**Basic Programming**

**Practicum Report**

Job sheet 6

LOOPING 2

Experiment & Assignment



MUHAMMAD BAIHAQI AULIA ASY’ARI

2241720145

CLASS 1I (INTERNATIONAL)

INFORMATICS ENGINEERING­­

INFORMATICS TECHNOLOGY

STATE POLYTECHNIC OF MALANG

Contents

[Laboratory Experiment 3](#_Toc118396765)

[Experiment 1 3](#_Toc118396766)

[Questions! 3](#_Toc118396767)

[Answer! 3](#_Toc118396768)

[Experiment 2 4](#_Toc118396769)

[Question! 4](#_Toc118396770)

[Answer! 4](#_Toc118396771)

[Experiment 3 5](#_Toc118396772)

[Question! 5](#_Toc118396773)

[Answer! 5](#_Toc118396774)

[Experiment 4 6](#_Toc118396775)

[Question! 6](#_Toc118396776)

[Answer! 6](#_Toc118396777)

[Assignment 7](#_Toc118396778)

[Question! 7](#_Toc118396779)

[Answer! 7](#_Toc118396780)

# Laboratory Experiment

## Experiment 1

1. Experiment 1 was aimed at reviewing the loop that had been studied in the previous week. In experiment 1, a program will be made to make a view \* N times sideways.
2. Create a new class, name it **Star**
3. Write the basic structure of the Java programming language which contains the **main()** function
4. Add the Scanner library
5. Make a **Scanner** declaration with the name **sc**
6. Add the following code to receive input from keyboard as the value to be stored in the variable N
7. Add a for loop structure to display the \* symbol according to the number specified via input
8. Compile and run the program. Observe the results!
9. Match the results of the running programs that you have created according to the following display

### Questions!

1. If in for loop, the initialization i = 1 is changed to i = 0, what is the result? How can It be like that?
2. If in for loop, condition i <= N is changed to i > N, what is the result? How can It be like that?
3. Change the **&&** operator to **||** on **if (value >= 0 && value <= 100)**. Compile and run the program by entering the value = 105 using keyboard. Watch what happened! Why is the result like that?

### Answer!

1. -
2. -
3. -

## Experiment 2

1. Experiment 2 is used to create a display \* in the form of a square, with sides of a number of N. When observed further, this problem is actually similar to Experiment 1. In Experiment 1, for example the input of N is 5, then the resulting output is \*\*\*\*\* (we can think of it as an inner loop showing 5 stars \*\*\*\*\*). For Experiment 2, doesn't the result of Experiment 1 just need to be repeated N times? (by adding an outer loop to repeat the inner loop process N times)
2. Create a new class, name it **Square**
3. Write the basic structure of the Java programming language which contains the **main()** Function
4. Add the same program code as the contents of the **main()** function in Experiment 1
5. Run the program. Make sure the results given are the same as in Experiment 1
6. Pay attention to the iterative syntax used to print \* N times sideways. In step 4, we make **for** loop structure (red box) as an **inner loop**
7. Furthermore, the inner loop needs to be repeated N times in order to display the \* symbol to form a square. Thus, it is necessary to add an outer loop
8. Compile and run the program. Observe the results!
9. Match the results of the running programs that you have created according to the following display

### Question!

1. Pay attention to outer loop. If in **for** syntax, the initialization iOuter = 1 is changed to iOuter = 0, what is the result? How can it be like that?
2. Return the program to normal with initialization iOuter = 1. Then pay attention to the inner loop. If in for syntax, the initialization i = 1 is changed to i = 0, what is the result? How can it be like that?
3. What is the difference between outer loop and inner loop?
4. Why is it necessary to add the syntax System.out.println(); under inner loop? What will happen if the syntax is omitted?

### Answer!

1. -
2. -
3. -
4. –

## Experiment 3

1. Experiment 3 is used to create a display \* in the form of a right triangle with a height of N
2. Create a new class, name it **Triangle**
3. Write the basic structure of the Java programming language which contains the main() function
4. Add the Scanner library
5. Make a Scanner declaration with the name sc
6. Add the following code to receive input from keyboard as the value to be stored in the variable N
7. Add a while loop structure to display the \* symbol according to the number specified via input
8. Compile and run the program. Observe the results!

### Question!

1. Look at the results, is the output generated with a value of N = 5 in accordance with the following display?

\*

\*\*

\*\*\*

\*\*\*\*

\*\*\*\*\*

1. If not, which parts should be improved or added? Describe any parts that need to be improved or added!

### Answer!

1. –
2. -

## Experiment 4

1. –
2. –
3. –
4. –
5. –
6. –
7. -

### Question!

1. –
2. –
3. –

### Answer!

1. –
2. –
3. -

# Assignment

## Question!

1. –
2. –
3. –
4. -

## Answer!

1. –
2. –
3. –
4. -