**Book: Computer Science** **Class: VI**

# L -1 TYPES OF COMPUTERS AND LANGUAGES

**Do it yourself 1A:**

**Match the following:**

| Type of computer | Feature | |
|---|---|---|
| Tablet and smartphones | Smaller than mainframe | **4** |
| Super computer | Need a lot of power and specialized cooling to stay cool | **3** |
| Mainframe computer | Can be carried anywhere | **1** |
| Minicomputer | Performance is measured in FLOPS | **2** |

**Do it yourself 1B:**

**1. Fill in the blanks:**

**a.** A program that converts assembly language into machine language is called **Assembler**

**b. Fifth Generation** languages require less code to accomplish tasks.

**2. Write T for True or F for False.**

**a.** A compiler translates the source code written in high level language into machine language in one go. **True**

**b.** A computer is an intelligent machine, so it does not require a translator. **False**

**CHAPTER CHECKUP:**

**A. Fill in the blanks :**

**1.** A special unit called **FLOPS** is used to measure how fast supercomputer work.

**2.** **Mainframe** computers are super reliable, and they can work for a long time-at least 10 years.

**3.** **Personal** Computers are the most common type of computer and are designed for individual use.

**4.** The language that includes the use of binary codes is called **binary** language.

**5.** The assembly language uses simple **mnemonic** code instead of binary numbers to communicate with the computers.

**B. Tick the (✓) the Correct option.**

**1.** Computer language can be defined as

**a.** The language that computers speak.

✓**b. A way in which computers understand instructions.**

**c.** A way of computer–to-computer communication

**d.** A way of communication between different types of machine.

**2.** Which computer language is used for giving low-level commands to a computer?

✓**a. Binary** b. Spanish c. Emoji d. English

**3.** A can convert a source code into binary code line-by-line.

a. Assembler ✓**b. Interpreter** c. Compiler d. Processor

**4.** LISP is a _____ language.

a.High-level b. Low-level c. Assembly ✓**d. Fifth generation**

**5.** _____ generation languages enable users to access the database.

a.First generation b. Second generation c. Third generation ✓**d. Fourth generation**

**C. Who am I?**

**1.** I am a second generation of programming language, which uses special code symbols like ADD and SUB.

**Assembly Language**

2. I use 0s and 1s in binary code to give instructions to the computer. **Binary language**
3. I am a program that helps computers understand various languages. **Translator program**
4. I am a computer that is used for creating 3D designs. **Workstation**
5. I am a computer that is portable and can be taken from one place to another. **Personal Computer**

**D. Write T for True and F for False.**

1. Many people can be use the supercomputers at the same time. **True**
2. Mainframe computers are bigger than supercomputers. **False**
3. Minicomputers are small, so they cannot run multiple operating systems simultaneously. **False**
4. Workstations have touch –enabled screen. **False**
5. Fourth generation languages are called procedural languages. **False**

**E. Answer the following:**

**1. What is a computer language?**

**Ans.** A computer language can be defined as a set of instructions that computers can understand and follow.

**2. Name the categories of computers based on their size and functionality.**

**Ans.** Based on their size and capacity, the computers can be categorized into supercomputers, mainframes, minicomputers, workstations, personal computers, laptops, and tablets.

**3. Write the features of mainframe computers.**

**Ans.** The features of mainframe computers are:

a. Mainframe computers are big and super-fast, but they are smaller than supercomputers.
b. They can do lots of jobs quickly.
c. They are used in places where high precision is required, such as in banks to handle money transactions or in aeroplane guidance.
d. Mainframes are super reliable, and they can workforalongtime—atleast10years.
e. Examples: IBMz15, IBMz14, Unisys Clear Path Libra, Fujitsu GS21360, and Hitachi VOS3.

**4. Differentiate between a compiler and an interpreter.**

**Ans.** A compiler is a language processor that reads the source programs written in high-level language and converts them into an equivalent program written in machine code in one go. On the other hand, the interpreter is a translator program that converts high-level language code to machine language line by line as the program runs.

**5. How is assembly language different from machine language?**

**Ans.** Assembly language uses a simple mnemonic code to communicate with computers. On the other hand, the language that includes the use of binary code is called binary language.

## L-2 SERVICES ON THE INTERNET

**Do it yourself 2A:**

**Name the following advantages:**

1. Online shopping
2. Communication
3. Maps and Navigation
4. Online payment

**Do it yourself 2B:**

**Identify which of the following are good net practices. Write G for good and B for bad practices.**

1. Sharing personal information with unknown persons online. **B**
2. Using emojis. **G**

**3.** Using capital letters while chatting. **B**

**4.** Using someone else's work or ideas without their knowledge. **B**

**5.** Write in a way that is easy to understand. **G**

**CHAPTER CHECKUP:**

**A. Fill in the blanks :**

**1.** The **Internet** is a global network of computers that are conned to each other.

**2.** **Email** is a way to send and receive messages over the internet.

**3.** A **blog** is a website to share thoughts.

**4.** The Internet was invented in the **1960s**.

**5.** E – commerce is used to buy and **sell** goods and services online.

**B. Tick the (✓) the Correct option.**

**1.** Which of the following is not an internet service?

a. Google b. Email c. Chatting ✓**d. Television**

**2.** What is blog?

✓**a. A writer's thoughts and opinions on a particular topic.** b. News and current events

c. Product reviews d. All of these

**3. What is podcast?**

a. An audio or video recording that is published online and can be downloaded or streamed

b. A live radio broadcast

c. A short video clip that is shared online

✓ **d. None of these**

**4.** Which of the following is NOT a good netiquette practice?

a. Be polite and respectful to others. b. Avoid using offensive language

✓**c. Share personal information about yourself or others.** d. Avoid using capital letters

**5.** _____ involves creating and sharing audio content.

✓**a. Podcasting** b. Blogging c. E-commerce d. None of these

**C. Who Am I?**

**1.** I allow you to send and receive message electronically. **E-mail**

**2.** I am a website where you can share your thoughts and ideas. **Blog**

**3.** I am a type of digital audio recording that can be shared online. **Podcasting**

**4.** I have a set of rules for online behavior. **Netiquette**

**5.** I allow you to make online payments. **UPI**

**D. Write T for True or F for False.**

**1.** The internet serves as a network connecting various computer systems. **True**

**2.** There is no limit for file size while attaching with email on Gmail. **False**

**3.** A blog is used to share thoughts. **True**

**4.** A netiquette is a way to share thoughts in an audio form. **False**

**5.** Online transactions can lead to security breaches, raising privacy concerns. **True**

**E. Answer the following.**

**1. What is the internet?**

**Ans.** The internet is a network that connects computers all over the world

**2. What is Email? What are the advantages of Email?**

**Ans.** Email stands for electronic mail. It is a way to send messages over the internet to other people. Emails can be used to send textual content, photos, documents, and others as attachments. Following are the advantages of

an email:

a. Most email services are free and easy to use.
b. You can send a message in real time to a person anywhere across the globe.
c. Emails are personal and are secured with passwords.

**3. What is podcasting?**

**Ans.** Podcasting is a way to create and distribute audio content. This content can include discussions, interviews, storytelling, music, and more.

**4. Mention any two netiquette you should follow while online?**

**Ans.** Following are the netiquette rule one should follow while online:

a. Treat others on the internet the way you want to be treated. Do not say or write mean or hurtful things.
b. Write in a way that is easy to understand, and avoid using all capital letters (LIKE THIS) or unnecessary punctuation (!!!! Or *!?*#), which can seem like shouting or being rude.

**5. Name and explain two online payment methods.**

**Ans.** Examples of Modes of Online Payments: Credit Card: Customers can make online payments using their credit cards. The customers need to enter card details like their card number, expiration date, and CVV code for transactions. Debit Card: Debit cards are another popular option for making online payments. These cards allow users to pay online by entering debit card information, and the transaction amount is deducted directly from their bank account.

## L-3 FEATURES IN A PRESENTATION

**Do it yourself 3A:**

**1. Write T for True or F for False.**

**a.** To animate text, first click on Slide and then Animation. **False**

**b.** Click on the Play button to check how that animation effect works on the selected objects. **True**

**Do it yourself 3B:**

**Explain the functions of these icons.**

a. **Play:** You can preview the transition by clicking the Play button in the Transition sidebar.
b. **Apply to all slides:** The Apply to all Slides Button is used to apply the same transition effect to all slides in the presentation.

**Do it yourself 3C:**

**1. Name the menu you click to select an action button.**

**Ans.** Slide menu

**2. What should you do in Google Slides to test if your action button works properly?**

**Ans.** Click on the slide show button.

**Do it yourself 3D:**

**Write T for True or F for False.**

**1.** Importing slides helps to add slides from another presentation to your current presentation. **True**

**2.** You cannot import data into Google Slides from any other data source other than Google Slides. **False**

**Do it yourself 3E:**

**Write T for True or F for False.**

**1.** To access the Dictionary feature, right click on the word and choose “Define” from the context menu. **True**

**2.** To close the Dictionary side bar, Click the ‘-‘ in the top right hand corner of the sidebar. **False**

**Do it yourself 3F:**

**Arrange the following steps for viewing a presentation in the correct order.**

1. Run a slide show
2. Click on View
3. Navigate through slides
4. Open your presentation in Google Slides
5. End the slideshow

**Ans.** **4.** Open your presentation in Google Slides
**2.** Click on View
**1.** Run a slide show
**3.** Navigate through slides
**5.** End the slideshow

**CHAPTER CHECKUP:**

**A. Fill in the blanks :**

1. To zoom in a slide, first click on **View** in the menu bar and then choose the **Zoom menu** option from the drop-down menu
2. The **Dictionary** feature of Google Slides, allows you to quickly access definitions, explanations, and other relevant information about a word or phrase.
3. To add a comment, click on the Insert menu and then choose **comment**.
4. The Grid view icon at the bottom left corner of the screen enables the **Slide Sorter** view

**B. Write T for True or F for False.**

1. To start the slideshow in Google Slides, click on "View" and then "Motion". **False**
2. Importing data is the process of bringing external content or data into your presentation. **True**
3. Viewing a presentation means to watch the slides in action. **True**
4. One cannot add comment in slides. **False**

**C. Explain the functions of the Icons.**

a. Add Comment: The comments facilitate collaboration among multiple authors or reviewers working on the same presentation.
b. Zoom In: The Slide zoom feature in presentations makes a small part of your slides look enlarged on the screen.
c. Eraser: You can erase annotations by selecting the eraser tool.

**D. Answer the following.**

1. **Explain the Dictionary feature of Google Slides.**

**Ans.** Using the "Dictionary" feature in presentations can help you learn more about words or phrases used in your presentation. This allows you to quickly access definitions, explanations, and other relevant information about a word or phrase within your presentation.

2. **What is the use of Action buttons?**

**Ans.** Action buttons in a presentation are used to make your slides more interactive. You can set action buttons to open external content, such as a website, another PowerPoint presentation, a document, a spreadsheet, and much more.

3. **How is the ink annotation feature helpful while presenting a presentation?**

**Ans.** Ink annotation in presentations is like drawing or writing on the slides with colourful pens.

4. **What do you mean by importing data in a presentation?**

**Ans.** Importing data into a presentation is the process of bringing external content or data into your own presentation. Importing slides helps you add slides from another presentation to your current presentation. You

can also import data from Google Sheets into your Google Slides presentation.

## L - 4 EDITING AND FORMATTING DATA IN GOOGLE SHEETS

**Do it yourself 4A:**

**1. Match the following:**

| Column A | Column B | |
|---|---|---|
| Ctrl + Spacebar key | Untitled spreadsheet | **4** |
| Shift + Spacebar key | Used to move down to the next cell | **3** |
| Enter key | Used to select a row | **2** |
| Default Title | Used to select a column | **1** |

**2. Define the following:**

**a. Menu bar:** It contains a range of drop-down menus, including File, Edit, View, Insert, Format, Data, and more.

**b. Formula bar:** It located just below the toolbar, the formula bar displays the contents of the currently selected cell.

**Do it yourself 4B:**

**1. Write the shortcut key used to perform the following operations.**

**a.** To make a cell editable. **Press F2**

**b.** To copy a cell. **Ctrl + C**

**2. Write the use of the following options.**

**a.** Insert 1 row above: This will insert the row above the selected row

**b.** Insert 1 row below: This will insert the row below the selected row

**Do it yourself 4C:**

**1. Arrange the following steps in the correct sequence to apply border in Google Sheets.**

2 Click the Borders button from Toolbar.

1 Select the cells containing data where you want to apply borders.

3 Choose the type of border you want to apply.

**2. Write the use of the following shortcut key combinations.**

a. Ctrl + B The selected text is changed to Bold

b. Ctrl + I The selected text is changed to Italicised

**CHAPTER CHECKUP:**

**A. Fill in the blanks :**

**1.** In Google Sheets, a spreadsheet file is known as **work sheet.**

**2.** The intersection of a column and row is called a **cell.**

**3.** To undo the last action in Google Sheets, you can press the **Ctrl+Z** key.

**4.** To change the font of selected data in Google Sheets, you can click the down arrow of the **font** option.

**5.** Freezing rows in Google Sheets allow you to pin data in place so you can see it while **scrolling.**

**B. Tick the correct Option.**

**1.** What is the primary purpose of Google Sheets?

a. Sending emails

b. Creating digital art

✓**c. organising and analyzing data**

d. playing video games

**2.** What identifies each column in Google Sheets?

a. Numbers b. Symbols ✓**c. Letters** d. Colours

**3.** How can you reverse the action of undo in Google sheets?

✓**a. By pressing Ctrl + Z** b. By pressing Ctrl + Y

c. By pressing Ctrl + C d. By pressing Ctrl + P

**4.** Which of the following is the basic unit in Google Sheets where data in entered?

✓**a. Cell** b. Row c. column d. Sheet

**5.** Which of the following shows the cell address when a cell is selected in a sheet?

a. Formula Bar ✓**b. Name box** c. Toolbar d. None of these

**C. Who Am I?**

**1.** I am a web-based application program that helps you to manage information, do calculations and display data graphically using charts. **Google sheets**

**2.** You can find me at the intersection of a column and a row. **Cell**

**3.** I am a component of Google Sheets that displays the contents of the currently selected cell. **Formula box**

**4.** I am a key that is used to select multiple groups of cells in Google Sheets. **Ctrl key**

**5.** I let you repeat information in your worksheet without retyping it. **Copying option**

**D. Write T for True and F for False.**

**1.** Google Sheets is a digital program used for organizing, calculating and visualizing data in rows and columns. **True**

**2.** Each column in Google Sheets is identified by a number, whereas each row is identified by a letter. **False**

**3.** To undo the last action in Google Sheets, you can press Ctrl +Z. **True**

**4.** You cannot move data in Google Sheets. **False**

**5.** The Borders button on the Toolbar lets you apply a border in Google Sheets. **True**

**E. Answer the following.**

**1. What are the features of Google Sheets?**

**Ans: The features of Google Sheets are:**

**a.** Easy editing and formatting of data

**c.** Use of formulas and functions

**d.** Printable sheets

**e.** Use of charts for data analysis

**2. Identify the row and column in the cell address. H5**

**Ans:** Row-5 Column-H

**3. What types of data can you type in a cell?**

**Ans:** Types of data you can enter into a cell are: Numbers and words

**4. How do you select a row in Google Sheets?**

**Ans:** To select a row in a google sheet, click the number of the row or the row heading you want to select orpress Shift + spacebar keys.

**5. What is the purpose of formatting in Google Sheets?**

**Ans:** Formatting is a crucial feature in Google Sheets. Formatting displays the data with an attractive look. You can make your sheet more presentable by applying one or several formatting features.

# L- 5 LEARN TO THINK USING ALGORITHMS

**Do it yourself 5A:**

**1. Write a step-by-step algorithm for going on shopping with your mother.**

**Ans:** 1. Start
2. Prepare a list of items to be bought
3. Let's get ready
4. Carry a shopping bag
5. Go to the store
6. Take the items
7. Pay for them
8. Stop

**2. Write an algorithm to bake a cake.**

**Ans:** 1. Start
2. Gather the ingredients
3. Prepare the baking tin
4. Mix the dry and wet ingredients separately
5. Combine them into a big bowl
6. Pour the batter into the tin
7. Cook it until it is golden brown
8. Take the cake out of the oven and let it cool for a bit
9. The cake is ready to be eaten
10. Stop

**CHAPTER CHECKUP:**

**A. Fill in the blanks :**

**1.** Algorithm provides a systematic approach to **problem-solving.**

**2.** A flowchart is a **pictorial** representation of an algorithm.

**3.** **Flow lines** are used to show the direction in which the process flows.

**4.** Terminators are used to show the **start** or **stop** of the flowchart.

**B. Tick the correct Option.**

**1.** Which symbol is used to represent the start and end of a flowchart?

a. Rectangle b. Parallelogram ✓**c. Oval** d. Rhombus

**2.** Flowcharts are the best representations for:

a. Customer service b. Manufacturing Process c. Education ✓**d. All of these**

**3.** What does a decision symbol in a flowchart typically represent?

a. Processing step b. Start of the flowchart

c. End of the flowchart ✓**d. Decision-making statement**

**4.** What is the first step in algorithm to find the sum of two numbers?

a. Input the first number b. Add the two numbers

✓**c. Start** d. Display the sum

**C. Write T for True and F for False.**

**1.** Flowcharts provide a visual representation of an algorithm. **True**

**2.** Decision symbols in a flowchart are represented by a rectangle. **False**

**3.** An algorithm is a set of step-by-step instructions designed to solve a particular problem. **True**

**D. Answer the following questions:**

**1. Define algorithm.**

**Ans:** Algorithms are step-by-step instructions designed to perform a specific task or solve a particular problem.

**2. What is a flowchart?**

**Ans:** A flowchart is a pictorial representation of an algorithm, using standardized symbols.

**3. Give an example of a real-life situation where algorithms can be applied.**

**Ans:** Algorithms provide a systematic approach to problem-solving and are applicable in various real-life scenarios. For example, getting ready for a school, the steps you follow every morning to get ready for school- brushing your teeth, getting dressed, having breakfast are the steps of the "Getting ready for school" algorithm.

**4. How do flowcharts help in project management?**

**Ans:** In project planning process the flowchart could include steps such as project initiation, planning, execution, monitoring, and closure.