Q1. Difference between JDK and JRE?

Ans:

|  |  |
| --- | --- |
| JDK | JRE |
| The Java Development Kit (JDK) is a software development environment used for developing java applications and applets. | JRE is an installation package which provides runtime environment to only run(not develop) the java program. |
| JDK includes JRE, an interpreter(java), a compiler(javac), a document generator(javadoc) and other tools needed in java development | JRE includes Java Virtual Machine(JVM), core classes. |

2. What is Java Virtual Machine (JVM)?

🡪 JVM stands for java virtual machine it basically provide run time environment in which java byte code can be executed. It is JVM which is responsible for converting byte code to the machine specific code. JVM performs the following tasks: Load code, Verifies code, Execute code, Provides runtime environment.

3. What are the different types of memory areas allocated by JVM?

🡪 Following are the different types of memory area allocated by JVM:

Ans : 1. Class Area

2. Heap

3. Stack

4. program counter register

5. Native method stack.

4. What is JIT compiler?

🡪 JIT stands for Just in time compiler . JIT is a part of JVM that optimize the performance of the application it converts byte code into instructions.

5. How Java platform is different from other platforms?

🡪 Java platform is different from because of following points:-Java is platform independent because in these we can write code in one platform and can be read in or run on other platform (write once run anywhere).Java has it ‘s own runtime environment.

6. Why people say that Java is 'write once and run anywhere' language?

🡪 People say that Java is 'write once and run anywhere' language because the program is not converted to code directly understood by hardware, rather it is converted into byte code (.class file) which is interpreted by JVM.

7. What are primitive data types?

🡪 Java is statically-typed programming language. It means, all variables must be declare before its use. That is why we need to declare variable’s type and name.

There are 8 primitive data types : It is predefined data types of java. They specify the size and type of any standard values.

1.boolean

2.char

3.int

4.short

5.long

6.double

7.float

8.byte

8. Why it is not preferred to use float and double in financial applications, write a program to describe the issue.?

🡪 It is not preferred to use float and double in financial applications, because In financial application applications exact result of calculation is expected. Float and double gives the approximate results.

9. If a variable of primitive data type is not assigned, what does it contain?

🡪 If a variable of primitive data type is not assigned then it will contain default values if variable is static and instance and if variable is local then it will give run time error.

10. Why do we suffix L with long, F with Float and D with double?

🡪 Having to specify a suffix for longs and floats and double is a compromise the language designers to choose, in order to balance the needs to specify what exactly a number is, with the flexibility of converting numbers from one storage type to another.

11. What happens when you assign a variable of primitive data type to another

Variable of same type?

🡪 If we assign variable of primitive data type of another variable of same type then it will run.

12. What are reference data types?

🡪 Reference datatypes in java are those which contains reference of dynamically created objects. These are not predefined like primitive data types.

Following are the reference types in Java.

**class types** − This reference type points to an object of a class.

**array types** − This reference type points to an array.

**interface types** − This reference type points to an object of a class which implements an interface.

13. Write a program and put these below comments in code and explain the behaviour

// \u000A is a newline

look inside [c:\users](file:///C:\c:\users)

class // HelloWorld{

public static void main(String []args public){

System.out.println("Hello World");

// \u000A is a newline

// look inside c:\users

}

}

14. Print "\u0022+\u0022" through code and explain the behaviour

public class pros {

public static void main(String args[]){

System.out.println("\u0022+\u0022");

// \u0022 is unicode of (“”) it will not print anything

}

}