

ASSIGNMENT 1

1. What is java ?

- Java is a popular programming language, created in 1995.
- It is owned by Oracle, and more than **3 billion** devices run Java.
- The rule and syntax of java are based on the C and C++ languages.

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

Simple : It is easy to understand and it doesn't have complex features like operator loading and multiple inheritance.

Object Oriented : Object oriented programming is a way of organizing programs as collection of objects, each of which represents an instance of a class.

Platform independent : A program that is compiled on windows can run on linux and vice-versa.

Portable : Java code that is written on one machine can run on another machine.

Distributed : It can be distributed on more than one systems that are connected to each other using internet connection.

Secure : It is secure because it has automatic garbage collection system.

Robust: Java is robust because it utilizes strong memory management.

Multithreading : It allows concurrent execution of two or more parts of a program for maximum utilisation of CPU..

3. In which folder can we find the javac, java, javah, javami commands?

- Java is placed in the same directory as Server and RMI Interface.
- Javah places the new .h file.
- In the same directory as the class file.
- You can tell javah to place the header files in a different directory with the -d option.

4. What are all the environment variables to set to run the java program through command prompt?

- JAVA_HOME=c:\program files\java\jdk1.8.0.
- PATH=PATH+C\;program files\java\jdk1.
- Java-docfigDir=/etc/myconfig-config/-cp test tool.

5. What are the rules for naming the class ?

Class name should be nouns, mixed case with the first letter of each internal word capitalized. Try to keep your class names simple and descriptive.

6. Which is the main entry point of the java program ?

In java programs, the point where the program starts its execution or simply the entry point of java programs is the main() method.

7. Components of the java program are ?

Module, package, class , variables, statement, method, constructor, inner class.

8. What is JVM, JRE, JDK ?

- JVM stands for java virtual machine. JVM is the heart of java programming language.
- JRE stands for java runtime environment. JRE is the implementation of JVM. It provides a platform to execute java program.
- JDK stands for java development kit is the core component of the java environment and provides all the tool, and binaries, required to compile, debug and execute a program.

9. Explain the components of compiler time environments and runtime environment?

The runtime environment is the state of the target machine, which may include software libraries, environment variables, etc, to provide services to the process running in the system.

10.What is JIT?

JIT stands for just-in-time compiler and is a component of the runtime environment that improves the performance of java applications by compiling bytecodes to native machine code at runtime.

11.Different types of memory in JVM?

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

12.In which area class is stored?

Class definitions are stored in a separate area (neither stack nor heap) called the method area. In net, the corresponding area is called the loader heap.

13.In which area object is stored?

In java, all objects are dynamically allocated on the heap. This is different from c++ where objects can be allocated memory either stack or on the heap.

14.Why do we call java simple?

Java is very easy to learn, and its syntax is simple, clean, and easy to understand. According to the sun's microsystem, java language is simple, java syntax is based on c++.

15.Why java is platform-independent explain?

Java is platform-independent because it uses a virtual machine. The java programming language and all APIs are compiled into byte codes. Byte codes are effectively platform-independent.

16.Is the JVM platform dependent?

JVM is undoubtedly platform-independent. Similar to how it varies depending on the surroundings. For instance, MAC and Linux have a different JVM than windows. It supports portability as one of its key features since it codes portable byte code portable byte code makes it platform independent,

17.Is java case-sensitive?

Java is case-sensitive because it uses a C-Style syntax. In most programming languages, case sensitivity is the norm. case sensitive is useful because it infers what a name means based on its case.

18.Is java a completely object-oriented programming language.

Java language is not a pure object-oriented language as it contains these properes: primitive data type example: int double , float , Boolean.