**Java Lecture 4**

**Java - Introduction to Programming**

**Loops**

* A loop is used for executing a block of statements repeatedly until a particular condition is satisfied.
* A loop consists of an initialization statement, a test condition and an increment statement.

**For Loop**

The syntax of the for loop is :

for (initialization; condition; update) {

// body of-loop

}

for (int i=1; i<=20; i++) {

System.out.println(i);

}

**While Loop**

The syntax for while loop is :

while(condition) {

// body of the loop

}

int i = 0;

while(i<=20) {

System.out.println(i);

i++;

}

**Do-While Loop**

The syntax for the do-while loop is :

do {

// body of loop;

}while (condition);

int i = 0;

do {

System.out.println(i);

i++;

} while(i<=20);

**Homework Problems**

* 1.Print all even numbers till n.
* Make a menu driven program. The user can enter 2 numbers, either 1 or 0.If the user enters 1 then keep taking input from the user for a student’s marks(out of 100).If they enter 0 then stop.

If he/ she scores :

Marks >=90 -> print “This is Good”

89 >= Marks >= 60 -> print “This is also Good”

59 >= Marks >= 0 -> print “This is Good as well”

Because marks don’t matter but our effort does.

(Hint : use do-while loop but think & understand why)

BONUS

* Print if a number is prime or not (Input n from the user).[In this problem you will learn how to check if a number is prime or not]

**Homework Solution (Lecture 3)**

import java.util.\*;

public class Conditions {

public static void main(String args[]) {

Scanner sc = new Scanner(System.in);

int a = sc.nextInt();

int b = sc.nextInt();

int operator = sc.nextInt();

/\*

\* 1 -> +

\* 2 -> -

\* 3 -> \*

\* 4 -> /

\* 5 -> %

\*/

switch(operator) {

case 1 : System.out.println(a+b);

break;

case 2 : System.out.println(a-b);

break;

case 3 : System.out.println(a\*b);

break;

case 4 : if(b == 0) {

System.out.println("Invalid Division");

} else {

System.out.println(a/b);

}

break;

case 5 : if(b == 0) {

System.out.println("Invalid Division");

} else {

System.out.println(a%b);

}

break;

default : System.out.println("Invalid Operator");

      }

   }

}