

JSS 2 FIRST TERM DIGITAL TECHNOLOGIES NOTE

SCHEME OF WORK

WEEK 1	GENERAL TOPIC: Revision of JSS1 Digital Technologies
PERIOD 1 PERIOD 2	Computer components, OS Basics, word processing Spreadsheet, internet and Safety
WEEK 2	GENERAL TOPIC: Advanced word processing
PERIOD 1 PERIOD 2	Using Templates, Styles, Tabs and Indents; Page formatting and Layout
WEEK 3	GENERAL TOPIC: Advanced word processing (Cont'd)
PERIOD 1 PERIOD 2	Creating tables, Inserting charts, Page numbering, Table of content.
WEEK 4	GENERAL TOPIC: Advanced Presentation Software
PERIOD 1 PERIOD 2	Designing slide masters; using themes Adding multimedia elements
WEEK 5	GENERAL TOPIC: Presentation Software (Cont'd)
PERIOD 1 PERIOD 2	Hyperlinks; Interactive Slides Effective presentation skills
WEEK 6	GENERAL TOPIC: Advanced Spreadsheet Operations
PERIOD 1 PERIOD 2	Formulas (SUM, AVERAGE, MAX, MIN) Sorting and filtering data
WEEK 7	GENERAL TOPIC: Spreadsheet Charts
PERIOD 1 PERIOD 2	Creating and customizing bar, Line and pie charts
WEEK 8	GENERAL TOPIC: Spreadsheet Project
PERIOD 1 PERIOD 2	Analyzing school expenses Class performance with chart
WEEK 9	GENERAL TOPIC: Revision of all topics covered in the term
PERIOD 1 PERIOD 2	Revision Revision
WEEK 10	GENERAL TOPIC: Revision
WEEK 11-13	GENERAL TOPIC: Examination /Closure

WEEK ONE

Topic: Digital Technologies

Definition

Digital technology refers to electronic tools, devices, and systems that use digital data (0s and 1s) to process, store, and communicate information. It makes work easier, faster, and more accurate.

Examples of Digital Technologies

- Computers (desktop and laptop)
- Smartphones
- Tablets
- Digital cameras
- Smart televisions
- Internet
- Printers
- Projectors
- Automated Teller Machines (ATMs)

Uses of Digital Technologies

1. Communication (emails, phone calls, video calls, social media)
2. Education (online learning, research, educational apps)
3. Business (online banking, e-commerce, record keeping)
4. Healthcare (electronic medical records, telemedicine)
5. Entertainment (music, movies, games)
6. Agriculture (weather forecasting, smart farming)
7. Transportation (GPS navigation, online ticket booking)

Advantages of Digital Technologies

- Fast communication
- Easy access to information
- Saves time and effort
- Improves learning
- Increases productivity
- Makes business transactions easier
- Stores large amounts of data

Disadvantages of Digital Technologies

- Cybercrime (hacking, online fraud)
- Internet addiction
- Spread of false information
- Privacy and security risks
- Health problems from excessive screen time
- Job loss due to automation in some sectors

Safety Rules for Using Digital Technologies

- Use strong passwords.
- Do not share personal information online with strangers.
- Install antivirus software and keep devices updated.
- Visit only trusted websites.
- Log out after using shared computers.
- Limit screen time and take regular breaks.

- Report suspicious online activities to a trusted adult or teacher.

Importance of Digital Technologies

- Promotes economic growth.
- Improves communication worldwide.
- Supports innovation and creativity.
- Enhances teaching and learning.
- Creates employment opportunities.
- Makes access to services faster and more convenient.

Key Terms

- **Digital Device:** An electronic device that processes digital information.
- **Internet:** A global network that connects computers and devices.
- **Data:** Facts and information processed by computers.
- **Software:** Programs that tell a computer what to do.
- **Hardware:** The physical parts of a computer or digital device.

Digital technologies are electronic tools and systems that help people process, store, and share information efficiently. They are widely used in education, business, healthcare, communication, and entertainment. While they offer many benefits, they should be used responsibly and safely.

Evaluation Questions

1. Define digital technology.
2. List five safety rules for using digital technologies.
3. Explain the importance of digital technologies in everyday life.

Computer Components

Definition

Computer components are the parts that make up a computer system. They are divided into **hardware** and **software**.

A. Hardware

Hardware refers to the physical parts of a computer that can be seen and touched.

Examples of Hardware

- Monitor
- Keyboard
- Mouse
- System Unit
- Printer
- Scanner
- Speakers
- Webcam

Types of Hardware

1. **Input Devices** – Used to enter data into the computer.
 - Keyboard
 - Mouse
 - Scanner
 - Microphone
2. **Output Devices** – Display or produce information.
 - Monitor
 - Printer
 - Speakers
 - Projector
3. **Storage Devices** – Store data and information.
 - Hard Disk Drive (HDD)
 - Solid State Drive (SSD)
 - Flash Drive
 - Memory Card
 - CD/DVD
4. **Processing Device**
 - Central Processing Unit (CPU), also called the "brain" of the computer.

B. Software

Software is a set of programs and instructions that tell the computer what to do.

Types of Software

- System Software
- Application Software

Basic Operating System (OS)

Definition

An **Operating System (OS)** is system software that manages the computer's hardware and software resources and allows users to interact with the computer.

Examples of Operating Systems

- Microsoft Windows
- macOS
- Linux
- Android
- iOS

Functions of an Operating System

1. Starts (boots) the computer.
2. Manages files and folders.
3. Controls hardware devices.
4. Runs application programs.
5. Provides a user interface.
6. Manages memory and storage.
7. Ensures computer security.

Common Desktop Elements

- Desktop
- Icons
- Taskbar
- Start Menu
- Recycle Bin

Word Processing

Definition

Word processing is the use of a computer program to create, edit, format, save, and print documents.

Examples of Word Processing Software

- Microsoft Word
- Google Docs
- LibreOffice Writer
- WPS Writer

Features of a Word Processor

- Typing text
- Editing text
- Spell checking
- Copy and paste
- Inserting pictures and tables
- Changing fonts and colours
- Printing documents

Uses of Word Processing

- Writing letters
- Preparing reports
- Creating assignments
- Producing newsletters
- Making certificates

Spreadsheets

Definition

A spreadsheet is software used to organize, calculate, analyze, and present data in rows and columns.

Examples of Spreadsheet Software

- Microsoft Excel
- Google Sheets
- LibreOffice Calc
- WPS Spreadsheets

Parts of a Spreadsheet

- Workbook
- Worksheet
- Rows
- Columns
- Cells
- Formula Bar
- Name Box

Uses of Spreadsheets

- Calculating totals
- Preparing budgets
- Recording students' scores
- Managing business records
- Creating charts and graphs

Basic Spreadsheet Formulas

- =SUM (A1 : A5) – Adds numbers.
 - =AVERAGE (A1 : A5) – Finds the average.
 - =MAX (A1 : A5) – Finds the highest value.
 - =MIN (A1 : A5) – Finds the lowest value.
-

5. Internet

Definition

The Internet is a worldwide network of computers that allows people to communicate and share information.

Common Internet Services

- Email
- World Wide Web (WWW)
- Video conferencing
- Social media
- Online learning
- Online banking
- Cloud storage

Uses of the Internet

1. Research
2. Communication
3. Online shopping
4. Entertainment
5. Education
6. Banking
7. Job searching

Advantages

- Fast communication
- Easy access to information
- Supports online learning
- Promotes business
- Global connectivity

Disadvantages

- Cybercrime
- Fake news
- Internet addiction
- Privacy risks
- Cyberbullying

Internet Safety

Definition

Internet safety refers to the practices that protect users from online dangers while using the internet.

Safety Rules

1. Use strong passwords.
2. Never share personal information with strangers.
3. Think carefully before clicking links.
4. Use trusted websites.
5. Install antivirus software.
6. Keep software updated.
7. Log out after using shared computers.
8. Do not download files from unknown sources.
9. Report cyberbullying or suspicious activities to a trusted adult, parent, or teacher.
10. Limit screen time and balance online activities with offline activities.

Online Threats

- Viruses
- Malware
- Phishing
- Hacking
- Identity theft
- Cyberbullying
- Online scams

Computer components consist of hardware and software that work together to perform tasks. The operating system manages the computer and its resources. Word processors are used to create and edit documents, while spreadsheets help organize and calculate data. The internet connects people and computers worldwide, providing many useful services. Practicing good internet safety helps protect users, their information, and their devices.

Evaluation Questions

1. Define computer hardware and software.
2. State four input devices and four output devices.
3. Explain internet safety

4. Mention six online threats and six internet safety rules

WEEK 2

Topic: Advanced Word Processing

Introduction

Advanced word processing involves using special tools in a word processing program to create professional-looking documents. These tools help users save time, improve document appearance, and make editing easier.

Examples of Word Processing Software

- Microsoft Word
- Google Docs
- LibreOffice Writer
- WPS Writer

Using Templates

Definition

A **template** is a ready-made document with a pre-designed layout and formatting that can be used to create new documents quickly.

Examples of Templates

- Letters
- Reports
- Resumes (CVs)
- Certificates
- Newsletters
- Invitations
- Brochures

Advantages of Templates

- Saves time.
- Gives documents a professional appearance.
- Ensures consistency in formatting.
- Reduces errors during document creation.

Steps to Use a Template

1. Open the word processing program.
2. Click **File** → **New**.
3. Choose a template.
4. Edit the text to suit your needs.
5. Save the document with a new name.

Styles

Definition

A **style** is a set of formatting instructions that can be applied to text with one click.

Types of Styles

- Title Style
- Heading 1
- Heading 2
- Normal Style
- Quote Style

Uses of Styles

- Makes documents neat and organized.
- Ensures consistent formatting.
- Speeds up document editing.
- Helps create automatic tables of contents.

How to Apply a Style

1. Select the text.
2. Go to the **Home** tab.
3. Choose a style from the **Styles** group.
4. Click the desired style.

Tabs and Indents

Tabs

Definition

A **tab** moves the cursor to a fixed position on a line for proper alignment of text.

Types of Tabs

- Left Tab
- Center Tab
- Right Tab
- Decimal Tab

Uses of Tabs

- Align text neatly.
- Create tables without borders.
- Organize lists and information.

Indents

Definition

An **indent** is the space between the text and the page margin.

Types of Indents

- Left Indent
- Right Indent
- First Line Indent
- Hanging Indent

Uses of Indents

- Improve document appearance.
- Separate paragraphs.
- Format essays and reports.
- Create professional documents.

Page Formatting

Definition

Page formatting is the process of changing the appearance of a document page.

Common Page Formatting Features

- Margins
- Page Orientation (Portrait and Landscape)
- Paper Size (A4, Letter)
- Page Borders
- Page Colour
- Watermark
- Headers and Footers
- Page Numbers

Importance of Page Formatting

- Makes documents attractive.
- Improves readability.
- Prepares documents for printing.
- Gives documents a professional look.

Page Layout

Definition

Page layout refers to the arrangement of text, pictures, and other elements on a page.

Page Layout Features

- Margins
- Orientation
- Columns
- Breaks
- Line Numbers
- Hyphenation
- Spacing

Importance of Good Page Layout

- Makes information easy to read.
- Organizes content neatly.
- Improves the presentation of reports and projects.
- Gives documents a professional appearance.

Advanced word processing involves using features such as templates, styles, tabs, indents, page formatting, and page layout to produce neat, attractive, and professional documents. These features help users work faster, maintain consistency, and improve the quality of their documents.

Questions

1. Define tabs and mention four types of tabs.
2. What is an indent? List four types of indents.

WEEK 3

Creating Tables

Definition

A **table** is a collection of rows and columns used to organize information neatly.

Parts of a Table

- **Rows** – Horizontal lines of cells.
- **Columns** – Vertical lines of cells.
- **Cells** – Boxes formed where rows and columns meet.

Uses of Tables

- Organizing data.
- Preparing timetables.
- Recording students' scores.
- Presenting financial information.
- Creating schedules and reports.

Steps for Creating a Table (Microsoft Word)

1. Open Microsoft Word.
2. Click the **Insert** tab.
3. Click **Table**.
4. Select the required number of rows and columns.
5. Enter your information into the table.

Editing a Table

- Add or delete rows and columns.
- Merge or split cells.
- Change table borders.
- Apply table styles.
- Adjust row height and column width.

Advantages of Tables

- Organize information neatly.
- Make data easy to read.
- Improve document appearance.
- Simplify comparison of information.

. Inserting Charts

Definition

A **chart** is a graphical representation of data that makes information easier to understand.

Common Types of Charts

- Bar Chart
- Column Chart
- Pie Chart
- Line Chart

Uses of Charts

- Comparing values.
- Showing trends.
- Displaying percentages.
- Presenting statistical information.

Steps to Insert a Chart

1. Click the **Insert** tab.
2. Select **Chart**.
3. Choose the desired chart type.
4. Enter or edit the data.
5. Click **OK**.

Advantages of Charts

- Make information easier to understand.
- Improve presentations.
- Help in data analysis.
- Make reports more attractive.

Page Numbering

Definition

Page numbering is the process of adding numbers to the pages of a document.

Importance of Page Numbering

- Helps readers locate information easily.
- Organizes long documents.
- Makes reports and projects professional.
- Prevents confusion when pages are mixed up.

Steps to Insert Page Numbers

1. Click the **Insert** tab.
2. Select **Page Number**.
3. Choose the position (Top, Bottom, or Margin).
4. Select a numbering style.
5. Click **Close Header and Footer**.

Types of Page Number Positions

- Top of Page
- Bottom of Page
- Page Margins
- Current Position

Table of Contents (TOC)

Definition

A **Table of Contents (TOC)** is a list of the main headings and subheadings in a document, together with their page numbers.

Importance of a Table of Contents

- Helps readers find topics quickly.
- Organizes long documents.
- Gives a professional appearance.
- Saves time when locating information.

Steps to Create a Table of Contents

1. Apply **Heading Styles** (Heading 1, Heading 2, etc.) to the document headings.
2. Place the cursor where the Table of Contents should appear.
3. Click the **References** tab.
4. Select **Table of Contents**.
5. Choose an automatic Table of Contents style.

Updating the Table of Contents

If changes are made to the document:

1. Click anywhere in the Table of Contents.
2. Select **Update Table**.

Choose **Update page numbers only** or **Update entire table**

Practical Activities

Students should be able to:

1. Create a table with five rows and four columns.
2. Enter and format data in the table.
3. Insert a bar chart using sample data.
4. Add page numbers to a document.

5. Create and update a Table of Contents using heading styles

Tables help organize information into rows and columns. Charts present data visually for easier understanding. Page numbering makes documents easy to arrange and reference, while a Table of Contents helps readers quickly locate sections in long documents. These features improve the quality, organization, and professionalism of documents

QUESTIONS

1. What is a chart?
2. List four types of charts.
3. State four uses of charts

WEEK 4

Presentation Software

Introduction

Presentation software is an application used to create and display information in the form of slides. It is commonly used for teaching, business meetings, seminars, and public speaking.

Examples of Presentation Software

- Microsoft PowerPoint
- Google Slides
- LibreOffice Impress
- WPS Presentation
- Apple Keynote

Designing Slide Master

Definition

A **Slide Master** is the main slide that controls the overall design and layout of all the slides in a presentation. Changes made to the Slide Master are automatically applied to every slide that uses that layout.

Features of the Slide Master

- Background colour or image
- Fonts and font sizes
- Logo placement
- Headers and footers
- Date and time
- Slide number
- Placeholder positions (title and content)

Importance of the Slide Master

- Ensures a consistent design throughout the presentation.
- Saves time by applying changes to all slides at once.

- Gives the presentation a professional appearance.
- Makes editing easier.

Steps to Open the Slide Master (Microsoft PowerPoint)

1. Open Microsoft PowerPoint.
2. Click the **View** tab.
3. Select **Slide Master**.
4. Make the desired changes.
5. Click **Close Master View** to return to the presentation

Using Themes

Definition

A **theme** is a ready-made set of colours, fonts, backgrounds, and effects that gives a presentation a consistent and attractive appearance.

Components of a Theme

- Colours
- Fonts
- Backgrounds
- Effects
- Slide layouts

Importance of Themes

- Makes presentations attractive.
- Maintains a uniform design.
- Saves time.
- Improves readability.
- Gives presentations a professional look.

Steps to Apply a Theme

1. Open the presentation.
2. Click the **Design** tab.
3. Select a theme from the gallery.
4. Click the preferred theme to apply it.

Tips for Choosing a Theme

- Use clear and readable fonts.
- Choose colours with good contrast.
- Avoid overly bright or distracting backgrounds.
- Keep the design simple and neat.

Adding Multimedia Elements

Definition

Multimedia elements are different types of media added to a presentation to make it more interesting and engaging.

Examples of Multimedia Elements

- Pictures
- Audio (sound or music)
- Videos
- Animations
- Shapes
- Icons
- SmartArt
- Charts

Steps to Insert Pictures

1. Click the **Insert** tab.
2. Select **Pictures**.
3. Choose the image.
4. Click **Insert**.

Steps to Insert Audio

1. Click the **Insert** tab.
2. Select **Audio**.
3. Choose an audio file.
4. Click **Insert**.

Steps to Insert Video

1. Click the **Insert** tab.
2. Select **Video**.
3. Choose the video file.
4. Click **Insert**.

Benefits of Multimedia

- Captures the audience's attention.
- Makes lessons and presentations more interesting.
- Helps explain difficult concepts.
- Improves understanding and memory.
- Makes presentations more interactive.

Guidelines for Using Multimedia

- Use only relevant images, audio, and videos.
- Avoid adding too many animations or sound effects.
- Ensure multimedia files are clear and of good quality.
- Test videos and audio before presenting.
- Keep slides simple and uncluttered.

QUESTIONS

1. Define presentation software.
2. Mention five examples of presentation software

Hyperlinks

Definition

A **hyperlink** is a clickable text, image, or object that takes the user to another slide, file, web page, or email address.

Types of Hyperlinks

1. Hyperlink to another slide in the presentation.
2. Hyperlink to a website.
3. Hyperlink to another file or document.
4. Hyperlink to an email address.

Uses of Hyperlinks

- Navigate quickly between slides.
- Open websites during a presentation.
- Access additional documents or resources.
- Create interactive presentations.
- Save time while presenting.

Steps to Insert a Hyperlink (Microsoft PowerPoint)

1. Select the text or object.
2. Click the **Insert** tab.
3. Click **Link** or **Hyperlink**.
4. Choose the destination (slide, file, website, or email).
5. Click **OK**.

Advantages of Hyperlinks

- Improve navigation.
 - Make presentations interactive.
 - Provide quick access to information.
 - Enhance audience engagement
 - **Interactive Slides**
 - **Definition**
 - **Interactive slides** are presentation slides that allow users to interact with the content by clicking buttons, links, images, or other objects.
 - **Features of Interactive Slides.**
-
- Action buttons
 - Hyperlinks
 - Navigation buttons
 - Multimedia (audio and video)
 - Animations
 - Trigger effects

Uses of Interactive Slides

- Educational lessons
- Quizzes and tests

- Business presentations
- Self-learning tutorials
- Games and classroom activities

Steps to Create Interactive Slides

1. Insert a shape or button.
2. Select the object.
3. Click **Insert** → **Action** or **Link**.
4. Choose what should happen when the object is clicked.
5. Test the presentation in **Slide Show** mode.

Benefits of Interactive Slides

- Increase audience participation.
- Improve understanding.
- Make presentations more interesting.
- Encourage active learning.
- Improve information retention.

Effective Presentation Skills

Definition

Presentation skills are the abilities needed to communicate ideas clearly and confidently to an audience.

Qualities of an Effective Presenter

- Confidence
- Good communication skills
- Clear voice
- Good eye contact
- Proper posture
- Good time management
- Respect for the audience

Tips for Delivering an Effective Presentation

1. Prepare well before presenting.
2. Know your topic.
3. Speak clearly and loudly enough.
4. Maintain eye contact with the audience.
5. Use simple and readable slides.
6. Avoid reading directly from the slides.
7. Use gestures naturally.
8. Encourage questions when appropriate.
9. Keep to the allotted time.
10. End with a clear summary.

Common Mistakes to Avoid

- Reading every word on the slides.
- Using too much text.
- Speaking too fast or too softly.

- Overusing animations and sound effects.
- Ignoring the audience.
- Poor preparation.

QUESTIONS

1. Define a hyperlink.
2. Mention four types of hyperlinks.
3. State four uses of hyperlinks.

WEEK 6

Advance Spreadsheet Operations

Introduction

A **spreadsheet** is an application used to organize, calculate, analyze, and present data in rows and columns. It helps users perform calculations quickly and accurately.

Examples of Spreadsheet Software

- Microsoft Excel
- Google Sheets
- LibreOffice Calc
- WPS Spreadsheets

Spreadsheet Operations

Definition

Spreadsheet operations are the activities carried out in a spreadsheet to enter, edit, calculate, organize, and analyze data.

Basic Spreadsheet Operations

1. Entering data into cells.
2. Editing and deleting data.
3. Saving and opening workbooks.
4. Formatting cells.
5. Copying and moving data.
6. Inserting and deleting rows and columns.
7. Printing worksheets.

Parts of a Spreadsheet

- **Workbook** – A spreadsheet file.
- **Worksheet** – A single page within a workbook.
- **Row** – Horizontal arrangement of cells.
- **Column** – Vertical arrangement of cells.
- **Cell** – The intersection of a row and a column.
- **Cell Address** – The location of a cell (e.g., A1, B5, C10).

Importance of Spreadsheet Operations

- Organizes data efficiently.
- Performs calculations quickly.
- Reduces errors.
- Saves time.
- Makes data analysis easier.

. Spreadsheet Formulas

Definition

A **formula** is an expression used to perform calculations in a spreadsheet. Every formula begins with an **equal sign (=)**.

Examples of Formulas

- =A1+B1
- =A2-B2
- =A3*B3
- =A4/B4

Importance of Formulas

- Perform calculations automatically.
- Save time.
- Reduce mistakes.
- Improve accuracy.

Common Spreadsheet Functions

Functions are built-in formulas that perform specific calculations.

A. SUM Function

Definition

The **SUM** function adds numbers together.

Syntax

=SUM (A1 : A5)

Example

A
10
20
30
40
50

Formula:
=SUM (A1 : A5)

Answer: 150

Uses

- Calculating total scores.
- Adding sales figures.

Finding total exp **AVERAGE Function**

Definition

The **AVERAGE** function calculates the mean (average) of a group of numbers.

Syntax

=AVERAGE (A1 : A5)

Example

A
10
20
30
40
50

Formula:
=AVERAGE (A1 : A5)

Answer: 30

Uses

- Calculating average examination scores.
- Finding average sales.
- Determining average temperatures.

MAX Function

Definition

The MAX function returns the largest value in a range of cells.

Syntax

=MAX (A1 : A5)

Example

A
10
20
30
40
50

Formula:

=MAX (A1 : A5)

Answer: 50

Uses

- Finding the highest score.
- Determining the highest sales figure.
- Identifying the maximum value in a list.

. MIN Function

Definition

The **MIN** function returns the smallest value in a range of cells.

Syntax

=MIN (A1 : A5)

Example

A
10
20
30
40
50

Formula:

=MIN (A1 : A5)

Answer: 10

Uses

- Finding the lowest score.
- Determining the lowest sales figure.
- Identifying the minimum value in a list.

Sorting Data

Definition

Sorting is the process of arranging data in a particular order.

Types of Sorting

1. **Ascending Order** – From smallest to largest (A–Z or 0–9).
2. **Descending Order** – From largest to smallest (Z–A or 9–0).

Steps for Sorting Data

1. Select the data.
2. Click the **Data** tab.
3. Choose **Sort A–Z** or **Sort Z–A**.
4. The data is rearranged automatically.

Importance of Sorting

- Makes information easy to find.
- Organizes records neatly.
- Improves data analysis.
- Saves time.

Filtering Data

Definition

Filtering is the process of displaying only the data that meets specific conditions while hiding the rest.

Uses of Filtering

- Find specific records quickly.
- Display selected information.
- Analyze large amounts of data.
- Improve data management.

Steps for Filtering Data

1. Select the table or data.
2. Click the **Data** tab.
3. Click **Filter**.
4. Click the drop-down arrow in a column.
5. Choose the required criteria.

Example

A teacher can filter a class list to display only students who scored **50 and above**.

QUESTIONS

1. Define a spreadsheet.
2. What are spreadsheet operations?
3. Explain the steps for filtering data in a spreadsheet.

WEEK 7

Creating and Customizing Charts

Introduction

A **chart** is a graphical representation of data in a spreadsheet. Charts help users understand information more easily by presenting data in visual form. Spreadsheet programs such as **Microsoft Excel**, **Google Sheets**, and **LibreOffice Calc** provide different chart types for displaying data

Creating Charts

Definition

Creating a chart is the process of converting numerical data into a graphical form for easy understanding and analysis.

Steps to Create a Chart

1. Enter data into the spreadsheet.
2. Highlight (select) the data.
3. Click the **Insert** tab.
4. Select **Chart**.
5. Choose the desired chart type.
6. The chart will appear on the worksheet.

Advantages of Charts

- Make data easy to understand.
- Help compare values quickly.
- Show trends and patterns.
- Improve reports and presentations.
- Make information more attractive.

Bar Chart

Definition

A **bar chart** uses horizontal or vertical bars to compare different categories of data.

Uses of a Bar Chart

- Comparing students' examination scores.
- Comparing monthly sales.
- Comparing population of different towns.

Comparing the number of books borrowed from a library

Example

Subject	Score
English	75
Mathematics	82

Subject	Score
Basic Science	68
Computer Studies	90

Line Chart

Definition

A **line chart** uses lines to show changes or trends over a period of time.

Uses of a Line Chart

- Showing monthly rainfall.
- Displaying changes in temperature.
- Tracking school attendance.
- Showing business sales over several months.

Example

Month Sales

January	200
February	250
March	300
April	280

Pie Chart

Definition

A **pie chart** is a circular chart divided into slices to show how each category contributes to the whole.

Uses of a Pie Chart

- Showing a class budget.
- Displaying election results.
- Showing market share.
- Presenting percentages of different categories.

Example

Item Percentage

Food	40%
Transport	20%
Clothing	15%
Education	25%

Customizing Charts

Definition

Chart customization is the process of changing the appearance of a chart to make it clearer and more attractive.

Ways to Customize a Chart

- Change the chart title.
- Change chart colours.
- Add data labels.
- Add or remove a legend.
- Change the chart style.
- Change the background.
- Add axis titles (for bar and line charts).
- Resize or move the chart.

Steps to Customize a Chart

1. Click the chart.
2. Select the **Chart Design** or **Format** tab.
3. Choose the feature you want to change.
4. Apply the changes and save your work.

Importance of Customizing Charts

- Makes charts easier to read.
- Improves the appearance of reports.
- Highlights important information.
- Makes presentations more professional.

QUESTIONS

- What is a bar chart?
- State four uses of a bar chart.
- List two ways of customizing a chart

WEEK 8

SPREADSHEET PROJECT

Analyzing School Expenses

Introduction

A **spreadsheet** can be used to analyze school expenses and students' academic performance. By using **charts**, data can be presented visually, making it easier to understand, compare, and interpret.

Charts help teachers, school administrators, and students identify trends, compare values, and make info

Definition

School expense analysis is the process of examining how money is spent on different school activities or items.

Example of School Expenses

Item	Amount (₹)
Books	25,000
Stationery	15,000
Sports	10,000
Laboratory	30,000
Maintenance	20,000

Suitable Charts

- **Pie Chart** – Shows the percentage of money spent on each item.
- **Bar Chart** – Compares the amount spent on different items.

Importance of Analyzing School Expenses

- Helps control spending.
- Supports proper budgeting.
- Identifies areas of high expenditure.
- Assists school management in planning.

Example: School Expenses (Pie Chart)

School expenses

Distribution of school expenses by category.

Books
Laboratory
Maintenance
Sports
Stationery

Analyzing Class Performance

Definition

Class performance analysis is the process of examining students' scores to measure their academic achievement.

Example of Students' Scores

Subject	Average Score
English	70
Mathematics	82
Basic Science	75
Computer Studies	88
Social Studies	73

Suitable Charts

- **Bar Chart** – Compares average scores in different subjects.
- **Line Chart** – Shows changes in class performance over several tests or terms.

Importance of Analyzing Class Performance

- Identifies strong and weak subjects.
- Helps teachers improve instruction.
- Encourages students to improve.
- Assists in monitoring academic progress.

Example: Class Performance (Bar Chart)

Average class performance

Average scores by subject.

English, Mathematics, Basic Science, Computer Studies, Social Studies

Steps to Create a Chart in Microsoft Excel

1. Enter the data into the worksheet.
2. Highlight the data to be analyzed.
3. Click the **Insert** tab.
4. Select the desired chart type (Bar, Line, or Pie).
5. Add a chart title.
6. Insert data labels if necessary.
7. Save the workbook.

4. Choosing the Right Chart

Chart Type	Best Used For
Bar Chart	Comparing values between different categories
Line Chart	Showing changes or trends over time
Pie Chart	Showing how each part contributes to a whole

Benefits of Using Charts

- Makes data easy to understand.
- Simplifies comparison of information.
- Helps identify trends and patterns.
- Supports decision-making.
- Improves reports and presentations

QUESTION

1. Differentiate between a **bar chart**, **line chart**, and **pie chart**

After each topic, please answer the questions that follows in your new test and assignment exercise book, to be submitted on resumption.