

## IT 182 - Programming Methodology

Date: Time: -

- 1. Write a C++ program to generate the multiplication table for a specified number, obtaining the table for the first five multiples of that number.
- 2. Write a C++ program by including a **function called IsEven** that takes an integer as a parameter and returns true if it's even and false otherwise.
- 3. Generate a C++ program with a **function greetUser** that takes a string (user's name) as input and prints a personalized greeting message.
- 4. **Display flow chart and write c++** for a grading system that accepts Average marks from a student. Based on the average score, determine and display the corresponding grade using the following criteria:
  - Average score 90-100: Grade A
  - Average score 80-89: Grade B
  - Average score 70-79: Grade C
  - Average score 60-69: Grade D
  - Average score below 60: Grade F

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5. The below pseudo code is to print n even numbers. Convert it to flow chart.

```
BEGIN

GET n

INITIALIZE i=2

WHILE(i<=n) DO

PRINT i

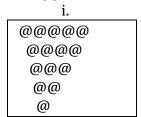
i=i+2

ENDWHILE

END
```

- 6. Programming languages use two types of translators.
  - i. Identify and state them.
  - ii. State two (2) differences between them.

7. Write the C++ / Java program code for a simple application that prints the following patterns using arrays and loops.



ii.	
1	
2 2	
3 3 3	
4 4 4 4	

iii.
1, 4, 9, 16,
25100

- 8. Write pseudo code to converts temperature from Celsius to Fahrenheit.
- 9. Create a C++ program that converts temperature from Celsius to Fahrenheit.

## Requirements:

- The program should prompt the user to enter a temperature in Celsius.
- It should then convert the Celsius temperature to Fahrenheit using the formula: Fahrenheit = (Celsius \* 9/5) + 32.
- The converted temperature in Fahrenheit should be displayed as output.
- 10. Write a C++ program that prompts user to input the two-dimensional array and print all the elements in the array.
- 11. Create a C++ program to find the sum of all even numbers between 1 and a given positive integer (inclusive).

## Requirements:

- The program should prompt the user to enter a positive integer.
- It should then use a loop to calculate the sum of all even numbers between 1 and the entered positive integer (inclusive).
- The sum of even numbers should be displayed as output.