JAVA ASSIGNMENT (DAY 1)

1) Mention the difference between interpreter and compiler.

What is compiler ?

- A compiler is a special program that processes statements written in a particular programming language and turns them into machine language or "code" that a computer's processor uses.
- A Java compiler is a program that takes the text file work of a developer and compiles it into a platform-independent Java file.
- Generally, Java compilers are run and pointed to a programmer's code in a text file to produce a class file for use by the Java virtual machine (JVM) on different platforms. For example, if an open source compiler that works in this way.
- just-in-time (JIT) compiler comes along with the Java VM. Its use is optional, and it is run on the platform-independent code. The JIT compiler then translates the code into the machine code for different hardware so that it is optimized for different architectures. Once the code has been (re-)compiled by the JIT compiler, it will usually run more quickly than the Java code that can only be executed one instruction at a time.

What is interpreter ?

- An interpreted program, sometimes called a script, is a program whose instructions are actually a logically sequenced series of operating system commands, handled one at a time by a command interpreter.
- Well, an Interpreter in **Java** is a computer program that helps to convert a high-level program statement into a machine code comprising source code, pre-compiled code, and scripts. An Interpreter converts the code into machine code when the program is run.
- For beginners, Interpreter is easy to use.
- The interpreter converts the source code **line-by-line** during the **RUN** Time.
- You can execute and evaluate a program while execution.

- Less amount of time is spent on analyzing and processing the program.
- When compared to a compiler, the program execution speed is slower.

2) Write a program which will store details of a student and print the detail using string as name, integer as roll number and Float as mark.

```
import java.util.Scanner;

public class Student

{

    String name;

   int roll;

   float marks;

   public void accept() {

      Scanner in = new Scanner(System.in);

      System.out.print("Enter student name: ");

      name = in.nextLine();

      System.out.print("Enter roll number: ");

      roll = in.nextInt();

      System.out.print("Enter mark: ");

      mark = in.nextFloat();


   }

   public void display() {

      System.out.println("Name: " + name);
```

```
        System.out.println("Roll number: " + roll);
        System.out.println("Marks: " + mark);

    }

    public static void main(String args[]) {
        Student obj = new Student();
        obj.accept();

        obj.display();
    }
}
```

Output:

Enter student name:yash

Enter roll number: 101

Enter mark: 75

Name: yash

Roll: 101

Mark: 75