

- 1) what is java?
 - a) java is a widely used object-oriented programming language and software platform that runs on billions of devices, including notebook computers, mobile devices, gaming consoles, medical devices and many others.

2) Explain all the java features in one or two lines.

a)

->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.

->Java supports dynamic compilation and automatic memory management (garbage collection).

3) In which folder can we find the javac,java,javah,javarmi commands?

a) The tool is located under JDK_HOME\bin directory

4)what all the environment variables to set to run the java programs through command prompt?

a) The first thing we need to do after installing the JDK is creating an environment variable named JAVA_HOME and then update the PATH variable.

- JAVA_HOME: stores location of the JDK's installation directory. When you install development tools, they will first check for the **JAVA_HOME** variable. If found, they will stick with it. If not, they may ask you to manually specify the location where JRE/JDK is installed.
- PATH: stores paths of directories where the operating system will look, to launch the requested programs quickly. For Java development, you should update this environment variable by adding an entry to the bin directory under JDK's installation directory.

5) what are the rules of naming the class?

- Class names should be nouns, in mixed cases with the first letter of each internal word capitalized. Interfaces names should also be capitalized just like class names.
- Use whole words and must avoid acronyms and abbreviations.

6) which is the main entry point of java program?

a) The Java main method is usually the first method you learn about when you start programming in Java because its the entry point for executing a Java program. The main method can contain code to execute or call other methods, and it can be placed in any class that's part of a program.

7) components of java program are?

a) They are: Module, Package, Class, Variable, Statement, Method, Constructor, Inner class.

8) what is jvm,jre,jdk?

a) JDK stands for Java Development Kit. JRE stands for Java Runtime Environment. JVM stands for Java Virtual Machine. It is a software development kit that helps in the development of applications in Java. Along with JRE, the JDK includes other various development tools.

9) Explain the components of compile time environments and run time environments.?

a) By runtime, we mean a program in execution. Runtime environment is a state of the target machine, which may include software libraries, environment variables, etc., to provide services to the processes running in the system.

10) what is JIT?

a) The Just-In-Time (JIT) compiler is a component of the Java Runtime Environment that improves the performance of Java applications at run time

11) different types of memory in jvm.

a) Two kinds of memory. The JVM divides its memory into two main categories: heap memory and non-heap memory.

12) In which area .class is stored?

a) The classes and it's own constant pool, i.e static variables are stored in Method Area.

13) In which area object are stored?

a) In Java, all objects are dynamically allocated on Heap

14) Why do we call as java simple?

a) Java is very easy to learn, and its syntax is simple, clean and easy to understand.

15) Why java is platform independent explain?

a) 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

16) Is jvm platform dependent?

a) JVM is undoubtedly platform-independent.

17) Is java case sensitive?

a) Java, like most programming languages, is case sensitive.

18) Is java complete object Oriented programming language?

a) No Java is not a "PURE" Object Oriented Language , because it uses primitive data types such as (int,float,char...etc).