Assignment No: 2.

Page No.
Date

Q.1. What is difference betⁿ JDK, JRE & JVM.

⇒ JDK :-

i) JDK is an abbreviation for java Develo-pement kit. ii) It is an environment of software developement user for developing applets & java applications.

iii) JDK has a physical existence, & it contai-ns JRE + developement tools.

JRE → i) JRE stands for Java Runtime Environ-ment. also written as java RTE.

ii) It is ~~set~~ set of software tools designed for using other software.

iii) It is an implementation of JVM & JRE provides a runtime environment.

JVM →

i) JVM stands for java virtual Machine. It provides a runtime environment for driving Java applications or code.

ii) JVM is an abstract machine that converts java bytecode into machine language.

iii) JVM is an essentialy part of JRE. JVM does not exist physically.

Q.2. What is JIT compiler.

⇒ JIT compiler helps improve the performa-nce of java programs by compiling bytecodes into native machine code at runtime. the JIT compiler is enabled by defcult.

Page No.
Date

Q3. What is class loader?

⇒ The java class loader is a part of the JRE that dynamically loads the java classes into the JVM.
Usually classes are loaded on demand. The java runtime system does not need to know about files & file systems as this is delegated to the class loader.

Q.4. What gives java its "write once & run anywhere nature".

⇒ In Java, when code is compiled, creates a bytecode (.class file), which can be run in any machine which supports JVM. So once compiled it doesn't require recompilation at every machine it runs, JVM converts the bytecode to be understood by the underlying hardware & it is the nature which is called "Write one & run anywhere".

Q.5 What was the original name of java? why it was renamed.

⇒ 'Oak' is the original name of java.
Because It was renamed because
- i) Oak is symbol of strength & chosen as a national tree tree of many contries like the U.S.A, France, Germany, Romania.
- In 1995 Oak was renamed as java because it was already a trademark by Oak Technologies.

Q6. List of features of java.

⇒ 1) simple
2) object oriented
3) portable
4) secured
5) robust
6) Architecture neutral
7) platform independent
8) interpreted
9) High performance
10) multithreaded
11) Distributed
12) dynamic.

Q7. List of various data types in java.

⇒ (A) primitive data types

1) Boolean.
2) character
3) Integral → i) Byte
ii) short
iii) int
iv) Long
4) Floating points → i) float
ii) double.

(B) Non-primitive data types.

- 1) Array
2) ~~string~~
3) class
4) interface.

Q.8 what is difference between :
System.out.print
System.out.println
System.err.println

⇒ print() retains the cursor in the same line after printing the argument while println() moves the cursor to the next line
∴ System.err.println() will print to the standard error &
System.out.println() will print standard output.

Q.9. How is java platform independent
⇒ Java is platform independent because it uses virtual machine
The java programing language & all APIs are compiled into bytecodes bytecodes are effectively platform independent.

Q.10. what is bytecode & how is it different from machine code?
⇒ Bytecode ⇒ bytecode is the intermediate code compiled & executed by a virtual machine.
main difference is.
- bytecode is an intermediate code. &
- machine code is the final code that the CPU processes

Q.11. What is difference betⁿ jar file & runnable jar file.
⇒ Jar file is a java application which requires a command line to run,
A runnable jar file can be directly executed by double clicking on it.

Q.12. what is difference bet^n path & classpath.

⇒ The main difference is that the Path is set for java & javac which are used to compile your code whereas classpath is used by system or Application class loader to locate & load compile java bytecodes stored in the .class file.

Q.13. How 'c' is platform dependent language.

⇒ ~~It is not tied to any hardware~~

or sy

'c' is platform dependent because the 'c' compiler generates a machine code which can be understand by the respective platform so it is platform dependent.

Q.14. Explain history of Java? who invented java?

⇒ i) James Gosling, Mike sheridan & Patrick Naughton initiated the Java language project in June 1991. The small team of Sun engineers called Green team.

ii) Initially it was designed for small embeded systems in electronic appliances like Set-top boxes

iii) Firsty it was called "Greentalk" by James Gosling, and the file extension was .gt.

iv) After that, it was called Oak & was developed as a part of Green project.

v) Oak In 1995 Oak was renamed as "Java" because it was already a trademark by Oak Technologies.

Page No.
Date

Java invented by "James Gosling" in 1995.

Q 15 Explain Various memory logical partitions.

⇒ - Memory partioning is the system by which the memory of computer can be divided into sections for use by the resident programs.

memory can be partitioned as.
1) Fixed, 2) Variable & 3) dynamic.

- i) Fixed partioning creates memory partitions of identical sizes.

ii) Variable partitioning offers more flexibility because it creates partition of varying sizes.

iii) dynamic partitioning allocates partitions of the required sizes requested by the programs.