LAB 01

1. Installation of Eclipse.

Procedure:

**Step 0: Install JDK**

To use Eclipse for Java programming, you need to first install Java Development Kit (JDK).

**Step 1: Download**

Download Eclipse from [https://www.eclipse.org/downloads](https://www.eclipse.org/downloads/).

**Step 2: Unzip**

To install Eclipse, simply unzip the downloaded file into a directory of your choice (e.g., "c:\myproject").

I prefer the zip version, because there is no need to run any installer. Moreover, you can simply delete the entire Eclipse directory when it is no longer needed (without running any un-installer). You are free to move or rename the directory. You can install (unzip) multiple copies of Eclipse in the same machine.

1. Hello World.

Code:

**public** **class** Hello {

**public** **static** **void** main(String[] args) {

System.***out***.println("Hello World!!!");

}

}

1. Mathematical Operation on static and dynamic variables.

Code:

**public** **class** SimpleDMAS {

**public** **int** res;

**public** **int** div(**int** x, **int** y) {

**if**(y>0) {

res = x/y;

**return** res;

}

**else** {

System.***out***.println("2nd element is less than zero!!!");

**return** 0;

}

}

**public** **int** mul(**int** x, **int** y) {

res = x\*y;

**return** res;

}

**public** **int** add(**int** x, **int** y) {

res = x+y;

**return** res;

}

**public** **int** sub(**int** x, **int** y) {

res = x-y;

**return** res;

}

**public** **static** **void** main(String[] args) {

SimpleDMAS sd = **new** SimpleDMAS();

Scanner sc = **new** Scanner(System.***in***);

**int** ch,a,b;

System.***out***.println("Enter Two Numbers To Perform DMAS");

a = sc.nextInt();

b = sc.nextInt();

System.***out***.println("1. Addition");

System.***out***.println("2. Subtraction");

System.***out***.println("3. Multiplication");

System.***out***.println("4. Division");

ch = sc.nextInt();

**switch**(ch) {

**case** 1:

System.***out***.println("Addition ="+sd.add(a, b));

**break**;

**case** 2:

System.***out***.println("Subtraction ="+sd.sub(a, b));

**break**;

**case** 3:

System.***out***.println("Multiplication ="+sd.mul(a, b));

**break**;

**case** 4:

System.***out***.println("Division ="+sd.div(a, b));

**break**;

**default**:

System.***out***.println("Wrong Choice!!!");

**break**;

}

sc.close();

}

}

1. Check whether a number is even or odd.

Code:

**public** **class** DisplayNumbers {

**public** **static** **void** main(String[] args) {

**int** i = 0;

**for**(; i<=10; i++) {

System.***out***.println(i);

}

**while**(i<=20) {

System.***out***.println(i);

i++;

}

**do** {

System.***out***.println(i);

i++;

}**while**(i<=30);

}

}

1. Implementation of loops.

Code:

**public** **class** OddEven {

**public** **int** k;

**public** **void** oddEvenCheck() {

System.***out***.println("Input an integer number :");

Scanner sc = **new** Scanner(System.***in***);

k = sc.nextInt();

**if** ((k/2)\*2 == k)

System.***out***.println("Number is Even");

**else**

System.***out***.println("Number is Odd");

sc.close();

}

**public** **static** **void** main(String[] args) {

OddEven oe = **new** OddEven();

oe.oddEvenCheck();

}

}

1. From a range of number provided by user print whether a number is even or odd.

Code:

**import** java.util.\*;

/\*\*

\* **@author** HAMMAD

\*

\*/

**public** **class** OddEvenRange {

**public** **int** a=0, b=0;

**public** **void** swap(**int** x, **int** y) {

**if**(x>=y) {

**this**.b = x;

**this**.a = y;

}

**else** {

**this**.b = y;

**this**.a = x;

}

oddEvenCheck();

}

**public** **void** oddEvenCheck() {

**if** ((**this**.a/2)\*2 == **this**.a) {

System.***out***.println("Even Series");

printEvenOdd(**this**.a,**this**.b);

System.***out***.println("Odd Series");

printEvenOdd(**this**.a+1,**this**.b);

}

**else**{

System.***out***.println("Odd Series");

printEvenOdd(**this**.a,**this**.b);

System.***out***.println("Even Series");

printEvenOdd(**this**.a+1,**this**.b);

}

}

**public** **void** printEvenOdd(**int** cur, **int** limit){

**if**(cur > limit) {

**return**;

}

System.***out***.println(cur);

printEvenOdd(cur + 2, limit);

}

**public** **static** **void** main(String[] args) {

**int** x, y;

Scanner sc = **new** Scanner(System.***in***);

System.***out***.println("Enter two integer numbers");

x = sc.nextInt();

y = sc.nextInt();

OddEvenRange rg = **new** OddEvenRange();

rg.swap(x, y);

sc.close();

}

}