, press SPACEBAR. If you miss the prompt (it only appears for a few seconds), restart your computer to try again.
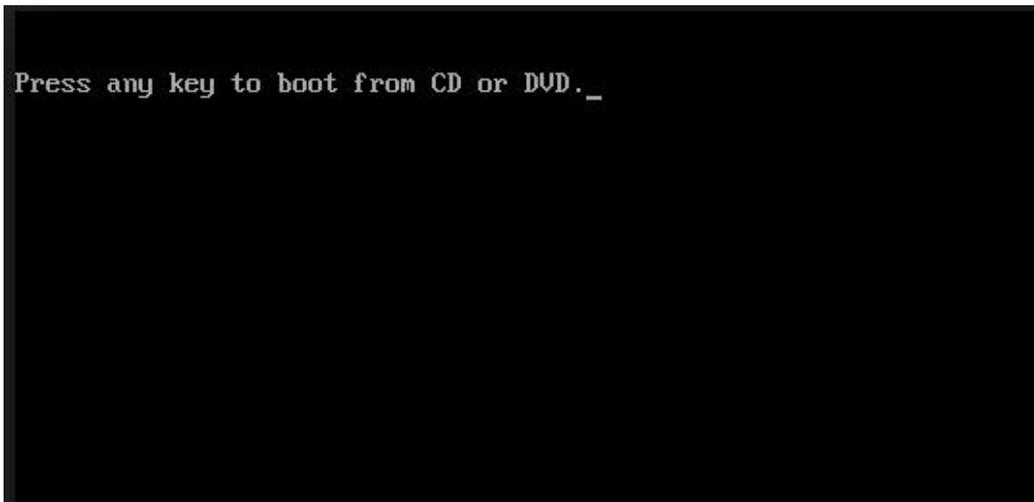

2. Windows XP Setup begins. During this portion of setup, your mouse will not work, so you must use the keyboard. On the **Welcome to Setup** page, press ENTER.

3. On the **Windows XP Licensing Agreement** page, read the licensing agreement. Press the PAGEDOWN key to scroll to the bottom of the agreement. Then press F8.
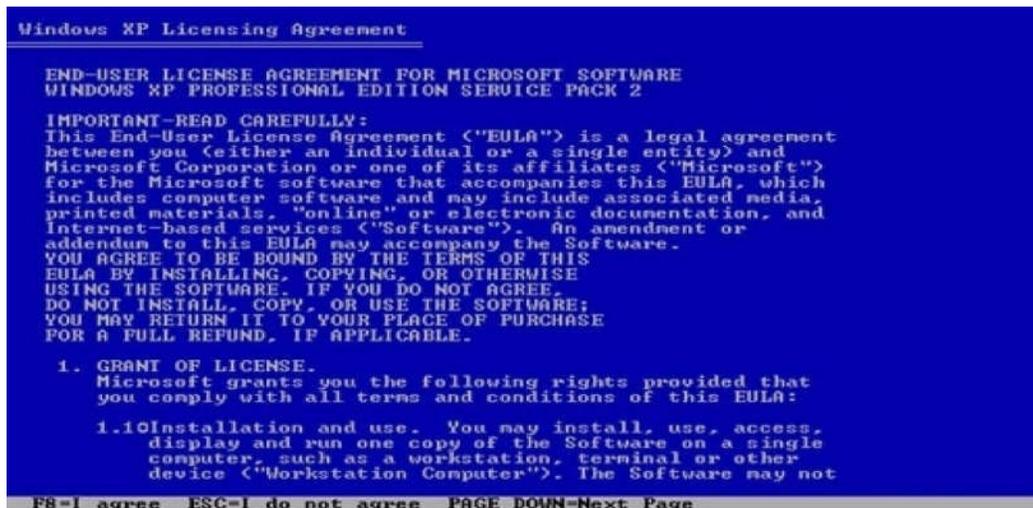
4. This page enables you to select the hard disk drive on which Windows XP will be installed. Once you complete this step, all data on your hard disk drive will be removed and cannot be recovered. It is extremely important that you have a recent backup copy of your files before continuing. When you have a backup copy, press D, and then press L when prompted. This deletes your existing data. Press ENTER to select Un **partitioned space**, which appears by default.
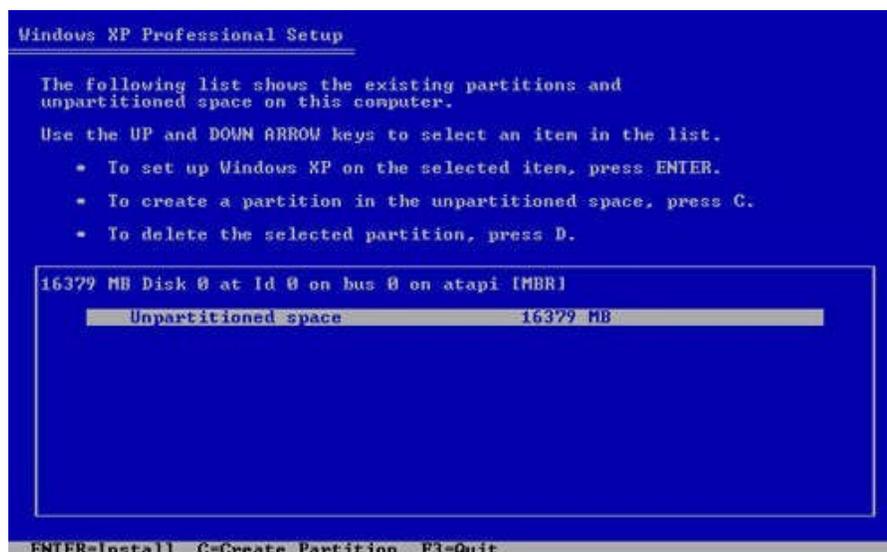
5. Press ENTER again to select **Format the partition using the NTFS file system**, which appears by default.

6. Windows XP erases your hard disk drive using a process called formatting and then copies the setup files. You can leave your computer and return in 20 to 30 minutes.
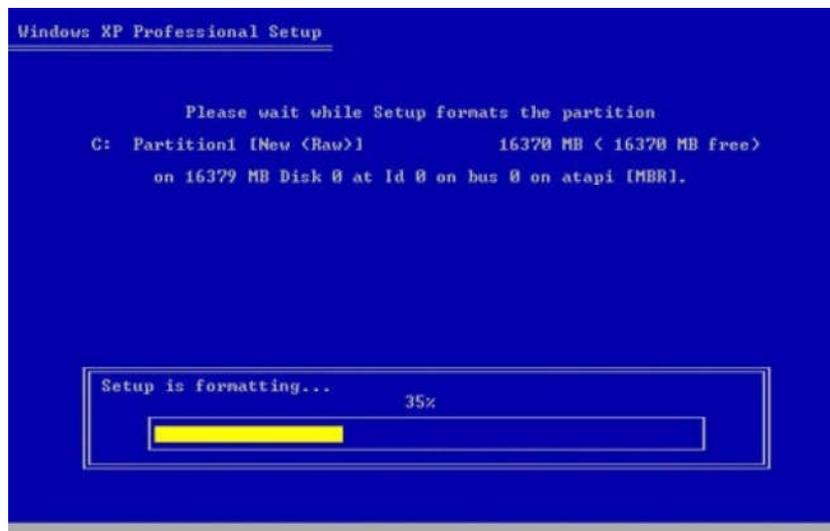
7. Windows XP restarts and then continues with the installation process. From this point forward, you can use your mouse. Eventually, the **Regional and Language Options** page appears. Click **next** to accept the default settings. If you are multilingual or prefer a language other than English, you can change language settings after setup is complete
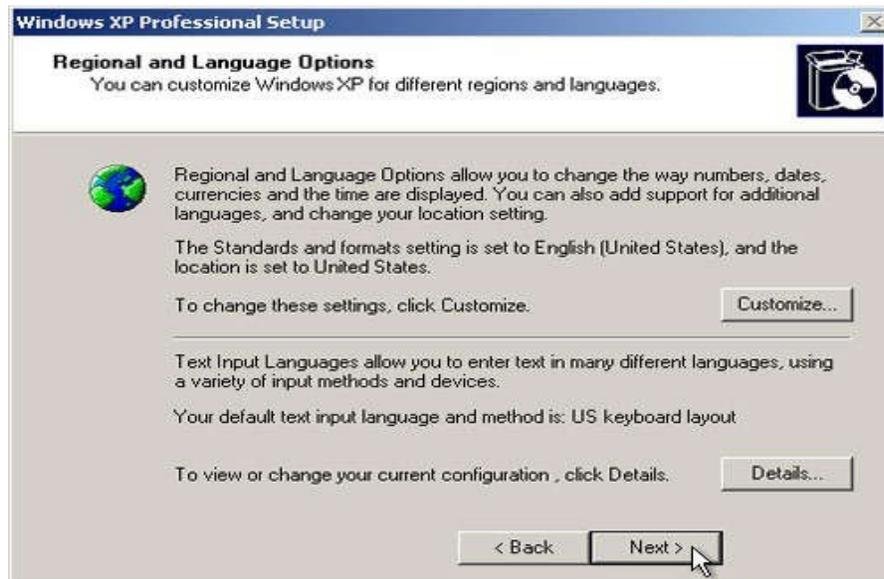
8. On the **Personalize Your Software** page, type your name and your organization name. Some programs use this information to automatically fill in your name when required. Then, click **Next**.

9. On the **Your Product Key** page, type your product key as it appears on your Windows XP CD case. The product key is unique for every Windows XP installation. Then, click **Next**.

10. On the **Computer Name and Administrator Password** page, in the Computer name box, type a name that uniquely identifies your computer in your house, such as FAMILYROOM or TOMS. You cannot use spaces or punctuation. If you connect your computer to a network, you will use this computer name to find shared files and printers. Type a strong password that you can remember in the **Administrator password** box, and then retype it in the **Confirm password** box. Write the password down and store it in a secure place. Click **Next**.

11. On the **Date and Time Settings** page, set your computer's clock. Then, click the

Time Zone down arrow, and select your time zone. Click **Next**.
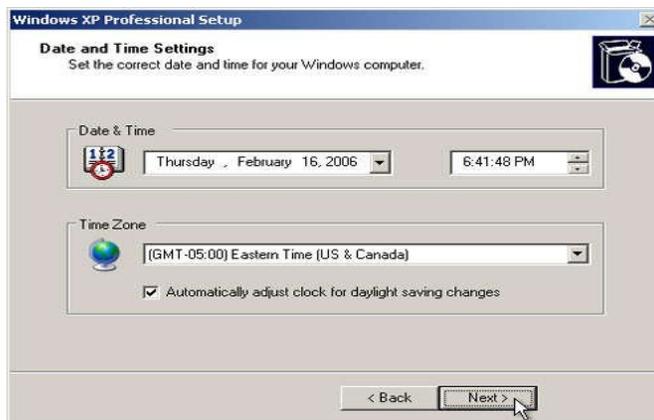
12. Windows XP will spend about a minute configuring your computer. On the **Networking Settings** page, click **Next**.
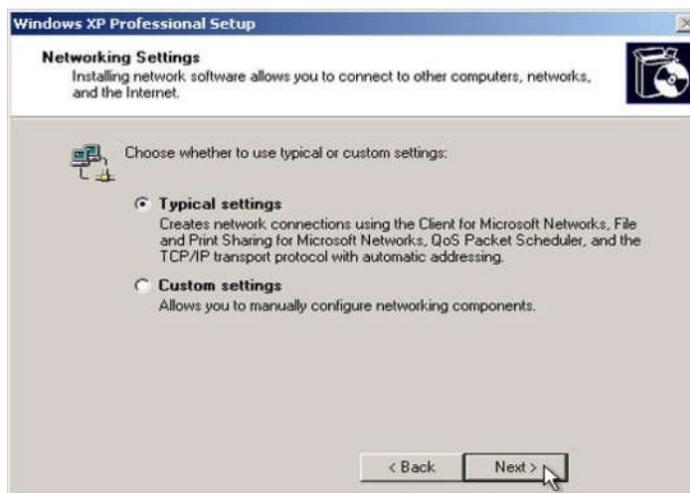
13. On the **Workgroup or Computer Domain** page, click **Next**.
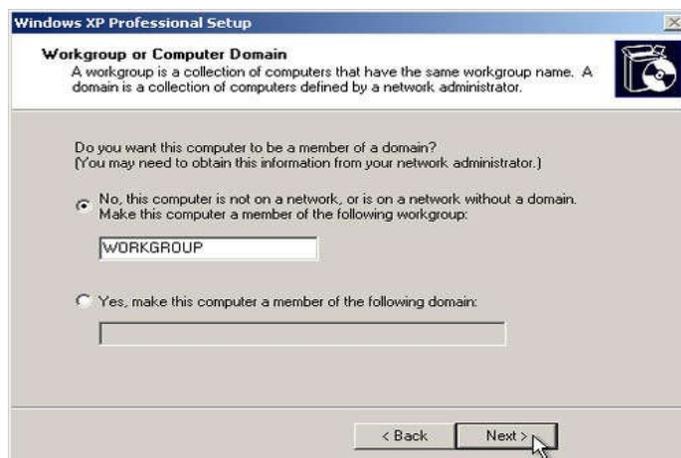
14. Windows XP will spend 20 or 30 minutes configuring your computer and will

Automatically restart when finished. When the **Display Settings** dialog appears, click OK
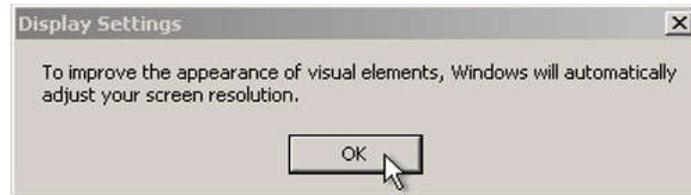
15. When the **Monitor Settings** dialog box appears, click **OK**.

16. The final stage of setup begins. On the **Welcome to Microsoft Windows** page, click **next**.

17. On the **Help protect your PC** page, click **Help protect my PC by turning on Automatic Updates now**. Then, click

18. Windows XP will then check if you are connected to the Internet: If you are connected to the Internet, select the choice that describes your network connection on the **Will this computer connect to the Internet directly, or through a network?** Page. If you're not sure, accept the default selection, and click **Next**
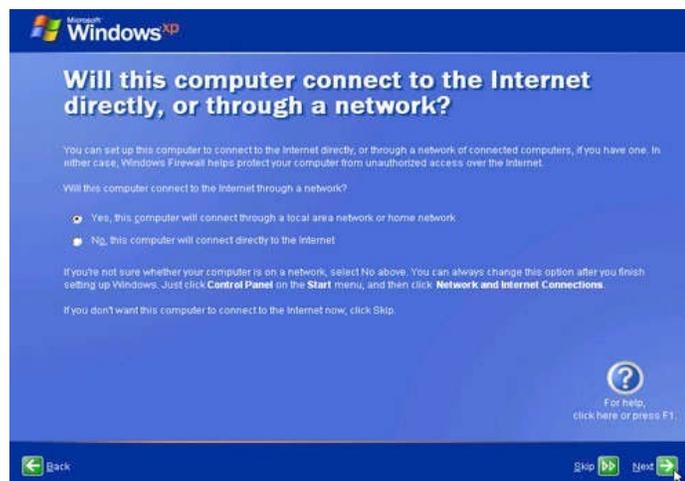
19. If you use dial-up Internet access, or if Windows XP cannot connect to the Internet, you can connect to the Internet after setup is complete. On the **How will this computer connect to the Internet?** Page, click **Skip**.

20. Windows XP Setup displays the **Ready to activate Windows?** Page. If you are connected to the Internet, click **Yes**, and then click **Next**. If you are not yet connected to the Internet, click **No**, click **Next**, and then skip to step 24. After setup is complete, Windows XP will automatically remind you to activate and register your copy of Windows XP

21. On the **Ready to register with Microsoft?** Page, click **Yes**, and then click **Next**.

22. On the **collecting registration information page,** complete the form. Then, click Next.

23. On the **Who will use this computer?** page, type the name of each person who will use the computer. You can use first names only, nicknames, or full names. Then click **Next**. To add users after setup is complete or to specify a password to keep your account private, read Create and customize user accounts.
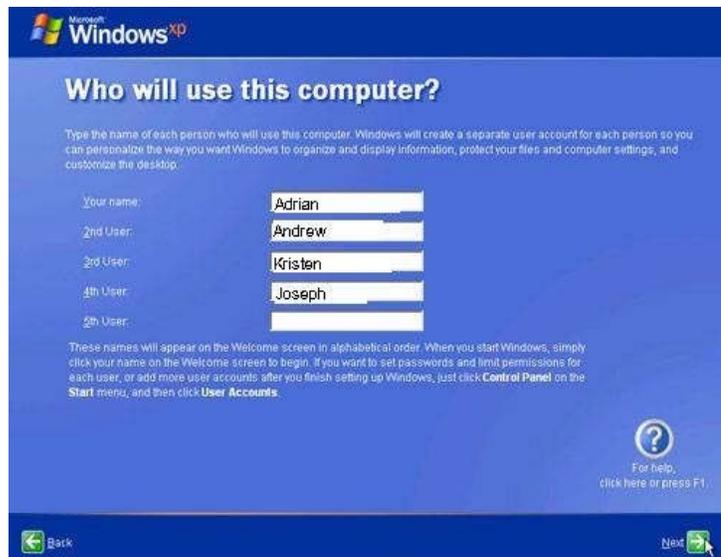
24. On the **Thank you!** Page, click **Finish**.

Congratulations! Windows XP setup is complete.

TEST DATA: No Test data for this Experiment

ERROR: No Errors for this Experiment

RESULT: Installation of Windows XP is completed.

Viva Q & A:

1. Give the advantages of Windows XP?
2. Who wrote Windows XP?
3. How to Boot from CD in Windows XP?
4. How to Install Windows XP?
5. How to Check IP address in Windows XP?
6. How to Create User Account in Windows XP?
7. How to Disable/Enable automatic updates in Windows...
8. How to find MAC address in Windows XP?
9. How to Disable and Enable automatic updates in Windows XP?
10. In Windows NT, NT stands for
11. MS DOS uses
12. The first version which become reasonably popular was
13. The desktop has several

(B) AIM: To install Linux in system

Software Requirement: Linux Compact Discs

Hardware Requirement: Personal computer

PROCEDURE:

1. Language Selection

⌋ Using your mouse select the language you would prefer to use for the installation

⌋ Click next to continue.

2. Key Board Configuration:

⌋ Using your mouse select the correct layout type for the keyboard you would prefer to use for the installation and as the system default.

⌋ Once you have made the selection click next to continue.

3. Mouse Configuration:

⌋ If you have a PS/2, USB or Bus mouse you do not need to pick a port and device. If you have a serial mouse, you should choose the correct port and device that your serial mouse is on.

□ The Emulate 3 buttons checkbox allows you to use a two-button mouse as if it had three buttons. If you select this check box you can emulate a third ―middle‖ button by pressing both mouse buttons simultaneously.

4. Installation Type:

⌋ Choose the type of installation you would like to perform.

⌋ Your options are **Personal desktop, Workstation, Server, Custom** and **upgrade**

5. Disk partition Setup:

⌋ You can chose automatic partitioning or manual partitioning using **Disk Druid** of **fdisk.**

⌋ Automatic partitioning allows you to perform an installation without having to partition your drives yourself.

⌋ Automatic partitioning allows you to have some control concerning what data is removed from your system.

⌋ Your options are:

   ↺ Remove all Linuxpartitionsonthissystem.

   ↺ Removeallpartitionsonthissystem

   ↺ Keep all partitions and use existing free space.

⌋ To partition manually choose either Disk druid or fdisk partitioning tool.

⌋ Lick next once you have made your selections.

6. Partitioning your system:

⌋ If you chose automatic partitioning and did not select **Review**

   skip ahead

⌋ If you choose automatic partitioning and selected **review** you can either accept the current partition settings (click next) or modify

   the setup using **Disk Druid**, the manual partition tool.

   ⌋ If you choose manual partition with disk skip ahead.

• At this point you must tell the installation program where to install Linux. This is done by defining mount points for one or more disk partitions in which Linux will be installed.

7. Adding Partitions:

   To add a new partition select **new** button, a dialogue box appears.

   Select the options and click **ok**

8. Boot Loader Configuration:

   Boot loader is the first software program that runs when a computer starts. The installation program provides two boot loaders **GRUB (GR and Unified Boot Loader)** which is the default and **LILO**

If you do not want GRUB as your boot loader click Change Boot Loader.

□

□

You can then choose to install LILO or choose not to install boot loader at all by clicking **Do not install boot loader** on the **change boot loader** button.

Network devices are automatically detected and displayed in **Network Devices** list,

Select a network device and click **Edit**

Here you can configure IP address and net mask of the device.

9. Firewall configuration:

⌡ Offers firewall protection for enhanced protection.

⌡ A properly configured firewall can greatly increase the security of the system.

10. Time zone configuration:

You can set your time zone by selecting your computers physical location or by specifying your time zones offset from Universal Time.

11. Account Configuration:

□ Allows to set Root password or user accounts

⌡ Root count is similar to the administrator password that you set up in Win NT.

□ Click **add** button to add a new non-rot user.

□ Enter the details and click **OK.**

12. Packing group selection:

You can select package groups which groups components together or

individual packages or a combination of the two.

TEST DATA: No Test data for this Experiment
ERROR: No Errors for this Experiment
RESULT: Installing the OS of Linux is completed

Viva Q & A:

1. Give the advantages of Linux over other OS?
2. Who wrote Linux?
3. What are the Flavors of Linux?
4. What is Linux?
5. What is the difference between UNIX and Linux?
6. What is the advantage of Linux?
7. What is the GUI?
8. What is SMTP?
9. What is Linux Kernel?
10. What are the basic components of Linux?

TASK 3:

Hardware Troubleshooting: Students have to be given a PC which does not boot due to improper assembly or defective peripherals. They should identify the problem and fix it to get the computer back to working condition.

AIM: Hardware troubleshooting

Software Requirement: No software required

Hardware Requirement: Personal computer

Troubleshoot:-

1.   If you hit the power button & nothing happened.

⌟ Check all power connections.

⌟ Check for power on mother board.

2.   If the system turns on but does not beep or begin to boot up.

⌟ Remove all components except motherboard/ cpu / moniter check by giving power to them

Computer error beeps codes:

No beep: short, no power, bad CPU/ MD, loose peripherals.

One beep: everything is normal & computer posted tax.

Two beeps: post / CMOS error.

One long beep One short beep: Motherboard problem.

One long beep two short beep: video problem.

One long beep 3 short beeps: video problem.

3 long beeps: keyboard error.

Repeated long beep: memory error.

Continuous high- low beeps: CPU overheating

TEST DATA: No Test data for this Experiment

ERROR: No Errors for this Experiment

RESULT: Doing the Hardware troubleshooting is completed

Viva Questions and Answers:

1. What is the hardware trouble shooting?
2. What is the device manager?
3. What are the troubles related to the monitors?
4. What is ASCII?
5. What is an IP address?
6. What is bandwidth?
7. What does HTTP mean?
8. How do you secure a computer network?
9. What does network mean?
10. How would you recover lost files from a system infected by a virus?

TASK4:

Software Troubleshooting: Students have to be given a malfunctioning CPU due to system software problems. They should identify the problem and fix it to get the computer back to working condition.

AIM: Software troubleshooting

Software Requirement: Malfunctioning CPU due to system software

Hardware Requirement: Personal computer

PROCEDURE:

Error messages encountered during boot before Windows loads

Ensure that your computer BIOS settings are correctly configured to the hardware that is installed in your computer

Error messages while windows loading

1. If you have recently installed or changed something that could have caused normal windows to stop loading, try loading the last known good configuration

2. If you are unable to get into Normal windows and believe that removing or uninstalling a program or changing a setting may help enable you to get into windows, boot the computer into windows XP safe mode

3. If your computer has worked fine in the past but recently has been experiencing the issue you are encountering run the system restore option to restore the computer to an earlier date

Other error messages that occur while windows is loading or after windows is loaded

1. If error occurs but windows still loads, verify no issues or conflict exits in device manager

2. Ensure that if programs are loading automatically that these errors are not associated with these programs

3. Make sure Windows XP is up to date by checking Microsoft windows update page

4. If your computer has virus protection installed make sure that it is up to date and that no virus are being detected

5. If your computer has worked fine in the past but recently has been experiencing the issue you are encountering run the system restore option to restore the computer to an earlier date

TEST DATA: No Test data for this Experiment

ERROR: No Errors for this Experiment

RESULT: Malfunctioning CPU due to system software is done

Viva questions and Answers:

1. Define a software trouble shooting?
2. What is the system restore?
3. How much the free hard disk drive space?
4. What to Do With the Issues That May Pop Up At the Time of USB Device Installation?
5. How do you remove a virus from a computer?
6. What is BIOS and how does it affect a computer device?
7. In your opinion, what situations typically require a simple replacement of a power cable?
8. Can you tell me about a time when you couldn't troubleshoot a problem? What did you do?
9. Do you have experience troubleshooting printer problems? If so, what examples can you provide?
10. My computer has no sound. What do you do to determine the cause and correct the issue?
11. I can't see the display on my computer. What's wrong and how can I solve it?
12. I can't turn my computer on, no matter how many times I try. What's happening?
13. My keyboard won't let me type. How would you troubleshoot this situation and determine a solution?
14. How do you test memory on a computer?
15. How would you clean a computer fan? And when would you do so?

TASK 5:

Orientation & Connectivity Boot Camp: Students should get connected to their Local Area Network and access the Internet. In the process they configure the TCP/IP setting. Finally students should demonstrate how to access the websites and email.

AIM: To learn Local Area Network and access the Internet. In the process they configure the TCP/IP setting. Finally students should demonstrate, to the instructor, how to access the websites and email

Software Requirement: Local Area Network to access the

Internet **Hardware Requirement:** Personal computer **THEORY:**

The internet is a worldwide, publicly network of interconnected computer networks

LOCAL AREA NETWORK:

LANs are privately owned networks within a single building or campus of up to few kilometers in size.

WIDE AREA NETWORK:

A WAN is a network that connects computers across a large geographic area such as a city or country

TCP/IP (Transmission Control Protocol/Internet Protocol):

Collection of methods used to connect servers on the internet and to exchange data.

HTML (Hyper Text Markup Language):

The coding used to control the look of documents on the web

HTTP (Hyper Text Transfer Protocol):

Part of a url that identifies the location as one that uses HTML

IP (Internet Protocol):

A format for contents and addresses of packets of information sent over

the internet

IP ADDRESS:

An identifier for a computer or device on a TCP/IP network

SEARCH ENGINE:

A program that searches documents located on the Internet for keywords or

phrases entered by a person browsing the net.

Internet Connection requirements:

⌋ TCP/IP protocol

⌋ Client Software

⌋ ISP Account

Means of communication to the net:

⌋ telephone Modem

⌋ Ethernet

⌋ ISDN(Integrated Services Digital Network)

⌋ DSL(Digital Subscriber Line)

⌋ Satellite.

PROCEDURE:

1. Go to **start>control Panel**

2. open **Network Connections**

3. Click **create a new connection** and then click **next**

4. The new connection wizard window opens , click **next** to continue

5. Choose one of the options in the next dialog box

6. Choose one of the three options in the next dialog box

⌋ If you do not have an internet account click **choose from a list of ISPs** and then click **next**

☐ If you have an account click Set up my connection manually

☐ If you have a CD from the ISP click use the CD I got from an ISP and then click next

7. Follow the next steps as per the option you selected.

TEST DATA: No Test data for this Experiment

ERROR: No Errors for this Experiment

RESULT: In this way we can learn surfing the web

Viva Q & A:

1. Define internet
2. What is the Intranet?
3. What is a sneaker net?
4. What is the full form of LAN?
5. What is the full form of WAN?
6. What are different types of LAN topologies?
7. What is TCP/IP?
8. What is MAC address?
9. What are different types of LAN devices?
10. What is difference between LAN and Private VLAN?
11. What is a node?
12. What is difference between Hub and Switch?
13. What is the full form of HTTP?
14. What is the full form of TCP/IP?
15. What is the full form of ISDN/DSL?

TASK 6:

Web Browsers, Surfing the Web: Students customize their web browsers with the LAN proxy settings, bookmarks, search toolbars and pop up blockers. Also, plug-ins like Macromedia Flash and JRE for applets should be configured

AIM: To learn to surf the web

Software Requirement: Local Area Network to access the Internet

Hardware Requirement: Personal computer

THEORY:

⌋ Web browser provides the means to the searching and also helps to
    Download the web content.

⌋ Web browsers support most of the famous Internet Protocols like HTTP,
    FTP.

⌋ Common file formats a browser accepts are HTML

⌋ Well known browsers natively support a variety of other formats in
    addition to HTML such as JPEG,PNG,GIF image formats

⌋ Different web browsers available in the market are:

- Silversmith
- Mosaic
- Netscape
- Mozilla
- Opera
- Lynx
- Safari
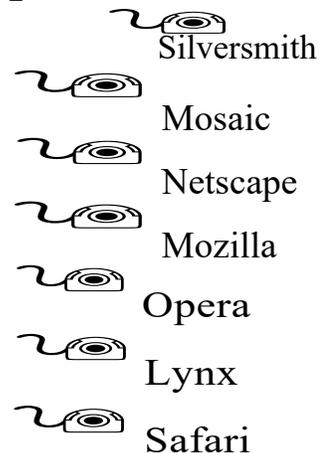
Bookmark:

Each web browser is built-in with the support of Internet Bookmarks which serve as a named anchor – primarily to URLs. The primary purpose of this book mark is to

easily catalog and access web pages that the web browser user has visited or plans to visit, without having to navigate the web to get there.

Pop-up Blockers:

Pop-ups are a form of online advertising on the WWW intended to attract the attention of the users. These pop ups are hosted on the web sites which are frequently visited by the netizens. These pop ups are activated when these web sites open a new web browser window and there by displaying the advertisements.

Plug-ins:

A plug-in is a software component program that interacts with a main application to provide a better integration of the media. The basic difference between application programs and plug-ins is that multimedia files are launched in a separate window where as in plug-ins multimedia play in the browser window.

Few famous plug -ins are:

⌋ Apple Quick Time

⌋ Macromedia flash

⌋ Microsoft Media Player

⌋ Adobe Shockwave

⌋ Sun Microsystems Java Applet

PROCEDURE: LAN

Proxy Settings:

⌋ select **tools** menu in Internet Explorer

⌋ Select **Internet Options**

⌋ Select **Connections**

⌋ You end up in two options

Dial-up and virtual network settings

LAN setting

⌐ The selection at this step is dependent on the kind of connection you are trying to
□configure. They are:

Dial-up modem connection

LAN connection

DSL or Cable modem

TEST DATA: No Test data for this Experiment

ERROR: No Errors for this Experiment

RESULT: In this way we can learn surfing the web

Viva Q & A:

1) What is the tool needed to surf the internet?
2) What is the first commercial browser?
3) What are the popular web browsers?
4) What Is The Purpose Of Web Browser?
5) What Is A Web Browser?
6) What Is Plug-in?
7) What Is A Safer Web Browser?
8) What Are Http And Https?
9) Which Is The Fastest Web Browser?
10) What Is The Support Being Provided To Web Browser?
11) What Are The Privacy And Security Features Being Provided By Web Browsers?
12) What Is Hyperlink?

TASK 7:

Search Engines & Netiquette: Students should know what search engines are and how to use the search engines. Usage of search engines like Google, Yahoo, ask.com and others should be demonstrated by student.

AIM: To know what search engines are and how to use the search engines.

Software Requirement: Local Area Network to access the Internet

Hardware Requirement: Personal computer

THEORY:

Search engine:

A search engine can be defined as a web site with tools which help you to find information on the internet

Function of a search engine:

You can find anything from a schedule of White house tours to instructions for removing stains from clothes.

Limitations:

Search engines visit web sites only several weeks. Search engines cannot see information in other data bases later on.

On the internet a search engine is a coordinated set of programs that includes: A spider (crawler or bot) that goes to every page or representative pages on every web site that wants to be searchable and reads it , using hypertext links on each page to discover and read site's other pages.

Pros:

⌋ You can select the search terms

⌋ You can use the same search terms with multiple search engines

⌋ You can change search terms as much as you wish

⌋ You will normally receive numerous links

⌋ Its fast

Cons:

⌋ There are so many different search engines it may be difficult to choose

⌋ You will normally receive too many links often making it difficult to identify the most relevant sites.

⌋ The vast majority of links may be only marginally relevant or altogether irrelevant

EX:

⌋ Alta Vista

⌋ Ask Jeeves

⌋ Google

⌋ Lycos

Etc...

Meta Search Engines:

Meta search engines or ―metacrawlers‖ don't crawl the web themselves. Instead they search the resources of multiple search engines by sending a search to several search engines at once aggregating the result.

Pros:

⌋ You only need to use one search tool which is time- efficient

⌋ You only need to learn how to use one search engine reducing learning curve

⌋ You benefit from the difference among several search tools at once

Cons:

□ Meta search services may not be able to leverage each individual search engines full range of query tools resulting in less refined searches

□ You can not personally select the search engines queried by Meta search services.

TEST DATA: No Test data for this Experiment

ERROR: No Errors for this Experiment

RESULT: In this way we can know what search engines are and how to use the search engines

Viva O & A:

1) Define search engine
2) What is a spider?
3) Give the main purpose of WWW
4) What is SEO? What are the important types of SEO methods?
5) What are the SEO tools do you use?
6) What do you mean by Back link?
7) What are outbound Links?
8) What are outbound Links?
9) Name some SEO blogs that help you to enhance your content marketing strategies
10) Why is Title Tag on Website valuable?
11) How do backlink tools work?

TASK 8:

Cyber Hygiene: Students should learn about viruses on the internet and install antivirus software. Student should learn to customize the browsers to block pop ups, block active x downloads to avoid viruses and/or worms.

AIM: To learn various threats on the internet and configure the computer to be safe on the internet.

Software Requirement: Antivirus Software

Hardware Requirement: Personal computer

THEORY:

Antivirus:

Antivirus software is a program that either comes installed on your computer or that you purchase and install yourself. It protects your computer against most viruses, worms, Trojan horses and other unwanted invaders that can make your computer sick.

Firewall:

A firewall is a special software or hardware designed to protect a private computer network from unauthorized access. A firewall is a set of related programs located at a network gateway server which protects the resources of the private network from users from other networks.

PROCEDURE:

Installing Symantec antivirus for Windows:

⌋ Insert Symantec antivirus CD into your CD drive

⌋ Double click on the Symantec-setup.exe

⌋ The installer will open

⌋ Click **next** to proceed

⌋ License agreement will open. Click **I accept the terms of the license agreement** and then click **next.**

⌋ Follow the instruction on the screen to complete the installation.

Get Computer Updates:

⌋ Click **start> settings>control panel**

⌋ Click **Automatic Updates** icon to open Automatic Updates dialog box

⌋ Check the box **Keep my computer up to date**

⌋ Choose a setting

⌋ Click OK

Block Pop ups:

⌋ In the IE open **tools>pop-up blocker**

⌋ Click on **Turn on Pop- up blocker**

Windows Firewall:

⌋Go to **Start>control panel>Network and Internet Connections >windows firewall**

⌋ In the general tab check the **On(recommended)** box

⌋ If you don't want any exceptions check on **Don't allow exceptions box**

TEST DATA: No Test data for this Experiment

ERROR: No Errors for this Experiment

RESULT: Antivirus is installed in the system

Viva Q & A:

1. What is antivirus software?
2. What is a firewall?
3. What are the three basic types of Firewall?
4. What are the advantages of cyber security?
5. What is cyber security?
6. What is port scanning?
7. How to prevent CSRF attacks?
8. List the common types of cyber security attacks.
9. What is the use of a firewall and how it can be implemented?
10. What are the techniques used in preventing a Brute Force Attack?

TASK 9:

Develop home page: Student should learn to develop his/her home page using HTML consisting of his/her photo, name, address and education details as a table and his/her skill set as a list.

AIM:

To create a your web page using HTML

Software Requirement: Notepad, Any web browser

Hardware Requirement: Personal computer

CODE:

```html
<html>
<head>
<title> details</title>
</head>
<body>

<img src="photo.jpg" height=100 width=100>
<h1> NAME : Radha</h1>
<h1><pre>
Address:
        H.NO.1-241/29,
        Kukatpally,
        Hyderabad-500062
</pre></h1>
<h1> Educational Details</h1>

<table border=1>
  <tr>
    <th>Course </th>
    <th>Name of the Institutation</th>
    <th>Year of Pass</th>
    <th>Percentage</th>
  </tr>
  <tr>
    <td>M.Tech(CSE)</td>


    <td>Vasavi College of Engineering</td>
      <td>2011</td>

<td>81%</td>
  </tr>
  <tr>
    <td>B.TEch(CSE) </td>
    <td>CVR Engineering College</td>
      <td>2009</td>
```

```
        <td>75%</td>
    </tr>
    <<tr>
       <<td>Intermediate </td>
       <td>Sri Chaitanya</td>
          <td>2005</td>
          <td>89%</td>
    </tr>
       <td>SSC</td>
       <td>Little Buds High School</td>
          <td>2003</td>
          <td>85%</td>
    </tr>
</table>
<h1>Technical Skills:</h1>
<ultype=disc>
    <li>Programming Languages : C, JAVA</li>
    <li>Operating Systems    : Windows </li>
    <li>Database Systems     : Oracle</li>
    <li>Web Technologies     : HTML</li>
</ul>
</body>
</html>
```

TEST DATA: Execute the code with any browser

ERROR: No Errors for this Experiment

RESULT: web is developed which consisting of photo, name,   address and education details and skill
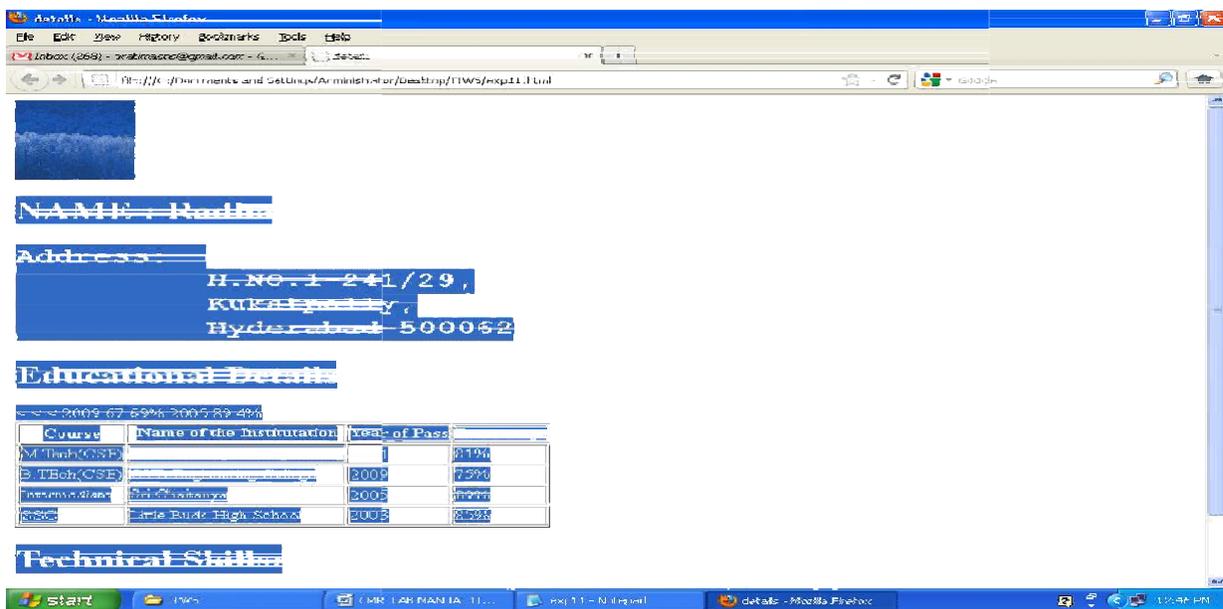
Viva Questions and Answers:

1) What is HTML?
2) What are the different tags available?
3) What is web page?
4) What web developer should know?
5) List out the advantage of HTTP/2 as compared with HTTP 1.1?
6) Explain what is an ETag and how does it work?
7) Explain what is DTD (Document Type Declaration)? Mention what is the difference between CDATA and PCDATA in DTD?
8) In HTML what tag can be used for a multi-line text input control?
9) List out few ways you can reduce page load time?
10) How XHTML is different from HTML?
11) List out the new APIs provided by HTML 5 standard?
12) Mention what is the correct way to include JavaScript into your HTML?

TASK 10:

To create project certificate, Features to be covered:-Formatting Fonts in word, Drop Cap in word, Applying Text effects, Using Character Spacing, Borders and Colors, Inserting Header and Footer, Using Date and Time option in both LaTeX and Word.

AIM:

To create a document applying the above mentioned techniques.

Software Requirement: MS-WORD

Hardware Requirement: Personal computer

THEORY:

Header and Footer:

1. To create a header, enter text or graphics in the header area
or click button on the header and footer tool bar.

2. To create footer, click switch between header and footer.

3. Then click exit.

Date and Time:

Insert a date field that automatically updates so that the current date is
displayed when you open or print the file.

Insert a time field that automatically updates so that the current time
is displayed when you open or print the file.

Border:

- On the format menu, click borders and shadings.

- To specify that the border appears on a particular side of a page, such as only
at the top, click custom under setting.

- To specify a particular page or section for the borders to appear, click the option you want to apply.

- To specify the exact position of the border on the page. Finally, click OK.

Color:

- Select the text you want to make a different color.

- To apply the color most recently applied to text, click font color.

- To apply different colors, click the arrow on the right of the font color button, select the color you want and then click the button.

PROCEDURE:

First click start button on the status bar. Then select program and again select Microsoft word. On the menu bar click the file option. Then again click new. Then enter the text not less than 100 words. A header appears at the top and the footer appears at the bottom of each page. On the view menu, click header and footer option. From dialogue box, make the required changes and then click OK. On the format menu, click borders and shading s make required changes and the click OK. Select the text you want and make the different color. Click on right of the font color button, and then select the color you want and then click on the button.

TEST DATA: No Test data for this Experiment

ERROR: No Errors for this Experiment

RESULT: A document is created by applying the above mentioned techniques

Viva Questions and Answers:

1) What is MS word?
2) What is a title bar?
3) What is menu bar?
4) What is a tool bar?
5) How you can create a custom watermark?
6) How can a break be deleted in the column?
7) How is editing restricted in MS Word?
8) How is cross-referencing created in MS Word?
9) What are the steps to create a macro in MS Word?
10) How is watermark created in MS word?

TASK 11:

Creating project abstract Features to be covered:-Formatting Styles, Inserting table, Bullets and Numbering, Changing Text Direction, Cell alignment, Footnote, Hyperlink, Symbols, Spell Check, Track Changes.

AIM:

To create a document applying the above mentioned techniques.

Software Requirement: MS-WORD

Hardware Requirement: Personal computer

THEORY:

Table:

A table consists of rows and columns.

Cell Alignment:

Aligns contents written in a table in the top left corner or top right

corner or in the center etc...

Foot Note:

Foot notes are used to comments on, or provide references for text in a document.

Hyperlink:

It is a colored and underlined text or a graphic that you click to go to a file, a location in a file, an HTML page on the World Wide Web, or an HTML page in an intranet.

Symbols:

You may not be able to enter certain symbols into your word document, as there is a limitation on the keys on the key board. Creating these new symbols especially when working with mathematical terms it becomes very difficult .For example we can insert symbols such as≡,≈, ,..

Spell check:

It automatically checks for spelling and grammatical errors

Bullets and Numbering:

In Microsoft word we can easily create bulleted or numbered list of

items.

Formatting Styles:

- o A style is a set of rules to be followed for the effective document.
- o Style can be applied to text, paragraph, table or a list.

Changing text direction:

You can change the text orientation in drawing objects, such as text boxes, shapes, and callouts, or in table cells so that the text is displayed vertically or horizontally.

Track changes:

A track change is an excellent feature of Microsoft word as it enables a user or reviewer to keep track of the changes that have taken a period. Changes like insertion, deletion or formatting changes can be kept track of.

Procedure:

Changing Text direction:

1. Click the drawing object or table cell that contains the text you want to change.
2. On the Format menu, click Text Direction.
3. Click the orientation you want.

Table:

1. Click where you want to create a table.
2. On the Table menu, point to Insert, and then click Table.
3. Under Table size, select the number of columns and rows.
4. Under AutoFit behavior, choose options to adjust table size.
5. To use a built-in table format, click AutoFormat.

Select the options you want

Cell Alignment:

1. Click the cell that contains text you want to align.
2. On the Tables and Borders toolbar, select the option for the horizontal and vertical alignment you want— for example, Align Bottom Center or Align Top Right.

Foot Note:

1. In print layout view, click where you want to insert the note reference mark.
2. On the Insert menu, point to Reference, and then click Footnote.
3. Click Footnotes or Endnotes.

   By default, Word places footnotes at the end of each page and endnotes at the end of the document. You can change the placement of footnotes and endnotes by making a selection in the Footnotes or Endnotes box.

4. In the Number format box, click the format you want.
5. Click Insert.

   Word inserts the note number and places the insertion point next to the note number.

6. Type the note text.
7. Scroll to your place in the document and continue typing.

   As you insert additional footnotes or endnotes in the document, Word automatically applies the correct number format.

Hyper link:

Select the text or picture you want to display as the hyperlink, and then click Insert Hyperlink on the Standard toolbar

Do one of the following:

1. Link to an existing file or web page:

   1. Under Link to, click Existing File or Web Page.

2. In the Address box, type the address you want to link to or, in the Look in box, click the down arrow, and navigate to and select the file

2. Link to a file you haven't created yet

Under Link to, click Create New Document.

3. In the Name of new document box, type the name of the new file.
4. Under When to edit, click either Edit the new document later or Edit the new document now

An e-mail address:

1. Select the text or picture you want to display as the hyperlink, and then click Insert Hyperlink on the Standard toolbar
2. Under Link to, click E-mail Address.
3. Either type the e-mail address you want in the E-mail address box, or select an e-mail address in the recently used e-mail addresses box.
4. In the Subject box, type the subject of the e-mail message

A specific location in another document

1. Insert a bookmark in the destination file or Web page.
2. Open the file that you want to link from, and select the text or object you want to display as the hyperlink.

3. On the Standard toolbar, click Insert Hyperlink   .
4. Under Link to, click Existing File or Web Page.
5. In the Look in box, click the down arrow, and navigate to and select the file that you want to link to.
6. Click Bookmark, select the bookmark you want, and then click OK.

Symbol:

1. Click where you want to insert the symbol.
2. On the Insert menu, click Symbol, and then click the Symbols tab.
3. In the Font box, click the font that you want.
4. Double-click the symbol that you want to insert.
5. Click Close

Spell check:

1. On the Standard toolbar, click Spelling and Grammar   .
2. When Word finds a possible spelling or grammatical problem, make your changes in the Spelling and Grammar dialog box.

Bullets and Numbering:

1. Type 1**.** to start a numbered list or ***** (asterisk) to start a bulleted list, and then press SPACEBAR or TAB.
2. Type any text you want.
3. Press ENTER to add the next list item.

   Word automatically inserts the next number or bullet.

4. To finish the list, press ENTER twice, or press BACKSPACE to delete the last bullet or number in the list

Formatting Styles:

1. Select the words, paragraph, list, or table you want to change.
2. If the Styles and Formatting task pane is not open, click Styles and Formatting on the Formatting toolbar
3. Click the style you want in the Styles and Formatting task pane. If

   the style you want is not listed, click All Styles in the Show box

Track Changes:

1. Open the document you want to revise.
2. On the Tools menu, click Track Changes

TEST DATA: No Test data for this Experiment

ERROR: No Errors for this Experiment

RESULT: A document is created by applying the above mentioned techniques

Viva q & A:

1) What is the feature of micro soft word?
2) What is the undo and redo commands?
3) What are the various cell alignments?
4) A Word 97-2003 document will be save in which extension?
5) Maximum number of text column supported by a word document is?
6) Which command will execute a new Word file in a windows machine?
7) A Word 97-2003 document will be save in which extension?

TASK 12:

Creating a Newsletter: Features to be covered:- Table of Content, Newspaper columns, Images from files and clipart, Drawing toolbar and Word Art, Formatting Images, Textboxes, Paragraphs in word.

AIM : Create a news Letter

Software Requirement: MS-WORD

Hardware Requirement: Personal computer

THEORY:

Table of contents:

Table of contents displays a list of headings in a created document. It basically provides an outline of the entire document created

Newspaper columns:

One can create a newspaper columns document by specifying the number of new letter-style column required and then adjust their width , and add vertical lines between columns.

Images from files and clipart:

Inserting a picture (graphic) from a file and clipart may be required for a document. This picture could be a scanned photograph or any other digitally produced one. This pictures can be modified , resized, cropped and enhanced.

Drawing toolbar and Word Art:

One can create his/her own drawings in Microsoft word. Ms word provides

a full fledged drawing tool bar.

Word Art in Microsoft word enables you to create special and decorative text.

Formatting Images, Textboxes and Paragraphs:

Formatting an image includes selecting appropriate color, size, layout and cropping.

Generally the text in a document follows a standard orientation (line after line). A text box provides a different orientation to the text with in a document. It can arrange the text in anywhere and can be resized and moreover moved to any section of the document or even outside.

When you are formatting a paragraph, you do not need to highlight the entire paragraph. Placing the cursor anywhere in the paragraph enables you to format it. After you set a paragraph format, subsequent paragraphs will have the same format unless you change the format

PROCEDURE:

Table of contents:

1. Click where you want to insert the table of contents.
2. On the **Insert** menu, point to **Reference**, and click **Index and Tables**.
3. Click the **Table of Contents** tab.
4. To use one of the available designs, click a design in the **Formats** box.
5. Select any other table of contents options you want.

Newspaper columns:

1. Select the entire or part of document to be converted into a newsletter-style

2. Click on format menu , select columns

3. Any desired number of columns are presets-one or two or three or left or right b\can be selected.

4. Width and spacing can be fixed and equal columns width can be checked for uniformity

5. If newspaper columns are to be separated by a line, then check line between

6. Under apply to will be whole document if entire document is selected else we have to select a selected text.

7. Click ok

Inserting images from files and clip art:

1. Click where you want to insert the picture.
2. On the Insert menu, point to Picture, and then click From File.
3. Locate the picture you want to insert.
4. Double-click the picture you want to insert.

CLIP ART:

1. On the Insert menu, point to Picture, and then click Clip Art.

2. In the Clip Art task pane, in the Search for box, type a word or phrase that describes the clip you want or type in all or some of the file name of the clip.
3. To narrow your search, do one or both of the following:

> To limit search results to a specific collection of clips, in the Search in box, click the arrow and select the collections you want to search.
>
> To limit search results to a specific type of media file, in the Results should be box, click the arrow and select the check box next to the types of clips you want to find.

4. Click Go.

5. If you don't know the exact file name, you can substitute wildcard characters for one or more real characters. Use the asterisk (*) as a substitute for zero or more characters in a file name. Use the question mark (?) as a substitute for a single character in a file name.

6. In the Results box, click the clip to insert it.

Drawing Toolbar and Word Art:

1. Click in your document where you want to create the drawing.
2. On the Insert menu, point to Picture, and then click New

    Drawing. A drawing canvas is inserted into your document.

3. Use the Drawing toolbar to add any shapes or pictures that you

    want

WORD ART:

1. On the Drawing toolbar, click Insert WordArt   . 2.

Click the WordArt effect you want, and then click OK.

3. In the Edit WordArt Text dialog box, type the text you want.

4. Do any of the following:

⌐ To change the font type, in the Font list, select a font.
⌐ To change the font size, in the Size list, select a size.
⌐ To make text bold, click the **Bold** button.
⌐ To make text italic, click the Italic button.

Formatting Images:

      1. Formatting of the images can be achieved by selecting the image and double click on the picture, format picture dialog box appears.

      2. The same can be achieved by selecting the tools menu > customize>tool bars tab>picture and click close.

Basic formatting features of an image

   Resize a drawing

1. Select the drawing canvas
2. On the Drawing Canvas toolbar, do one of the following:
   - To make the drawing canvas boundary larger without changing the size of the objects on the canvas, click Expand   .
   - To make the drawing canvas boundary fit tightly around the drawing objects or pictures, click Fit   .
   - To scale the drawing and make the objects and canvas proportionately smaller or larger, click Scale Drawing, and then drag the edges of the canvas.

Resize a picture or shape

1. Position the mouse pointer over one of the sizing handles
2. Drag the sizing handle until the object is the shape and size you want.

   To increase or decrease the size in one or more directions, drag the mouse away from or toward the center, while doing one of the following:

   - To keep the center of an object in the same place, hold down CTRL while dragging the mouse.
   - To maintain the object's proportions, drag one of the corner sizing handles.
   - To maintain the proportions while keeping the center in the same place, hold down CTRL while dragging one of the corner sizing handles.

Crop a picture

1. Select the picture you want to crop.

2. On the Picture toolbar, click Crop   .

3. Position the cropping tool over a cropping handle and then do one of the following:
   - To crop one side, drag the center handle on that side inward.
   - To crop equally on two sides at once, hold down CTRL as you drag the center handle on either side inward.
   - To crop equally on all four sides at once, hold down CTRL as you drag a corner handle inward.

4. On the Picture toolbar, click Crop to turn off the Crop command.

Text Box:

1. On the Drawing toolbar, click Text Box   .

2. Click or drag in your document where you want to insert the text box

3. You can use the options on the Drawing toolbar to enhance a text box— for example, to change the fill color— just as you can with any other drawing object

Paragraphs: Change line spacing

Select the text you want to change.

1. On the Formatting toolbar, point to Line Spacing, and then do one of the following:
   - To apply a new setting, click the arrow, and then select the number that you want.
   - To apply the most recently used setting, click the button.
   - To set more precise measurements, click the arrow, click More, and then select the options you want under Line Spacing.

Change spacing before or after paragraphs

1. Select the paragraphs in which you want to change spacing.

2. On the Format menu, click Paragraph, and then click the Indents and Spacing tab.

3. Under Spacing, enter the spacing you want in the Before or After box.

Change paragraph direction

1. Place the insertion point in the paragraph that you want to change, or select several paragraphs.

2. Do one of the following:
    ○ To have text begin from the left, click Left-to-Right on the Formatting toolbar.
    ○ To have text begin from the right, click Right-to-Left on the Formatting toolbar.

When you change the paragraph direction, Microsoft Word leaves justified and centered text as it is. In the case of left-aligned or right -aligned text, Word flips the alignment to its opposite. For example, if you have a left-to-right paragraph that is right aligned, such as the date at the top of a letter, clicking Right-to-Left results in a right-to-left paragraph that is left aligned.

Forms:

Using Microsoft word one can create an organized and structured document with a provision to enter the required information into it. A document of such nature is called a form.

Mail Merge:

It helps us to produce from letters mailing labels envelopes catalogs and others types of merged document. It is so found in the tools option on the menu bar. In tools we have letters and mailing. In letters and mailing we have mail merge mail merge tool box envelopes tables and letters wizard. In mail merge select the required document you are working on. A window for customizing the data base structure appears. This file contains the names, address details with contact numbers etc of people you wish to send the letters.

Inserting objects:

Insert an object such as drawing word art text effects or an equation at the inserting point.

Fields:

It inserts a field at the inserting font fields are used to insert a variety of information automatically. Select table in table select insert. In that select insert table a box containing number of rows and columns will appear. Select six colors and four rows and click o.k. Given the first row as date, problem repeated

student's signature action recommended problem status and councilors sign. Insert the objects in the feedback form and apply the text fields in the form.

PROCEDURE:

Mail Merge:

1. Open a document and type the complete body of the letter and format it as required.

2. Create a data source and choose mail merge from tool bar a window is displayed.

3. Click on create button and choose from letter options. Then a window is displayed.

4. Click active window choose currently active document. Click on data and create data source option.

5. A window for customizing the data base structure appears and this file contains the names address details with contact number etc. we can add or remove fields from this file.

6. Once the list of fields is finalized a window of same is displayed and types the required file names and click on save button.

7. A window is displayed. Type the details of 10 candidates. After typing details of one person, click on add menu.

8. Click on the o.k. to finish entering the records mail merge tool bar is displayed.

9. Place the curser at the place where you wish to insert names and click on insert mail merge button. A drop list is displayed all fields created would be shown.

10. By highlighting to desired file and click on it we can insert the field into the main document and go to begin the mail merge click on mail merge.

11. A window is displayed click once on the merge button to generate letters for all records in your data source file.

Forms:

1. Design the form by sketching a layout first, or use an existing form template as a guide. Tables, text boxes, borders, and shading are all design elements that can help you create a well-designed form that's easy to use.
2. On the Standard toolbar, click New Blank Document .
3. Add the text or graphics you want. For example, enter the questions you want answered, and list the available choices.
4. To insert a text box where users can enter their responses, click the document, and then click Text Form Field on the Forms toolbar. If you need more space, you can insert multiple text boxes side by side. To insert check boxes that list choices, such as Yes and No, click the document, and then click Check Box Form Field on the Forms toolbar.
5. Save the form.

Insert line numbers:

1. On the File menu, click Page Setup, and then click the Layout tab.
2. In the Apply to box, click Whole document.
3. Click Line Numbers.
4. Select the Add line numbering check box, and then select the options you want.

TEST DATA: No Test data for this Experiment

ERROR: No Errors for this Experiment

RESULT: A document is created by applying the above mentioned techniques

Viva q & A:

1) What is a table of content?
2) What is word art?
3) What is the function of a text box?
4) What is a Form?
5) What is the purpose of checkbox?
6) What is the mail merge?
7) How do I create a Table of Contents in MS Word?
8) What are the shortcut keys for creating hyperlink?
9) When should Heading Styles be applied in the TOC process?

TASK 13:

Spreadsheet Orientation: Accessing, overview of toolbars, saving spreadsheet files, Using help and resources. **Creating a Scheduler**:- Gridlines, Format Cells, Summation, auto fill, Formatting Text**.**

AIM: To maintain a shift schedule with specifications

Software Requirement: MS-EXCEL

Hardware Requirement: Personal computer

THEORY:

Grid lines:

1. Click the worksheet.
2. On the file menu, click page setup and the click the sheet tab.
3. Click gridlines.
4. Select the sheets on which you want to change the gridlines color.
5. On the Tools menu click options click the color you want in the color box.
6. To use the default gridlines color click automatic.
7. Lines you can add to a chart that make it easier to view and evaluate data. Gridlines extend from the tick marks on an axis across a plot area.

Format Cell:

1. Change the font and font size.
2. Change the text color.
3. Make selected text or numbers bold, italic or underlined.
4. Create a new style.

Auto fit:

1. Combine cells horizontally or vertically to make one large cell.
2. Add borders to cells.
3. Shade cells with colors.

4. Change the column width and row height
5. Change the font, font size or colors of text.
6. Align text vertically at the top, center and bottom of cell.

Formatting the text:

1. Select the text you want to format.

2. On the format menu click cells and then click number tab.

3. In the catalog box click text.

4. Enter the numbers in the formatted cells.

5. Click ok.

6. Then press enter and reenter the data.

PROCEDURE:

First click start button of the screen on status bar. Click on programs and then Microsoft excel. To get a new blank work sheet go to programs and then click on excel sheet. On the file menu click page setup and then click sheet tab click gridlines. In this way do the required changes using format cell, make the required changes using formatting text also make the required changes. Enter the data in the data in the worksheet consisting of week name person name and timings 7 a.m. to 3 p.m. Make all the above changes to the text.

TEST DATA: No Test data for this Experiment

ERROR: No Errors for this Experiment

RESULT: A Excel Sheet is created by applying the above mentioned techniques
Viva Q & A:

1) What do you mean by a spread sheet?

2) What is the Auto Fill?

3) What is a grid line?
4) Explain MS Excel in brief?
5) What do you mean by cells in an Excel sheet?
6) Explain what is a spreadsheet?
7) What do you mean by cell address?
8) Can you add cells?
9) Can you protect workbooks in Excel?
10) Can you protect workbooks in Excel?

TASK 14:

Calculating GPA - .Features to be covered:- Cell Referencing, Formulae in spreadsheet – average, std. deviation, Charts, Renaming and Inserting worksheets, Hyper linking, Count function, Sorting, Conditional formatting.

AIM:

   To maintain a control chart for printing books with given data.

Software Requirement: MS-EXCEL

Hardware Requirement: Personal computer

THEORY:

1. On the chart menu click chart type

2. Text direction.

   Click the arrow down next to the text direction button. For right to left click right to left. For left to right reading order, click left to right.

   For reading order that is consistent with the language of the first entered character, click context. For reading order that is inconsistent with the language of the first entered character, click control.

3. In the tools menu click options and then click chart tab.

4. To show all worksheet data in the chart even if some rows and columns are hidden, clear the plot visible cells by check box.

5. To prevent hidden rows and columns from displaying in the chart, select the plot cells only check box.

Hyper Linking:

1. Create a worksheet: On the file menu, click new, and then click blank workbook taskpane.

2. Insert a worksheet: C lick worksheet on the insert menu. Right click on sheet tab and then click insert double click the template for the type of sheet you want.

---

3. Hyperlink: Using hyperlink we can insert one more sheet in the present sheet

4. Count function: Create a blank worksheet press control +c. In the worksheet select cell A and press control +c. On the tools menu point to formula auditing and then click formula auditing menu.

Worksheet:

1. In the file menu go to menu then a new worksheet is created.

2 To add a single worksheet, click worksheet on the Insert menu. To add multiple worksheets hold down shift and then click the number of worksheet tasks to add in an open workbook

Sort:

1. Click a cell in the list you want to sort.

2. On the Data menu click sort.

3. Under first key sort click the custom sort order you want and then click ok.

4. Click any other sorting option you want.

PROCEDURE:

Formulae in Excel:

First click on start button at the bottom of the screen on status bar. Click on programs and then on Microsoft excel. Then open a new document. Give the main heading and subheading by changing the size so that they look in block letters. Enter the data. To calculate go to Insert menu in the menu bar and then click on function and then ok. Then select the data to which you want to calculate mean. Then you get the required answer. In same way, sample means standard deviation lower count limit and upper count limit. Go to insert menu and click on function and select the required operation to be done and select the data and calculate. Formulas for all the above are given below.

Mean = (s1 + s2 + s3 + s4 + s5)/5;

Sample mean = avg (mean)

Standard deviation = (mean, sample, mean)

Sample standard deviation= avg (Standard deviation)

Lower count limit = sample mean – sample standard deviation.

Upper count limit = Sample mean + Sample Standard deviation

Hyper linking:

First click on start button of the screen on status bar. Click on programs and then Ms-excel. To get a new blank worksheet go to programs and then click on excel sheet. Rename the first sheet as student by right clicking on sheet 1 and renaming. Insert hyperlink insert and click on hyperlink. Then go to sheet 2 and rename as CSE type in particulars of ECE right click on sheet 3. Then go to sheet -4 rename as IT. In this type all the four sheets are created.

WORKSHEET

First click on start button at the bottom of the screen on status bar. Click on programs and then Ms-excel. Then enter the data as given. Enter the student's names, Subjective wise marks, total and avg. Then calculate the total and avg by using formula. Then go to Data menu and click sort. Under first key sort, click custom sort order needed i.e. ascending order or alphabetical order and then click o.k. Then the required worksheet is prepared.

Count Function

Some of the content in this topic may not be applicable to some languages.

1. To count words in selected text only, select the text you want.

   If you don't select any text, Microsoft Word counts the words in the whole document.

2. On the **Tools** menu, click **Word Count**.

   Word displays counts for words, paragraphs, lines, and characters.

3. To add or remove footnotes and endnotes from the count, select or clear they **Include footnotes and endnotes** check box.

VLOOKUP and HLOOKUP Functions

This document explains the functions of VLOOKUP and HLOOKUP and how to use them in a spreadsheet. It can be used in all versions of Microsoft Excel.

VLOOKUP and HLOOKUP are functions in Excel that allow you to search a table of data and based on what the user has supplied and give appropriate information from that table.

If you have a table of Student ID numbers, Student Names and Grades, you can set up Excel so that if a Student ID number is supplied by the user, it will look through the table and output the student's name and grade.

Student ID Number	Student Name	Semester Grade
1234	John Smith	A/B
1689	Jane Jones	B/C
2495	Michelle Schreiner	B
3697	Jack Lepak	A
9228	Rod Arneson	B

A	B	C
VLOOKUP		
Student ID Number	1234	⟵ User supplied
Student Name	John Smith	⟵ From table
Semester Grade	A/B	⟵ From table

VLOOKUP allows you to search a table that is set up vertically. That is, all of the data is set up in columns and each column is responsible for one kind of data. In the Student Record example, there would be a separate column of data for Student Names, one for Student ID numbers, etc.

HLOOKUP is the exact same function, but looks up data that has been formatted by rows instead of columns.

Student ID Number	1234	1689	2495	3697	9228
Student Name	John Smith	Jane Jones	Michelle Schreiner	Jack Lepak	Rod Arneson
Semester Grade	A/B	B/C	B	A	B

The format of the VLOOKUP function is:

VLOOKUP (lookup _value, table _array, col _index _num, range _lookup)

The **lookup _value** is the user input. This is the value that the function uses to search on. If you are searching a table by the Student ID number, then the lookup _value is the cell that contains the inputted Student ID number being looked up.

The **table _array** is the area of cells in which the table is located. This includes not only the column being searched on, but the data columns for which you are going to get the values that you need. Back to the example, the table_array would not only include the Student ID number column, but the columns for the Student Names and Grades as well.

The **col _index _num** is the column of data that contains the answer that you want. If your table is set up as: column 1 - Student ID Number, column 2 - Student Names, column 3 - Grades and you inputted a Student ID Number and you want to retrieve the grade that was received for that person, the col _index _num would be 3. 3 is the column number of the data column for the ANSWER that you are trying to look up.

Range _lookup is a TRUE or FALSE value. When set to TRUE, the lookup function gives the closest match to the lookup _value without going over the lookup _value. When set to FALSE, an exact match must be found to the lookup _value or the function will return #N/A. Note, this requires that the column containing the lookup _value be formatted in ascending order.

To use the Function Wizard to insert a VLOOKUP function:

1. Select the cell that will contain the answer to the VLOOKUP and select **Insert** -> **Function...**

2. Under the **Function Category**, choose either **All** or **Lookup & Reference**.

3. Under the **Function Name**, select **VLOOKUP**, and hit **OK**.

4. The Function Wizard for VLOOKUP will then display. The 4 values talked about above (lookup _value, table _array, col _index _num,

range_lookup) are required by the function. Each line for each value required. If you put the cursor into the first line for lookup _value, down below it explains what the lookup _value is for your reference. Similar information is displayed when the cursor is in any of the other fields.
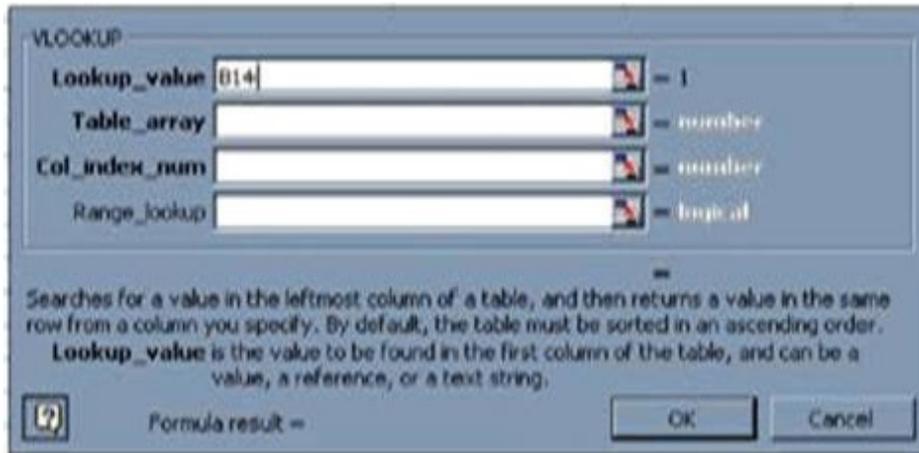
5. Enter in the lookup _value either by typing in the number for the cell, or, by selecting the cell on the worksheet.

6. Enter in the table _array by typing in the numbers for the cells, or, by selecting the group of cells on the worksheet.

7. Enter in the number for column which contains the data that you wish toobtain in the col _index _num area.

8. Enter into the range _lookup field the value TRUE if the function should accept the closest value to your lookup _value without going over or FALSE if an exact match is required.

9. Hit **OK** when ready.

TEST DATA: No Test data for this Experiment

ERROR: No Errors for this Experiment

RESULT: An Excel Sheet is created by applying the above mentioned techniques

Viva Q & A:

1) What is an average function?

2) What is the syntax of average function?

3) What is a count function?

4) Can you protect workbooks in Excel?

5) Average Formula:

6) MAX Formula:

7) VLOOKUP function

8) MIN Formula:

TASK 15:

Creating Power Point: Student should work on basic power point utilities and tools in Latex and Ms Office/equivalent (FOSS) which help them create basic power point presentation. PPT Orientation, Slide Layouts, Inserting Text, Formatting Text, Bullets and Numbering, Auto Shapes, Lines and Arrows, Hyperlinks, Inserting Images, Tables and Charts

TITLE:

      Create a power point presentation consists of slide layouts inserting text, formatting text, bullets and numbering of five slides with following information's.

              Slide 1 – contents

              Slide 2 – Name

              Slide 3 – Address

              Slide 4 – Hobbies

              Slide 5 – Friends

AIM:

   To maintain a PowerPoint presentation with some specifications

THEORY:

SLIDE LAYOUT:

1. On the format menu, click slide layout.
2. On the slides tab in normal view, select the slides; you want to apply a layout too.
3. In the slide layout task pane, point to layout you and then click it.
4. A new slide can also be inserted within the task pane. Point the layout you want the slide to have, click the arrow and then click the insert new slide.

INSERT TEXT:

1. Text can be added to layout.
2. Align text in the top, middle or bottom of a cell.
3. Align text on the right or left, or in the center of a cell.
4. Change cell margins.

5. Insert a tab in a table.

6. To make the symbol command available, in normal view, place the insertion point on the outbox tab or in a text place holders on the slide.

7. On the insert menu, click symbol.

8. To change fonts, click a name in the font box.

FORMATTING TEXT:

1. Select the text you want to format as superscript or subscript.

2. On the format menu, click font.

3. To show or hide text formatting, on the standard toolbar, click show formatting.

BULLETS AND NUMBERINGS:

1. Select the lines of text that you want to add bullets or numbering to.

2. Click bullets or numbering.

AUTOSHAPES:

1. Select the auto shape that has the text you want to position.

2. Double-click the selection rectangle of the auto shape or text box and then click the text box tab in the format dialog box.

3. In the text anchor point box, click the position you want the text to start in.

LINES AND ARROWS:

1. In Microsoft power point, double click the chart.

2. Double click the chart item you want to change.

3. On the patterns tab, do one or both of the following.

4. To change the colors, patterns or lines, select the options you want.

5. To specify a fill effect, click fill efeect and then select the options you want on the gradient, text patterns or picture tabs.

To return to the slide, click outside the about

PROCEDURE:

First click on start button at the button of the screen on status bar. Click on programs and then Microsoft PowerPoint. Go to file and new. Then you find different pattern of slides on right side of your screen. Then select which is completely empty. Then enter the contents in the first slide as per given information, name in the second slide, Address in the third slide, Hobbies in the fourth slide and friends in the fifth slide. Except first slide, all the second, third, fourth, fifth slides should be inserted. When you select pattern of slide from a new slide, on slide which you selected you will find an arrow towards its right side, click that arrow and then again click insert slide. Then save it. Then adjust the layout. Then format the text then give bullets or numbering to the text if required. Go to auto shapes. Select more auto shapes and insert wherever required. Then again go to insert option and select new slides. And select chart and a chart with datasheet appear. Give the name, roll no, marks in three subjects and calculate the total. Then save the file.

TEST DATA: No Test data for this Experiment **ERROR:**

No Errors for this Experiment

RESULT: A Power point Presentation is created by applying the above mentioned techniques

Viva Questions:
1) Explain about power point
2) What is word art?
3) Explain about slide transition
4) How can you rotate the picture in power point?
5) What is the different auto shapes available in power point?
6) What is the advantage of Microsoft PowerPoint?
7) Explain Microsoft PowerPoint
8) How can we create a video in PowerPoint?
9) What is motion path in PowerPoint?
10) What is a trigger in the context of animation?
11) What is handout master in PowerPoint?

(B) __AIM__:

To maintain a PowerPoint presentation using some specifications

__THEORY__:

HYPERLINK:

1. Select the text or object that you want to represent the hyperlink.

2. Click insert hyperlink.

3. Under link to, click place in this document.

INSERT IMAGES:

1. Click where you want to insert the picture.

2. On the drawing tool bar, click insert picture.

3. Locate the folder that contains the picture that you want to insert, and then click the picture file.

CLIP ART:

1. On the insert menu, point to structure and then click clipart.

2. In the clipart task pane, in the search for box, type a word or phrase that describes the clip, you want to type in all or some of the file menus of the clip.

3. In the results box, click the clip to insert it.

AUDIO VIDEO OBJECTS:

1. On the slide show menu, click setup show. Under performance check box. If your computer has their capability, office PowerPoint will attempt to use it.

2. Animation performance will be much better with a video card that has Microsoft direct 3D.

CHART:

1. Click the slide where you want to place the embedded object.

2. On the insert menu, click chart.

3. Click a cell on the data sheet and then type the information you want

To return to the slide, click outside the chart

PROCEDURE:

First click on start button at the bottom of the screen on status bar. Click on programs and then Microsoft power point goes to file menu. Then you find different pattern of slides on right side of your screen. Then select which is completely empty. Then enter the name of your college in bold letters. Address of your college in bold letters in the second slide. List of all the available courses in the third slide, extra co-curricular activities in the fourth slide except first slide, all the second, third, fourth slide should be inserted. When you select pattern of slide from a new slide, on slide which you selected, you will find an arrow towards it right side click that arrow and then again click insert slide. Then save it the select the slide show and then select the view show option. Then review the presentation in slide show by selecting next and after completing the slide show then click end show. Click on start button at the button of the screen on status bar, click on programs and then Microsoft power point. Go to file menu. On insert menu and select table option and give no. of rows and no. of columns and give the name, Roll no and marks in three subjects and find the total

TEST DATA: No Test data for this Experiment

ERROR: No Errors for this Experiment

RESULT: A Power Point Presentation is created by applying the

above mentioned techniques

Viva Questions:
1. Define hyper link
2. Define slide show
3. Define slide transition
4. What is animation
5. How can you insert a table in power point?
6. What is handout master in PowerPoint?
7. What is handout master in PowerPoint?
8. What is handout master in PowerPoint?
9. What is handout master in PowerPoint?
10. What is handout master in PowerPoint?