

Lab - 6

Task:

- Write a Java program that display a horizontal triangle.

Instructions:

- ▮ Allow the user to enter the height of the triangle
- ▮ Draw a horizontal triangle using the asterisk (*) symbol [see sample output]

Sample Output:

Enter the height of the triangle: 5

```
*
**
***
****
*****
****
***
**
*
```

End of program!

Lab Submission:

- ▮ At the beginning of your program, insert your full name as a comment.
- ▮ Include comments in your program wherever necessary.
- ▮ Upload the `.java` file on Dropbox.

Lab Report Submission:

- First, download the Lab Report Template document on Dropbox.
- Use this template to complete your lab report.
- Proposed Solution:
 - In the proposed solution section of your lab report, draw a flow chart based on your lab solution.

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- Make sure to put decisions in diamonds, actions/statements in boxes, and draw arrows showing the flow of the program.
- Arrows coming from decisions must have the “TRUE” and “FALSE” branches clearly labeled.
- Additional Questions:

1. (5 pts) Write a for statement to compute the sum of

$$1 + 2^2 + 3^2 + 4^2 + 5^2 + \dots + n^2$$

2. (5 pts) Define scope of a variable? Why is it important when a variable is declared in a loop?
3. (5 pts) Does the code snippet below give an error? Why or Why not?

```
for(int x = 0; x < 50; x++)  
{  
    System.out.println(x);  
}  
  
int y = x + 9;
```

4. (5 pts) Does the code snippet below give an error? If yes, rewrite the correct code otherwise display the output.

```
for(int i = 0, j = 1; i < 3, j > 5; i++, j++)  
{  
    System.out.println(i+j);  
}
```