Ex1

```
/*
Example java program without any class
*/
// Edit HelloNoClass.java


        public static void main (String args[ ] ) {

                System.out.println( "Hello Classless Java!]);

                }



        Type following two commands to run the HelloNoClass.java Application:


                        javac HelloNoClass.java          // To compile

                        java   HelloNoClass              // To run the program
```

Is the compilation successful? What is about the execution?

Ex2
```
/*
Application with more than one classes within same java file
*/
//Edit PeopleApp.java
        class FirstClass {
        int idNo;
        idNo = 555;
                public static void print(  ) {
                        System.out.println ( " First Class citizen"  + idNo );
                }
        }
```

```
class SecondClass {

int idNo;

        idNo = 111;

        public static void print(  ) {

                System.out.println ( " Second Class citizen " + idNo) ;

        }

}

public class PeopleApp {

FirstClass female;

SecondClass male;

        public static void main( String args[ ] ) {

                System.out.print("People from Java World");

                female.print( );

                male.print( );

        }

}
```

(This problem has a minor mistake. Identify the mistake and then write the correct code.)

Ex3

```
/*

Application with more than one class in separate java file

*/
//Edit AnotherFirstClass.java

class AnotherFirstClass {

static int idNo = 777;

        public static void print(  ) {

                System.out.println ( " First Class citizen"  + idNo );

        }

}

//Edit AnotherSecondClass.java

class AnotherSecondClass {

static int idNo = 888;
```

```java
            public static void print(  ) {

                    System.out.println ( " Second Class citizen " + idNo) ;

            }

    }


    //Edit AnotherPeopleApp.java


    public class AnotherPeopleApp {

            public static void main( String args[ ] ) {

                    AnotherFirstClass female = new AnotherFirstClass();

                    AnotherSecondClass male = new AnotherSecondClass();

                    System.out.print("People from Java World");

                    female.print( );

                    male.print( );

            }

}
```
What is the output?

```
Ex4
/*
This program passes inputs to the Application through command line arguments
*/
// CommnadLineInputTest.java

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

        int count;

        String aString;

        count = args.length;


        System.out.println( "Number of arguments ="+ count);


        for(int i = 0; i < count; i++) {

                aString = args[0];

                System.out.println( "args["+i+"]"+"="+ aString);
```

```
                        }

                   }

            }
```

Type following two commands to run the CommandLineInputTest.java Application :

```
        javac CommandLineInputTest.java

        java  CommandLineInputTest Kolkata Chennai Mumbai Delhi Goa
```

What is the output?

```
Ex5
/*

This is a Java Application to read a number from the standard input * and display
the number.

*/

// ReadNumber.java


        import java.io.*;


        class ReadNumber{

                public static void main(String args[ ] ) {

                Float number1 = new Float(0);

                Float number2 = new Float(0);


        DataInputStream in = new DataInputStream(System.in);

                String tempString;


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

                System.out.flush();

        tempString = in.readLine();

                number1  = Float.valueOf(tempString);


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

                System.out.flush();

                tempString = in.readLine();

                number2 = Float.valueOf(tempString);
```

```
            System.out.println("Number 1: "+number1);

    System.out.println("Number 2: "+number2);


     }
```
What is the output?

Ex6
```
/* while loop example */
    class WhileDemo {
    public static void main(String[] args){
    int count = 1;
    while (count < 11) {
    System.out.println("Count is: " + count);
    count++;
}
}
}
```

What is the output?

Ex7
```
/* DoWhile loop example */
    class DoWhileDemo {
    public static void main(String[] args){
    int count = 1;
    do {
    System.out.println("Count is: " + count);
    count++;
    } while (count <= 11);
    }
    }
```

What is the output?

Ex8

```java
/* while loop example */
        class WhileDemo {
        public static void main(String[] args){
        int count = 1;
        while (count < 11) {
        System.out.println("Count is: " + count);
        count++;
}
}
}
```

What is the output?

Ex9

```java
/* For loop example */
        class ForDemo {
        public static void main(String[] args){
        for(int i=1; i<11; i++){
        System.out.println("Count is: " + i);
        }
        }
        }
```

What is the output?

Ex10

```java
/* Loop  example with continue */
        class Continue {
        public static void main(String args[]) {
        for(int i=0; i<10; i++) {
        System.out.print(i + " ");
        if (i%2 == 0) continue;
        System.out.println("");
```

```
        }
        }
        }
```

What is the output?

Ex11

```
/* Loop example with break*/
        class BreakLoop {
        public static void main(String args[]) {
        for(int i=0; i<100; i++) {
        if(i == 10) break; // terminate loop if i is 10
        System.out.println("i: " + i);
        }
        System.out.println("Loop complete.");
        }
        }
```

what is the output?

Ex12

```
/* Test for primes */
        class FindPrime {
        public static void main(String args[]) {
        int num;
        boolean isPrime = true;
        num = 14;
        for(int i=2; i <= num/2; i++) {
        if((num % i) == 0) {
        isPrime = false;
        break;
        }
        }
        if(isPrime) System.out.println("Prime");
        else System.out.println("Not Prime");
```

```
        }
        }
```

what is the output?

Ex13


```java
/* Menu selection using do-while and switch-case */
        class Menu {
        public static void main(String args[]) throws java.io.IOException {
        char choice;
        do {
        System.out.println("Help on:");
        System.out.println(" 1. if");
        System.out.println(" 2. switch");
        System.out.println(" 3. while");
        System.out.println(" 4. do-while");
        System.out.println(" 5. for\n");
        System.out.println("Choose one:");
        choice = (char) System.in.read();
        } while( choice < '1' || choice > '5');

        System.out.println("\n");
        switch(choice) {
        case '1':
        System.out.println("The if:\n");
        System.out.println("if(condition) statement;");
        System.out.println("else statement;");
        break;
        case '2':
        System.out.println("The switch:\n");
        System.out.println("switch(expression) {");
        System.out.println(" case constant:");
        System.out.println(" statement sequence");
        System.out.println(" break;");
        System.out.println(" // ...");
        System.out.println("}");
```

```
        break;
        case '3':
        System.out.println("The while:\n");
        System.out.println("while(condition) statement;");
        break;
        case '4':
        System.out.println("The do-while:\n");
        System.out.println("do {");
        System.out.println(" statement;");
        System.out.println("} while (condition);");
        break;
        case '5':
        System.out.println("The for:\n");
        System.out.print("for(init; condition; iteration)");
        System.out.println(" statement;");
        break;
        }
        }
        }
```

what is the output?

Ex14
```
/* Example of recursion */
        class Recursion {
        public static void main(String args[]) {
        myMethod(10); // pass positive integer
        }

        void myMethod( int counter)
        {
        if(counter == 0)
        return;
        else
        {
        System.out.println("hello" + counter);
```

```
        myMethod(--counter);

        System.out.println(""+counter);

        return;

        }

        }

        }



what is the output?
```

Assignment

Q: Write java program to calculate the Square of a number.
Q: Write java program to add two numbers, take input as command line argument.
Q: Write java program to multiply two numbers, numbers should be taken from standard input.
Q: Write Java program to read the three integers a, b and c from the keyboard and then print the largest value read.
Q: Write a Java Application to read the name of a student (studentName), roll Number (rollNo) and marks (totalMarks) obtained. rollNo may be an alphanumeric string. Display the data as read..
Q: Write Java program to calculate the perimeter and the area of the circle. The radius of the circle is taken as user input. Use to different functions to calculate the perimeter and area. Define the value of PI as class constant.
Q: Write a program to check the number is even or odd. Input is taken from keyboard.
Q: Write a program to find out the number of days in a month using switch-case. Month number and year is taken as input through keyboard.
Q: Write java program to calculate the Sum of the square of first 10 integers.
Q: Write java program to calculate the Factorial of a 10 (iteratively and recursively).
Q: Write a program to calculate the grade of a student. There are five subjects. Marks in each subject are entered from keyboard. Assign grade based on the following rule:

```
Total Marks >= 90          Grade: Ex

90 > Total Marks >= 80    Grade: A

80 > Total Marks >= 70    Grade: B

70 > Total Marks >= 60    Grade: C
```

```
60 > Total Marks         Grade: F
```