

## Assignment 1

### 1. What is JDK? JRE? JVM?

JDK: JDK is a set of tools for developing Java programs.

JRE: A software layer that provides the class libraries and other resources that a specific Java program needs to run.

JVM: JVM acts as a run-time engine to run Java applications.

### 2. What is java compiler?

A Java compiler is a program that takes the text file work of a developer and compiles it into a platform-independent Java file.

### 3. Why is java platform independent?

JVM converts Java bytecode into machines language. This means a programmer can develop Java code on one system and can expect it to run on any other Java-enabled system without any adjustment.

### 4. What is IDE? Why is it important for developers?

A software building applications that combines common developer tools into a single graphical user interface.

Why?

An IDE allows developers to start programming new applications quickly because multiple utilities don't need to be manually configured and integrated as part of the setup process.

### 5. Is java case sensitive?

Yes, which means the upper or lower case of letters in your Java programs matter.

### 6. What do the following key words do?

#### a. Static

The static keyword is a non-access modifier used for methods and attributes.

#### b. Final

Final is a non-access modifier applicable only to a variable, a method or a class.

#### c. Public

An access modifier used for classes, attributes, methods and constructors, making them accessible by any other class.

#### d. Private

The private keyword is an access modifier used for attributes, methods and constructors, making them only accessible within the declared class.

e. Void

The void keyword specifies that a method should not have a return value.

f. Null

In Java, null is associated with `java.lang.NullPointerException`. As it is a class in `java.lang` package, it is called when we try to perform some operations with or without null and sometimes we don't even know where it has happened.

g. Package

A package in Java is used to group related classes. Think of it as a folder in a file directory. We use packages to avoid name conflicts, and to write a better maintainable code.

h. Class

Everything in Java is associated with classes and objects, along with its attributes and methods.

i. New

The Java new keyword is used to create an instance of the class. In other words, it instantiates a class by allocating memory for a new object and returning a reference to that memory.

**7. What is primitive type and reference type?**

Primitive types are the basic types of data. For example, byte, short, int, long, float, double, boolean, char. Primitive variables store primitive values.

Reference types are any instantiable class as well as arrays. For example, String, Scanner, Random, Die, `int[]`, `String[]`, etc. Reference variables store addresses.

**8. Is parameter passed by value or reference?**

Pass parameters by value.

**9. What is the output: `System.out.println(1 > 0 ? "A":"B");`**

This will cause error.

If the code is `System.out.println(1 > 0 ? "A":"B");`  
Then ans = "A"

### 10. How to define constants in java?

We can use variable modifiers like static and final.

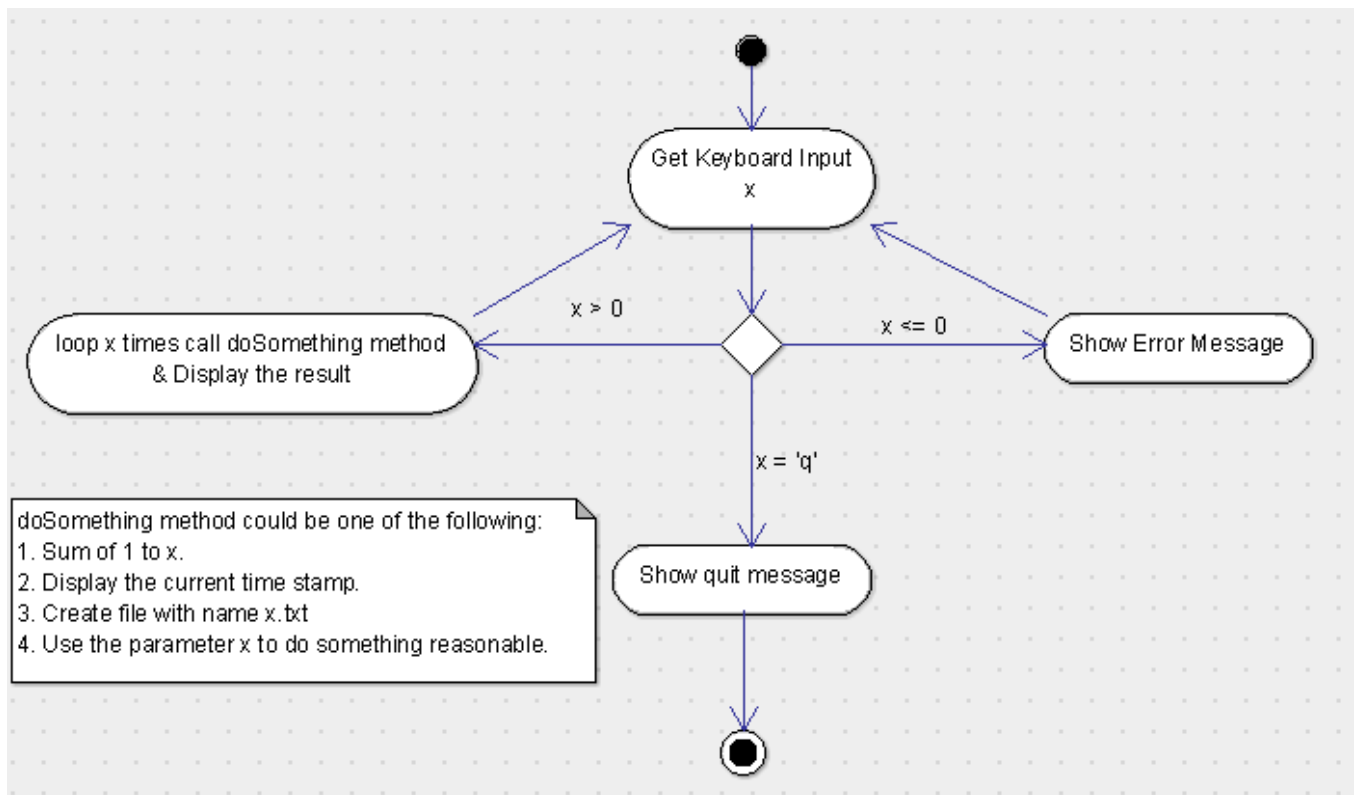
### 11. What is String? Is it primitive type?

Not a primitive type. String is an object that represents sequence of char values.

### 12. How to check if a String is representing a number?

Convert to Integer by using "Integer.valueOf()" and see whether it throws the exception or not.

### 13. Write a program to implement the following activity diagram:



My Solution:

[https://github.com/david820505/Java5\\_6Batch/tree/master/src/main/java/day1/DoSomething](https://github.com/david820505/Java5_6Batch/tree/master/src/main/java/day1/DoSomething)

**14. Write a program to merge two array of int.**

My Solution:

[https://github.com/david820505/Java5\\_6Batch/tree/master/src/main/java/day1/MergeIntArr](https://github.com/david820505/Java5_6Batch/tree/master/src/main/java/day1/MergeIntArr)

**15. Write a program to find the second largest number inside an array of int.**

My Solution:

[https://github.com/david820505/Java5\\_6Batch/tree/master/src/main/java/day1/LargestNum](https://github.com/david820505/Java5_6Batch/tree/master/src/main/java/day1/LargestNum)