

Fundamentals of

Java

1. What is Programming language?

Answer: A programming language is a way for programmers (developers) to communicate with computers. It is a set of instructions written in any specific language (C, C++, Java, Python) to perform a specific task.

A programming language is a set of symbols, grammars and rules with the help of which one is able to translate algorithms to programs that will be executed by the computer.

2. Why do we need a programming language?

Answer: To give the instructions you want the computer to do. Computers understand bits and bytes and today's programming languages allow you to write code in multiple programming languages. And programming language are also important in our daily life to enhance and increase the power of computer, mobile solutions , and the internet.

3. What is the feature of Java?

Answer: There are following some features of java programming are:

- Object-Oriented:
- Platform independent
- Simple
- Secure
- Portable
- Robust
- Multi-threaded
- Distributed

4. What is an Object?

Answer: An object is an entity that has state and behaviour 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.

- **State:** represents the data (value) of an object.

- **Behaviour:** represents the behaviour (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?

Answer: 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?

Answer: main():

The main() is the starting point for JVM to start execution of a Java program. Without the main() method, JVM will not execute the program. The syntax of the main() method is: **public static void main(String[] args){ }**

It is a default signature which is predefined in the JVM. It is called by JVM to execute a program line by line and end the execution after completion of this method. We can also overload the main() method.