**Assignment 1**

* What is JDK? JRE? JVM?

JDk include the JRE (Java Run time environment) and an interpreter/ loader(Java), a compiler(javac) documentation generator(Javadoc) and other tools.

JRE is run time environment which provides requirements for executing a java application and it consists of the JVM

JVM is java virtual machine and it provides the enviroment to drive the Java code

* What is java compiler?

It converts source code into bytecode.

 take a program written in some programming language and translate it into machine language. A compiler does the translation all at once. It produces a complete machine language program that can then be executed

* Why is java platform independent?

A single program works on different platforms without any modification.

* What is IDE? Why is it important for developers?

An IDE, or Integrated Development Environment, enables programmers to consolidate the different aspects of writing a computer program.

IDEs increase programmer productivity by combining common activities of writing software into a single application: editing source code, building executables, and debugging.

* Is java case sensitive?

Yes

* What do the following key words do?  
  static, final, public, private, void, null, package, Class, new

**we'll create only one instance of that static member that is shared across all instances of the class.**

**Package:** package**is a Java keyword. It declares a 'name space' for the Java class**

* What is primitive type and reference type?

In Java, **non-primitive** data types are known as **reference types**. In other words, a variable of class type is called **reference data type**. It contains the address (or reference) of dynamically created objects. For example, if Demo is a class and we have created its object **d**, then the variable d is known as a reference type.

All data for primitive type variable is stored on the stack

For reference types the stack holds a pointer to the objects on the heap

When setting a reference type variable equal to another reference type variable equal to another reference type variable, a copy of only the pointer is made

Certain object types can not be manipulated on the heap

Primitive type: In Java, the primitive data types are the predefined data types of Java. They specify the size and type of any standard values.

* Is parameter passed by value or reference?

Pass by value

* What is the output: System.out.println(1 > 0 : “A”:”B”);

A

* How to define constants in java?

Add finial keyword before the variable declaration.

* What is String? Is it primitive type?

string is basically an object that represents sequence of char values.

String is reference type

* How to check if a String is representing a number?

Integer.parseInt(String)

* Write a program to implement the following activity diagram:



* Write a program to merge two array of int.

public class MergeTwoArrays1 {

public static void main(String[] args)

{

// first array

int[] a = { 10, 20, 30, 40 };

// second array

int[] b = { 50, 60, 70, 80 };

// determines length of firstArray

int a1 = a.length;

// determines length of secondArray

int b1 = b.length;

// resultant array size

int c1 = a1 + b1;

// create the resultant array

int[] c = new int[c1];

// using the pre-defined function arraycopy

System.arraycopy(a, 0, c, 0, a1);

System.arraycopy(b, 0, c, a1, b1);

// prints the resultant array

System.out.println(Arrays.toString(c));

}

}

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

class GFG{

// Function to print the

// second largest elements

static void print2largest(int arr[],

int arr\_size)

{

int i, first, second;

// There should be

// atleast two elements

if (arr\_size < 2)

{

System.out.printf(" Invalid Input ");

return;

}

// Sort the array

Arrays.sort(arr);

// Start from second last element

// as the largest element is at last

for (i = arr\_size - 2; i >= 0; i--)

{

// If the element is not

// equal to largest element

if (arr[i] != arr[arr\_size - 1])

{

System.out.printf("The second largest " +

"element is %d\n", arr[i]);

return;

}

}

System.out.printf("There is no second " +

"largest element\n");

}

// Driver code

public static void main(String[] args)

{

int arr[] = {12, 35, 1, 10, 34, 1};

int n = arr.length;

print2largest(arr, n);

}

}