

1. What is a programming language?

Answer: A programming language is a vocabulary and set of grammatical rules for instructing a computer or computing device to perform specific tasks. The program written in those languages gets translated to a low-level machine-understandable code by an assembler, compiler, or interpreter. Examples: Assembly, C, C++, Java, Javascript, Python, etc.

2. Why do we need a programming language?

Answer: To make a complex application we have to write millions of lines of code. If we do it with binary it will take more lines of binary code. It will be also very difficult to debug code and modify it. Binary consists of 0 and 1 only so it's very difficult to read it. It takes a lot of time to write instructions in binary. To eliminate all these problems we need a language that programmers can easily read, write, modify and debug them.

3. What are the features of Java?

Answer: Following are the features of Java:

- a. Object Oriented Programming
- b. Platform Independent
- c. Secured
- d. Robust
- e. Distributed
- f. Architecture Neutral
- g. Multi-threaded
- h. High Performance

4. What is an Object?

Answer: In Object Oriented Programming an object is an instance of a class. It is created using the "new" keyword which returns a reference of the object that is created in the heap memory.

5. What is a class?

Answer: In Object Oriented Programming a class is a template or blueprint with variables and methods which is used to create different objects of the same type.

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

Answer: main() is the entry point of the program.

Structure of the main():

```
public static void main (String[] args) {  
    // method body  
}
```

public: public keyword is an access specifier. The access specifier is kept public so that JVM can call it.

static: static keyword makes a method independent of a class. This means JVM can invoke main() without creating an instance of the class.

void: void is a return type. The return type is set to void because main() does not return anything.

String[] args: String[] args is a list argument that it takes from the command prompt or terminal when we run a java program with the command "java filename". We pass the arguments separated by space character along with the command "java filename".

Method Body: The method body consists of a set of statements that run after the control flow enters inside the main().