

UNIVERSITY OF ENGINEERING AND TECHNOLOGY, TAXILA



SOFTWARE ENGINEERING

OOP-LAB 5

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COURSE: OOP-LAB

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TASK-1

Write a Java application that uses looping to print the following table of values:

```
public class Lab5_task1 {  
  
    public static void main(String[] args) {  
        //created an integer type variable to store numbers  
        int num;  
        System.out.println("\t N \t 10*N \t 100*N \t 1000*N  
        \t");  
        for(num=0;num<=5;num++)  
  
            {System.out.println("\t "+ num + "\t" +(num*10) +  
            "\t" +(num*100)+ "\t"  
                +(num*1000));  
        }  
    }  
}
```

```
Lab5_task1.java x Lab5_task2.java Lab5_task3.java
1
2
3 public class Lab5_task1 {
4
5 public static void main(String[] args) {
6     //created an integer type variable to store numbers
7     int num;
8     System.out.println("\t N \t 10*N \t 100*N \t 1000*N \t");
9     for(num=0;num<=5;num++)
10
11     {System.out.println("\t " + num + "\t" +(num*10) + "\t" +(num*100)+ "\t"
12         +(num*1000));
13 }
14 }
15 }
```

Problems @ Javadoc Declaration Console Coverage
<terminated> Lab5_task1 [Java Application] C:\Program Files\Java\jdk-17\bin\javaw.exe (Oct 23, 2021, 10:56:14 PM – 10:56:15 PM)

N	10*N	100*N	1000*N
0	0	0	0
1	10	100	1000
2	20	200	2000
3	30	300	3000
4	40	400	4000
5	50	500	5000

EXPLANATION

In this program I first declared integer type of variable 'num'.

Then I printed headings text in the first row.

Then I used a for loop which will execute until it equals to 5.

TASK-2

Write a program using while loop which calculate square of every number and then sum the squares of all numbers. Output should be like as shown below:

```

public class Lab5_task2 {
    public static void main(String[] args) {
        //initialized two variables with zero starting
values
        int n1=0;
        int sum=0;
        while(n1<11) {

            System.out.println(n1*n1);n1++;}

        for(int i=1;i<n1;i++)
            {sum = sum + (i*i);
}

        System.out.println("Total is "+ sum);
}
}

```

```
Lab5_task1.java Lab5_task2.java x Lab5_task3.java
1
2 public class Lab5_task2 {
3     public static void main(String[] args) {
4         //initialized two variables with zero starting values
5         int n1=0;
6         int sum=0;
7         while(n1<11) {
8
9             System.out.println(n1*n1);n1++;}
10
11         for(int i=1;i<n1;i++)
12             {sum = sum + (i*i);
13         }
14         System.out.println("Total is "+ sum);
15     }
16 }
```

Problems Javadoc Declaration Console x Coverage
<terminated> Lab5_task2 [Java Application] C:\Program Files\Java\jdk-17\bin\javaw.exe (Oct 23, 2021, 10:57:02 PM – 10:57:03 PM)

```
0
1
4
9
16
25
36
49
64
81
100
Total is 385
```

TASK-3

Write a test program that find out the minimum value from an array of 10 digits.

```
public class Lab5_task3 {

    public static void main(String[] args) {

        int my_array[]= {4,5,74,46,22,4,9,10,33};
```

```

        int min_val=my_array[0];//CREATED A VARIABLE TO STORE
MINIMUM VALUE
        int length= my_array.length;//ARRAY LENGTH IS STORED
IN length VARIABLE

System.out.println(" Elements of Array are:");
        //displaying elements of array
        for (int i=0;i<length;i++) {
            System.out.print(my_array[i]+" ");
        }

        //checking for smallest element of given array
        for(int i=1;i<length;i++){
            if(my_array[i]<min_val) {
                min_val = my_array[i];
            }
        }
        System.out.println("\n MINIMUM VALUE IN ARRAY
IS="+ min_val);
    }}

```

```
Lab5_task1.java Lab5_task2.java Lab5_task3.java ×
1
2 public class Lab5_task3 {
3
4     public static void main(String[] args) {
5
6         int my_array[] = {4,5,74,46,22,4,9,10,33};
7
8
9         int min_val=my_array[0]; //CREATED A VARIABLE TO STORE MINIMUM VALUE
10        int length= my_array.length; //ARRAY LENGTH IS STORED IN length VARIABLE
11
12        System.out.println(" Elements of Array are:");
13        //displaying elements of array
14        for (int i=0;i<length;i++) {
15            System.out.print(my_array[i]+" ");
16        }
17
18        //checking for smallest element of given array
19        for(int i=1;i<length;i++){
20            if(my_array[i]<min_val) {
21                min_val = my_array[i];
22            }
23        }
24        System.out.println("\n MINIMUM VALUE IN ARRAY IS="+ min_val);
25    }
}
```

Problems Javadoc Declaration Console × Coverage
<terminated> Lab5_task3 [Java Application] C:\Program Files\Java\jdk-17\bin\javaw.exe (Oct 23, 2021, 10:57:25 PM - 10:57:25 PM)

Elements of Array are:
4 5 74 46 22 4 9 10 33
MINIMUM VALUE IN ARRAY IS=4

Writable Smart Insert