

1. What is Programming Language?

Ans. The Programming language is the way to communicate with our computer To perform some particular task. It is a set of instruction or command written in specific language like C, C++, JAVA, Python etc.

2. Why do we need a programming language?

Ans. We need programming language to communicate with our computer so that we can give command to it to perform the set of task which we want to perform on it. Also we need programming language to make our day to day life easy.

3. What are the features of Java?

Ans. Simple :- Java is a simple programming language and easy to understand because it does not contain complexities that exist in prior programming languages.

Object - Oriented :- Java is an object-oriented programming language. Everything in Java is an object. Object-oriented means we organize our software as a combination of different types of objects that incorporate both data and behavior.

Portable :- Java is portable because it facilitates you to carry the Java bytecode to any platform. It doesn't require any implementation.

Robust :- Java is Robust.

Platform Independent :- Java is platform-independent because it uses a virtual machine. The Java programming language and all APIs are compiled into bytecodes. Bytecodes are effectively platform-independent. The virtual machine takes care of the differences between the bytecodes for the different platforms.

Distributive :- Java is distributed because it facilitates users to create distributed applications in Java. RMI and EJB are used for creating distributed applications. This feature of Java makes us able to access files by calling the methods from any machine on the internet.

4. What is an object?

Ans. An entity that has state and behavior is known as an object e.g., chair, bike, marker, pen, table, car, etc. It can be physical or logical (tangible and intangible). The example of an intangible object is the banking system.

An object is an instance of a class.

An object has three characteristics:-

- **State:** represents the data (value) of an object.
- **Behavior:** represents the behavior (functionality) of an object such as deposit, withdraw, etc.
- **Identity:** An object identity is typically implemented via a unique ID. The value of the ID is not visible to the external user. However, it is used internally by the JVM to identify each object uniquely.

5. What is a class?

Ans. A class is a group of objects which have common properties. It is a template or blueprint from which objects are created. It is a logical entity. It can't be physical. A class in Java can contain:

- **Fields**
- **Methods**
- **Constructors**
- **Blocks**
- **Nested class and interface**

6. Explain about the main() method in Java?

Ans. The main Method is the starting point for JVM to start the execution of a java program. The syntax of the main() method is:

```
Public static void main( string [] args)
```

Here **public** is for visibility so that out side the class also it is visible.

Static is to recall/invoke without the object creation.

Void is return type. **Main** is variable name.

String [] args is to receive the data if any present in the command line argument.