Lab 2 - Tasks
Software Engineering 1 Module

This document outlines the lab tasks for this week. You are expected to complete these tasks independently. For further reading and clarification, refer to the lab guidance provided.

If you have any questions during the lab, feel free to raise your hand, and a tutor will assist you.

- **Task 1: Writing a For Loop**

Write a C++ program that prints the first 10 natural numbers using a for loop. Make sure to initialize the loop counter properly and increment it correctly.

- **Task 2: Implementing a While Loop**

Write a C++ program that reads numbers from the user until they enter a negative number. Use a while loop for this task.

- **Task 3: Using Nested Loops**

Write a C++ program that uses nested loops to print a pattern of stars in the following format:

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

- **Task 4: Handling User Input in a Do-While Loop**

Write a C++ program that asks the user for a number, and uses a do-while loop to validate that the input is a positive number.

- **Task 5: Creating a Multiplication Table with Nested Loops**

Write a C++ program that generates a multiplication table for numbers from 1 to 10 using nested loops. The program should display the multiplication table in a formatted grid as follows:

1	2	3	4	5	6	7	8	9	10
2	4	6	8	10	12	14	16	18	20
3	6	9	12	15	18	21	24	27	30
4	8	12	16	20	24	28	32	36	40
5	10	15	20	25	30	35	40	45	50
6	12	18	24	30	36	42	48	54	60
7	14	21	28	35	42	49	56	63	70
8	16	24	32	40	48	56	64	72	80
9	18	27	36	45	54	63	72	81	90
10	20	30	40	50	60	70	80	90	100