Class 8

Answer Key

iPlus Ver. 2.1

1. Operating System

Let's Catch Up (Page 8)

System software helps the user to operate the computer system & utilize its different resources.

Application software refers to programs which are designed to accomplish particular type of tasks to meet a user's specific needs.

Exercise

Section A (Objective)

A. 1. c 2. a 3. c 4. a 5. b
6. c

B. 1. operating system 2. Real-Time OS 3. difficult 4. GUI
5. deallocates

C. 1. F 2. T 3. F 4. F 5. T

D. 1. d 2. a 3. b 4. e 5. c

Section B (Subjective)

A. 1. Single-user Operating System and Multi-processing Operating System are two types of operating system.

2. Two categories of software are: System software and application software.

3. Two disadvantages of character user interfaces are:

   a. People find it difficult to remember all the commands.

   b. It is not user-friendly.

4. Names of two GUI operating system are: Windows and Mac.

B. 1. Advantages of GUI

- It is easy to use, especially for beginners.

- It is more appealing and attractive as compared to CUI.
- It provides remote access to a computer.

Disadvantages of GUI

- It takes large amount of hard disk space than CUI.
- It uses more processing power.
- It needs more memory (RAM) to run.

2. An operating system perform various functions:

   a. Managing Memory: It is the process of coordinating and controlling the use of memory in a computer system. It allocates a job to a free memory partition.

   b. Managing Resources: An operating system keeps a track of the hardware and software requirements of the processes. It works as a manager of the resources and allocates them to different programs.

   c. Assigning Tasks to the CPU: An Operating system handles the scheduling, synchronization, processing suspension and resumption of processes. Operating system can independently prioritize jobs for processing.

   d. Security: An Operating system protects information and resources against unauthorised access using login and password.

3. The differences between CUI and GUI are:

   CUI

   a. It provides lots of commands to perform different types of operations.

   b. A user needs to remember lots of commands.

   c. It uses keyboard to give commands.

   d. Examples are DOS, Windows Command Prompt, etc

   GUI

   a. It provides icons, buttons, windows and menus to give commands

   b. A user need not to remember commands. He can just click on the icons, menus etc.

   c. It uses mouse, stylus, fingers to give commands.

   d. Examples are Windows, MacOS, etc.

4. a. In a multi-processing operating system, multiple processors are used within a single computer system to perform tasks concurrently. These processors share the same physical memory but operate independently, executing different tasks simultaneously. This system provides enhanced computational speed and efficiency by allowing parallel processing, which gives the user the impression of faster task completion.

   b. It processes instructions and produces a response within a specified time. It is a computing environment that reacts to input within specified time.

   Example: ATM, traffic signal, etc.

C. 1. Tally is an application software.

2. As a beginner, he should take the computer with GUI.

3. (a)

Higher Order Thinking Skills (HOTS)

1. Multi-user Operating System is used in the family scenario since multiple users share the same laptop.

2. System Software: Operating System

   Application Software: MS-Excel

Crack The Code

W	T	A	U	W	O	F	I	L	R
V	C	E	U	I	E	T	I	A	H
G	U	I	Y	N	K	L	N	M	H
D	I	Z	Q	D	L	I	N	U	X
P	F	D	L	O	G	H	X	N	W
S	E	Y	X	W	N	U	I	I	C
D	S	E	F	S	K	L	O	X	X
I	N	T	E	R	F	A	C	E	Z
M	U	E	T	Y	X	T	Y	R	X
D	E	F	K	R	T	Y	X	C	P

2. Spreadsheet—Functions and Charts

Let's Catch Up (Page 32)

1. T 2. T 3. T 4. F

Exercise

Section A (Objective)

A. 1. a 2. b 3. c 4. b 5. d

6. b 7. a 8. c

B. 1. Absolute References 2. Logical 3. Legend 4. equal
5. UPPER 6. Custom sort

C. 1. F 2. F 3. T 4. T 5. F 6. F

D. 1. c 2. d 3. b 4. a

Section B (Subjective)

A. 1. A group of cells is known as a cell range. A range comprises two or more selected cells and those selected cells need not be adjacent to each other.

2. a. Data labels refer to the label that provides additional information about data marker, thus representing a single data item or value of a cell.

   b. Legend helps to identify the plotted data series. Unique colour or pattern is helpful to identify such series.

3. Arranging the selected data in ascending or descending order based on a certain criteria is called sorting.

4. Scatter charts are also known as XY scatter plot charts. They display the relationships among the numeric values of several data series.

B. 1. CONCATENATE function joins two or more different text strings together. For example:

   Input: =CONCATENATE("Touch", "pad")

   Output: Touchpad

2. Rules to enter Functions are:

   a. All Excel functions must begin with = sign

   b. Function name must be a valid Excel name.

   c. Function must be followed by opening and closing parenthesis.

3. Pie Chart: It is a circular chart divided into slices, with each slice showing how big a value is compared to the whole chart. Pie chart displays single type of data item and is beneficial when the user wants to emphasize value of a significant item. Pie charts help to compare how each value relates proportionally to the whole.

   Bar Chart: A bar chart represents the data in horizontal columns. The measurement of values are organized horizontally. Stacked bar chart is a variation of bar charts. These bars can be placed horizontally on the chart area. It illustrates the comparisons among the individual items.

C. 1. Pie Chart

2. Cell Referencing

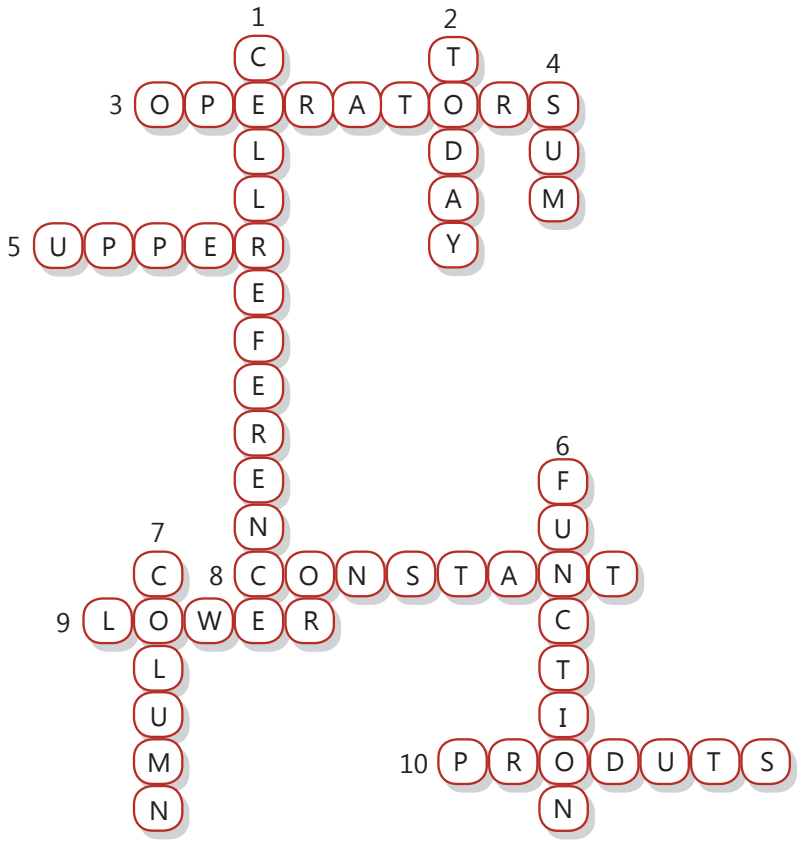
3. Sort & Filter feature

4. Both Assertion (A) and Reason (R) are false.

Higher Order Thinking Skills (HOTS)

1. Charts visually represent data, making it easier to analyse trends, compare values, and make decisions.
2. Instead of dragging from the first cell, click on the row number on the left-hand side.

Crack The Code



3. Algorithms and Flowcharts

Let's Catch Up (Page 45)

Step 1: Start.

Step 2: Read the length of the base of the triangle and store it in `'b'`.

Step 3: Read the height of the triangle and store it in `'h'`.

Step 4: Calculate the area of the triangle using the formula:

Area = (1/2) × base × height

Step 5: Print the area of the triangle.

Step 6: Stop.

Exercise

Section A (Objective)

A. 1. d 2. d 3. b 4. a

B. 1. Algorithm 2. Connectors 3. Consistent 4. Two 5. Flowchart

C. 1. T 2. F 3. T 4. T 5. T

Section B (Subjective)

A. 1. Algorithm is a set of steps in a sequential manner to solve a problem or to complete a task.

2. Flowchart is a graphical representation of the sequence of operations in an information system or program.

3. Two symbols used in flowchart are rectangle and diamond.

4. Two uses of an algorithm are:
   - Performing data processing
   - Performing computer and mathematical operations

B. 1. Basic rules while drawing a flowchart are as follows:
   - The flowchart should be clear, neat and easy to follow.
   - Maintain the direction of the flow from left to right or top to bottom.
   - Only one flow line should come out from a process symbol.
   - Ensure that only one flow line should enter a decision symbol, but two flow lines should leave the decision box.
   - Ensure that the flowchart has a logical start and end.

2. The main characteristics of a good algorithm are:
   - **Precision:** Each step is precisely defined.
   - **Uniqueness:** Result of each step should be uniquely identified and only depend on the result of the preceding step.
   - **Finiteness:** It should stop after a finite number of instructions are executed.
   - **Input:** It should have well-defined input.
   - **Output:** It should have well-defined output.
   - **Effective:** It is measured in terms of time and space.

3. **Process symbol:** It is used to show a process or action step. This is the most common symbol used in flowcharts.

   Input/Output: It is used to represent the material or information entering or leaving the system, i.e., input and output.

C. 1. a. Input b. Process c. Output

2. Richa should make an algorithm before drawing a flowchart.

Higher Order Thinking Skills (HOTS)

Step 1: Start

Step 2: Go to pavement

Step 3: Look at left and right

Step 4: Check if both sides are clear

If Yes, go to Step 5

If No, go to Step 6

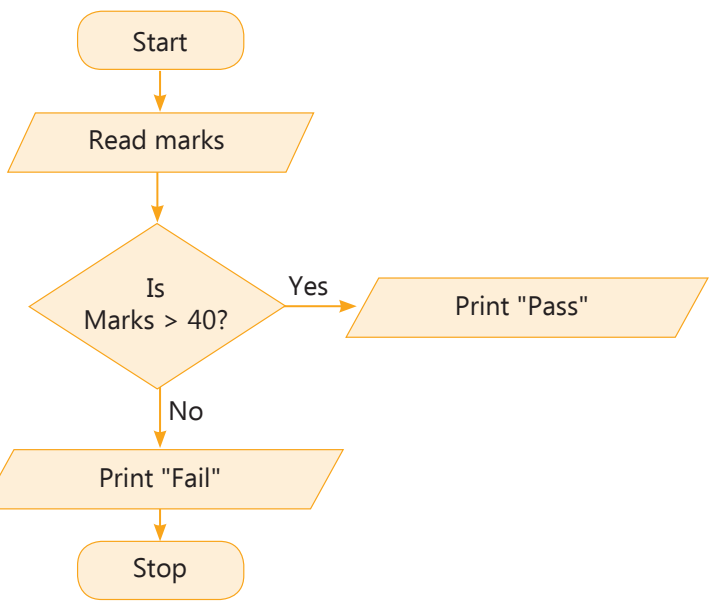
Step 5: Cross the road

Step 6: Wait and go back to Step 3

Step 7: Stop

Crack The Code

A.



B.

W	T	A	U	F	O	F	I	L	C	O	F	I	P
R	V	D	E	L	R	E	T	I	U	R	E	T	R
B	A	L	G	O	R	I	T	H	M	N	D	R	O
W	I	N	D	W	W	S	O	R	O	W	S	O	G
T	N	O	R	C	W	S	W	J	D	W	S	W	R
E	T	L	L	H	D	I	H	B	E	O	I	H	A
X	E	U	I	A	E	H	E	K	P	L	H	E	M
T	R	M	N	R	C	O	N	N	E	C	T	O	R
Y	F	N	U	T	I	X	G	I	N	I	X	G	E
P	R	O	C	E	S	S	G	I	R	E	S	G	T
Y	C	N	P	R	I	S	G	I	R	E	S	G	E
Y	E	N	F	L	O	W	L	I	N	E	S	G	R
Y	E	N	P	R	N	C	O	M	I	N	P	U	T

4. Program Coding

Let's Catch Up (Page 64)

Character Literal, String Literal and Integer Literal.

Exercise

Section A (Objective)

A. 1. d 2. b 3. b 4. b 5. c

B. 1. Procedural Language 2. Encapsulation 3. Reference 4. Comment 5. BlueJ

C. 1. F 2. T 3. F 4. T 5. F

D. 1. d (Logical NOT operator) 2. a 3. c 4. b

Section B (Subjective)

A. 1. Procedural languages like C, BASIC, and FORTRAN use functions to perform tasks in a sequential manner. Object-oriented languages like C++, Java, and Python use objects and classes to perform tasks in a non-sequential way.

2. Inheritance is a mechanism where a new class (called a subclass or derived class) is created from an existing class (called a superclass or base class).

   Polymorphism allows objects of different classes to be treated as objects of a common superclass.

3. Arithmetic operators are used to do basic mathematical calculations.

B. 1. Four Features of Java are as follows:

- **Simple:** Java has relatively simple structure and clearly defined syntax.
- **Case sensitive:** Java is a case sensitive language.
- **Object-Oriented:** Java supports object-oriented programming concepts of classes and objects.
- **Platform Independent:** A Java can run on any platform without making changes to it, which means that the same program will run on windows, Linux, Macintosh, etc.

2. Logical operators are used to combine multiple conditions and evaluate them. They return Boolean value 'True' or 'False' as a result.

   &&(AND), !(NOT) and ||(OR) are two types of logical operators.

3. Unary operators are special operators which require only one operand or value to perform operations. Java provides only two unary operators which are increment (++) or decrement (--).

C. 1. 14.443999999999999

2. GST to be paid: 10.0

   Total invoice value: 210.0

3. Value of a is: 20

   Value of b is: 10

4. Kittu Sharma
5. 20
6. false

   true

7. 12

   13

D. 1.
```
public static void main(String[] args){
int a = 10;
int b = 20;
int c = a + b;
System.out.println("The value of c is: "+c);
}
}
```

2.
```
public class assignment{
public static void main(String[] args){
int a = 10;
System.out.println(a);
}
}
```
3.
```
public class D3{
public static void main(String[] args){
int a = 5;
String name = "Chirag";
System.out.println(a + name);
}
}
```
4.
```
public class D4{
public static void main(String[] args){
System.out.println("Welcome");
}}
```

E. 1. Increment operator
2. String

Higher Order Thinking Skills (HOTS)

1. Java is case-sensitive, so System must be capitalised.

```
public class Simple {
    public static void main(String[] args) {
        System.out.println("Hello Java");
    }
}
```

2. In Java, = is the assignment operator used to assign values to variables (e.g., Address = "Delhi";), while == is the comparison operator used to compare values. However, for string comparison, == checks memory location, not content. So, Ajay should use:

   Address = "Delhi"; to assign the value.

   Address.equals("Delhi") to compare the content.

   Ajay's statements are incorrect because he has used the operators the wrong way.

Crack The Code

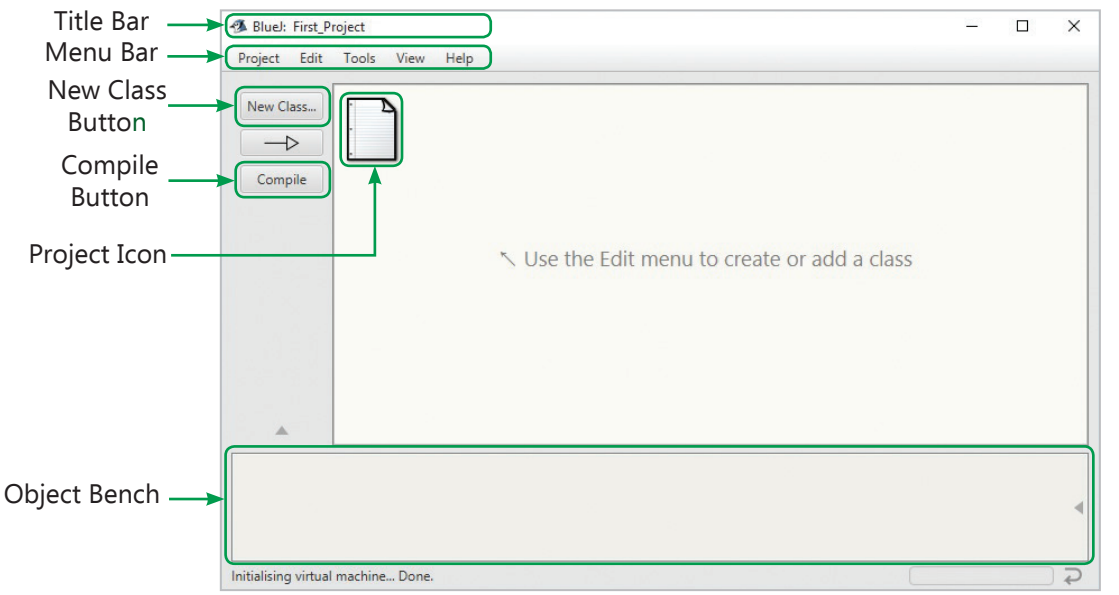
1. Java
2. (==) Equal to operator
3. Variable
4. Keywords
5. Char
6. Comment
7. System.out.println()

Worksheet 1 (Based on chapters 1 to 4)

A.

1.	int	else
2.	Linux	Windows
3.	Process	Decision
4.	PRODUCT()	SUM()

B.



C.

1. Cell Reference
2. Single-user operating system
3. Identifier
4. SQRT(number)

D. 1. Flow Line
2. Connector
3. Process
4. Input/Output

E. Shivam will use Now () to add for getting the current system date and time.

Test Sheet 1

(Based on chapter 1 to 4)

Section A

A. 1. b 2. b 3. c 4. b 5. a
6. c 7. b 8. d

B. 1. GUI 2. SQRT() 3. column 4. two 5. primitive
6. output

C. 1. F 2. F 3. F 4. T 5. F 6. T

Section B

A. 1. Single-user Operating System and Multi-processing Operating System are two types of operating system.
2. Scatter charts are also known as XY scatter plot charts. They display the relationships among the numeric values of several data series.
3. Two uses of an algorithm are:
   - Performing data processing
   - Performing computer and mathematical operations
4. Flowchart is a graphical representation of the sequence of operations in an information system or program.
5. Java is an object oriented high level programming language.
6. Arithmetic operators are used to do basic mathematical calculations.

B. 1. The differences between CUI and GUI are:

CUI

- It provides lots of commands to perform different types of operations.
- A user needs to remember lots of commands.
- It uses keyboard to give commands.
- Examples are DOS, Windows Command Prompt, etc

GUI

- It provides icons, buttons, windows and menus to give commands
- A user need not to remember commands. He can just click on the icons, menus etc.
- It uses mouse, stylus, fingers to give commands.
- Examples are Windows, Mac, etc.

2. We prefer to use GUI as in this interface, a user need not to remember all the commands. GUI allows us to give commands to the computer simply by clicking with the mouse.
3. CONCATENATE function joins two or more different text strings together. For example:

   Input: =CONCATENATE("Touch", "pad")

   Output: Touchpad
4. **Process symbol:** It is used to show a process or action step. This is the most common symbol used in flowcharts.

   Input/Output: It is used to represent the material or information entering or leaving the system, i.e., input and output.
5. The basic rules while drawing a flowchart are as follows:
   - The flowchart should be clear, neat and easy to follow.
   - Maintain the direction of the flow from left to right or top to bottom.
   - Only one flow line should come out from a process symbol.
   - Ensure that only one flow line should enter a decision symbol, but two flow lines should leave the decision box.
   - Ensure that the flowchart has a logical start and end.
6. Logical operators are used to combine multiple conditions and evaluate them. They return Boolean value 'T' or 'F' as a result.

   &&(AND), !(NOT) and ||(OR) are two types of logical operators.

5. Conditional, Looping and Jump Statements in Java

Let's Catch Up  (Page 81)

1. The if statement is the most basic conditional statement in Java that allows us to test a condition before executing a block of statements.
2. The if...else statement is used to execute either of the blocks of statements from if or else statements.
3. The if...else...if statement helps us to test multiple conditions and execute one of the multiple blocks of statements.

Exercise

Section A (Objective)

A. 1. d 2. a 3. a 4. c 5. b 6. c

B. 1. do-while 2. while 3. case 4. break 5. conditional

C. 1. F 2. F 3. T 4. T 5. F

Section B (Subjective)

A. 1. Looping statements are the control flow statements allow us to repeatedly execute a set of statements for a given number of times.

2. The if statement is the most basic conditional statement in Java that allows us to test a condition before executing a block of statements.

3. The default keyword is used to specify some code to be executed if there is no matched case found.

4. The errors that occurred due to violating the rules of Java programming language are called syntax errors.

B. 1. The for loop in Java helps to repeat a set of statements a definite number of times.

The syntax of the for loop is:

```
for (initialisation; conditional expression; increment/decrement)
{
[statements]
}
```

2. The break statement forcefully terminates the loop or switch execution within which it lies.

It skips rest of the statements next to the break keyword in the loop and jumps over to the statement following the loop.

Whereas, the continue statement forces the next iteration of the loop to take place and skips the current iteration.

3. Jump statements are those in which the control of the program is transferred out of the normal flow — such as exiting a loop early or skipping an iteration. The two jumping statements are: Break and Continue.

4. The errors that occurred due to violating the rules of Java programming language are called syntax errors. These are the most commonly occurred errors while developing programs in Java. Syntax errors are also known as compile time errors. Programs containing syntax errors does not compile.

On other hand, a logical error is a type of error due to which a program compiles and executes successfully, but gives the unexpected or incorrect result is called logical error. It is very difficult to find this type of errors in the program. Compiler does not able to find logical errors. We need to read our programs deeply to find logical errors. Logical errors are also called Semantic Errors.

C. 1. Square of 1 is: 1
Square of 2 is: 4
Square of 3 is: 9
Square of 4 is: 16
Square of 5 is: 25
Square of 6 is: 36
Square of 7 is: 49
Square of 8 is: 64
Square of 9 is: 81
Square of 10 is: 100

2. Hello World
Hello World
Hello World
Hello World
Hello World

3. 5
4
3
2
1

4. number is even

5. 4321

D. 1.
```
public static void main(String args[])
{
    System.out.println("Table of 8");
    int a = 8, res;
    int i;
    for (i = 1; i <= 10; i++) {
        res = a * i;
```

```
            System.out.println(res);
        }
    }
```

2.
```
public static void main(String args[])
{
    int i;
    for (i = 1; i <= 5; i++) {
        System.out.println("The value of i is: " +i);
    }
}
```

3.
```
public class modulus {
public static void main(String args[])
{
    int x = 20, y = 45;
    int mod = y % x;
        System.out.println("Modulus is " + mod);
    }
}
```

4.
```
public static void main(String args[])
{
    String s = "Touchpad";
    String s1 = "Orange";
    System.out.println(s + s1);
}
```

E. 1. Dilip can use conditional statements.

2. Looping statement

3. (a) Both Assertion (A) and Reason (R) are true and Reason (R) is a correct explanation of Assertion (A)

4. (a) Both Assertion (A) and Reason (R) are true and Reason (R) is a correct explanation of Assertion (A)

Higher Order Thinking Skills (HOTS)

1. This Java code calculates and prints the sum of the first 1000 natural numbers using a loop.

2. Type of Error: Logical Error (due to wrong formula) and Syntax Error (missing semicolon)

   Cause: Used 2 * l + w instead of 2 * (l + w)

   Effect: Incorrect output (125 cm instead of 150 cm)

Crack The Code

C	O	N	T	I	N	U	E	L	L
O	V	D	E	F	A	U	L	T	T
N	H	L	U	I	F	D	R	M	I
D	I	O	E	R	R	O	R	G	T
I	N	O	R	B	R	E	A	K	E
T	T	P	L	E	O	I	H	R	R
I	E	I	I	P	L	H	E	A	A
O	R	N	S	W	I	T	C	H	T
N	F	G	U	N	I	X	G	I	I
A	A	N	X	R	E	S	G	O	O
L	J	U	M	P	I	N	G	N	N

6. App Development

Let's Catch Up (Page 100)

1. Pinterest - Web App
2. LinkedIn - Social Networking App

Exercise

Section A (Objective)

A. 1. a 2. a 3. b 4. a 5. b 6. a

B. 1. Hybrid 2. Mobile 3. Android 4. Gaming 5. Install

C. 1. F 2. T 3. F 4. T 5. T 6. F

Section B (Subjective)

A. 1. An app is a software program primarily developed for hand-held smart devices such as mobile and tablet.

2. A Web app is an application program that is stored on a remote server and accessed over the Internet through a Web browser interface.
3. Native apps are platform dependent which means that these apps are primarily developed for a specific platform.
4. E-commerce apps is an app to buy or sell products while sitting at home or any other place.
5. Communication apps allow us to communicate with each other by sending and receiving messages, information, and opinion in the form of texts, videos, and audios.
6. Two popular app development tools are Android Studio, and AppMachine.

B. 1. The types of apps are given the following:

- **Entertainment Apps:** Entertainment apps are developed to entertain the people. These apps allow users to watch videos, post photos, search upcoming events, etc. The most commonly used entertainment apps are Netflix, Talking Tom and YouTube.
- **Utility Apps:** Utility apps allow us to do our daily tasks such as booking a cab, booking a railway ticket, booking an appointment with doctor, sharing files, and performing calculations. These apps make our work easy. The most commonly used utility apps are SHAREit, Calculator and Flashlight.
- **Educational Apps:** Educational apps provide a platform for children to learn from anywhere and anytime. The most commonly used educational apps are Khan Academy, Vedantu and Grammar EN.

2. Two categories of mobile apps are:

- **Native Apps:** Native apps are platform dependent which means that these apps are primarily developed for a specific platform. For example, any app which is developed for iOS will not run on any other platform such as Android, Windows, and BlackBerry.
- **Web Apps:** Web apps are actually web applications which give a user with experience similar to native apps. These apps are not deployed on the app store. Hence, you need an extra app called browser to access these apps on your mobile device. Some examples of Web apps are OLX, Flipkart, and Pinterest.

3. Web apps are different from websites. The major difference is that a web app can be a small part of a website which provides a particular functionality. On the other hand, a website can contain many web apps. Some of the examples of the Web apps are OLX, Flipkart, and Pinterest.
4. Educational apps provide a platform for children to learn from anywhere and anytime. The most commonly used educational apps are Khan Academy, Vedantu and Grammar EN.
5. App Inventor allows us to test our app it is being created. So, to test your app, connect your Android device and download MI A12 companion. Now, follow the given steps:

   Step 1: Click on the Connect menu.

   Step 2: Select AI Companion from the drop-down list.

Step 3: Open MIT A12 Companion on your device and connect by scanning the QR code or typing the code displayed on your screen.

C. 1. Gaming App
2. Mobile(Calculator) app
3. (c) Assertion (A) is true and Reason (R) is false

Higher Order Thinking Skills (HOTS)

1. a. (iii)
   b. (iv)
2. a. Google Maps
   b. MakeMyTrip
   c. YouTube
   d. YouTube

Crack The Code

1. Mobile Apps
2. Google Play Store
3. iOS
4. Web Apps
5. Apple's App store
6. Hybrid Apps
7. Gaming Apps
8. Educational Apps
9. Communication Apps
10. Web Apps

7. Computer Networking

Let's Catch Up (Page 123)

1. Hyper Text Transfer Protocol
2. Internet Message Access Protocol
3. File Transfer Protocol
4. Transmission Control Protocol/Internet Protocol

Exercise

Section A (Objective)

A. 1. a 2. b 3. b 4. a 5. a

B. 1. Modem 2. Bus Topology 3. Protocol 4. MAN 5. LAN

C. 1. T 2. T 3. T 4. F 5. T

D. 1. c 2. d. 3. e 4. b 5. a

Section B (Subjective)

A. 1. Network refers to an inter-connected group of people, object, companies, computers, etc.

2. A server is also called host computer. It controls the access to the hardware and software on the network.

   Client is a computer which depends on the server for all the resources.

3. Topology refers to the geometric arrangement of computers or nodes in a network.

4. The different components of a computer network are:
   - Sender
   - Receiver
   - Transmission Medium
   - Message
   - Protocol

B. 1. A computer network is a group of interconnected computer systems and other computing devices.

   The advantages of computer network are:
   - The information can be easily shared by people.
   - It reduces the cost of hardware.
   - Store information in one centralised location.
   - Reduction in installation cost.
   - User authentication process to secure the data.

2. We need a computer network because networking is a way of getting all the devices to communicate with each other and use the same data files and resources through a physical pathway.

3. Three types of topologies are:
   - **Bus Topology:** In this topology, all the nodes are connected to a single common path. It is simple and easy to maintain. Additional nodes can be connected at any point along its length. The major disadvantage of this topology is that fault detection in this topology is very difficult.

- **Ring Topology:** In this topology, all the nodes are connected in a circular path. The messages travel in clockwise or anti-clockwise direction. Any damage to the cable of any node or device can result in breakdown of the whole network.
- **Mesh Topology:** In this topology, every single node in a network is connected to all the other nodes or computers in the network. There is minimal chances of breakdown in this topology. This topology is mostly used in LANs.

4. LAN is a digital communication system that interconnects a larger number of computers and other peripheral devices within a radius of less than 1 km. This type of network is usually preferred for a smaller area such as a residence, school, laboratory, university campus or office building.

   Whereas, MAN (Metropolitan Area Network) network consists of two or more local area networks or campus area networks together that usually spans several buildings in the same city or town.

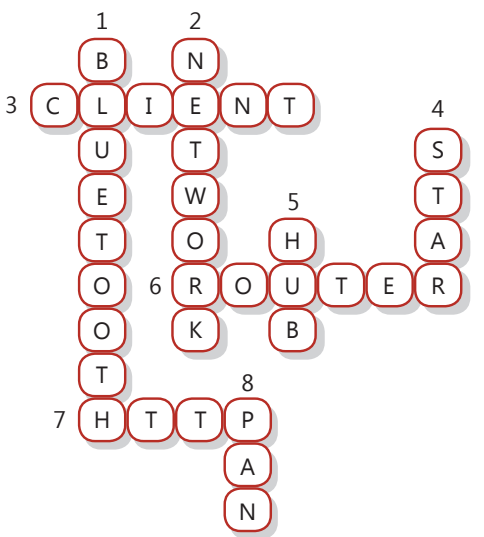
5. A single digital page on the World Wide Web (WWW) that contains information and links of another pages is called a web page. Web pages are created by using the Hyper Text Markup Language (HTML). A website is a collection of web pages which are interlinked to each other. A website may contains thousands of web pages.

C. 1. Ring Topology 2. Network Server

Higher Order Thinking Skills (HOTS)

1. Star Topology
2. i., ii and iii.

Crack The Code



8. Cloud Computing

Let's Catch Up (Page 130)

1. **Cost Effective:** One has to pay minimal or no subscription charges to avail the services.
2. **Easy Accessibility:** Cloud services are available and accessible globally to everyone who has a computer or any device with an Internet connection.

Exercise

Section A (Objective)

A. 1. a 2. c 3. c 4. a 5. a 6. d

B. 1. Cloud computing 2. Cloud 3. Community cloud
4. Shared 5. two

C. 1. F 2. F 3. T 4. F 5. F

D. 1. c 2. e 3. d 4. b 5. a

Section B (Subjective)

A. 1. Cloud computing is an Internet-based service that helps users to get shared resources, software, and information over a network on demand.

2. Cloud Computing has become very popular these days due to certain characteristics it has which are as follows:
   - **No dependence on location and devices:** Cloud computing lets access the resources with the help of a web browser. It does not depend on the device from which the user wants to use the cloud computing services. The users can access it from anywhere and anytime due to online infrastructure and internet-based access.
   - **Easy to Maintain:** Cloud Computing applications are easy to maintain do not require to be installed on the computers of every user. Anyone who is travelling or is at a different location for work can use the services without any hassle.
3. DropBox is a cloud service provider which is used to store, organise and edit data through the network.
4. The name of cloud storage service that is provided by Apple is iCloud.
5. Reason one should opt for cloud storage are as follows:
   - Cloud computing provides a facility to store, organise and edit data through the network.
   - Cloud Storage is an online storage space where users can save their documents and can access them through multiple devices.

6. The drawback of cloud computing is, it needs a internet connection always. Without internet connection or network failure, we cannot reap the benefits of cloud computing.

B. 1. Advantages of Cloud Computing are:

- **Sharing of information globally:** The cloud computing enables users to access information from anywhere at anytime whenever they need it.
- **Productivity:** The cloud computing helps to increase the productivity as there is no need to set up any hardware, software in this. So, the work is reduced and productivity is increased.

Disadvantages of Cloud Computing are:

- Cloud computing needs a internet connection always. Without internet connection or network failure we cannot reap the benefits of cloud computing.
- We cannot solve technical faults at our end as we have to depend upon the third party for technical solutions.

2. To upload files on the OneDrive, follow the given steps:

Step 1: Click on the Add new button.
Step 2: Select the Files upload option.
Step 3: Select the file which you want to upload.
Step 4: Click on the Open button.

3. We need to follow the given steps to share a file or folder with others on OneDrive:

Step 1: Click on the circle to select the file or folder.
Step 2: Click on the Share button.
Step 3: Enter the email address of the people with whom you want to share your file or folder.
Step 4: Choose the level of access.
Step 5: Click on the Send button.

4. Cloud Storage is the online storage space where users can save their documents, can access it through multiple devices.

Two service provider of cloud storage are DropBox and ZipCloud.

- **DropBox:** The basic users of Dropbox are given 2 gigabytes of storage space. Whereas, if somebody has premium subscription then they are given 1 TB of storage space.
- **ZipCloud:** It is a cloud storage for documents, music, photos and videos. It offers 1 GB of free storage to users. But users can take 75GB, 250 GB, 1TB storage through paid plans.

C. 1. Yes, it is possible to do so, he does not need to buy some specific hardware or software. He can use cloud storage such as Google Drive, DropBox or OneDrive.

2. He can find the OneDrive icon by clicking on the Start button and scrolling down to find the OneDrive app icon.

Higher Order Thinking Skills (HOTS)

1. Use public cloud for handling high traffic (scalable & cost-effective).

   Use private cloud for secure, sensitive data.

   A hybrid cloud gives the best of both—scalability + security.

2. He can use Google Docs (docs.google.com) or Microsoft Word Online—both are free and only need internet and an account.

Crack The Code

T	K	O	C	G	P	H	I	S	L	L
O	N	E	D	R	I	V	E	K	T	T
N	H	I	U	I	F	D	R	Y	I	I
D	D	C	U	P	L	O	A	D	T	T
I	R	L	R	B	R	E	A	R	E	E
G	O	O	G	L	E	D	R	I	V	E
I	P	U	I	P	L	H	E	V	A	A
O	B	D	S	W	I	T	C	E	T	T
N	O	G	U	N	I	X	G	I	I	I
A	X	N	X	R	E	S	G	O	O	O
Z	I	P	C	L	O	U	D	N	N	N

Worksheet 2 (Based on chapter 5 to 8)

A.

1. The if...else statement is used to execute either of the blocks of statements from if or else statements.
2. The while loop is a flow control statement in Java. It is used to execute a block of statements repeatedly until a given condition becomes F.
3. The break statement forcefully terminates the loop or switch execution within which it lies.
4. Utility apps allow us to do our daily tasks, such as booking a cab, booking a railway ticket, booking an appointment with a doctor, sharing files, and performing calculations.
5. Cloud computing is an Internet-based service that helps users to get shared resources, software, and information over a network on demand.

B. 1. continue statement
2. error
3. Mobile app
4. iOS
5. Bandwidth
6. Website
7. Modulation
8. OneDrive

C. 1. Wi-Fi Bluetooth
2. Native Apps Mobile Apps
3. Server URL
4. IMAP SMTP

D. 1. Ring Topology 2. Tree Topology
3. Bus Topology 4. Star Topology

Test Sheet 2

(Based on chapter 5 to 8)

Section A

A. 1. a 2. d 3. b 4. b 5. b
6. a 7. a 8. a

B. 1. while 2. conditional 3. hybrid 4. gaming
5. MAN 6. Shared

C. 1. T 2. F 3. F 4. F 5. F 6. F

Section B

A. 1. Looping statements are the control flow statements allow us to repeatedly execute a set of statements for a given number of times.

2. Communication apps allow us to communicate with each other by sending and receiving messages, information, and opinion in the form of texts, videos, and audios.

3. A server is also called host computer. It controls the access to the hardware and software on the network.

   Client is a computer which depends on the server for all the resources.

4. The different components of a computer network are:
   - Sender
   - Receiver
   - Transmission Medium
   - Message
   - Protocol
5. The name of cloud storage service that is provided by Apple is iCloud.
6. The drawback of cloud computing is needs a internet connection always. Without internet connection or network failure, we cannot reap the benefits of cloud computing.

B. 1. Jumping statements are those statement in which the control of the program is transferred out of the loop body, even if all the values of the iterations of the loop have not been completed. The two jumping statements are: Break and Continue.

2. The for loop in Java helps to repeat a set of statements a definite number of times.

   The syntax of the for loop is:

```
for (initialisation; conditional expression; increment/decrement)
 {
 [statements]
 }
```

3. Two categories of mobile apps are:
   - **Native Apps:** Native apps are platform dependent which means that these apps are primarily developed for a specific platform. For example, any app which is developed for iOS will not run on any other platform such as Android, Windows, and BlackBerry.
   - **Web Apps:** Web apps are actually web applications which give a user with experience similar to native apps. These apps are not deployed on the app store. Hence, you need an extra app called browser to access these apps on your mobile device. Some examples of Web apps are OLX, Flipkart, and Pinterest.
4. We need a computer network because networking is a way of getting all the devices to communicate with each other and use the same data files and resources through a physical pathway.
5. Advantages of Cloud Computing are:
   - **Sharing of information globally:** The cloud computing enables users to access information from anywhere at anytime whenever they need it.

- **Productivity:** The cloud computing helps to increase the productivity as there is no need to set up any hardware, software in this. So, the work is reduced and productivity is increased.

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