



**Instructions:**

- 1- Create a folder with your full name on the desktop.
  - 2- Create 9 Text Documents inside the folder and name them Q1, Q2 ... Q9.
  - 3- Save your codes inside the Text Documents.
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Q1. Write a program that uses a **for loop** to print the first 10 positive integers (1, 2, 3, ..., 10) to the console.

Q1.1: Modify Q1 and print numbers from (10 to 1)

Q1.2. Modify Q1 & 1.1 and use (**While loop**)

Q2. Write a C++ program that uses a for loop to print the even numbers between 1 and 50.

Q2.5: Modify Q2 and find how many even numbers are between 1-50.

Q3. Write a C++ program that finds the sum of 10 random numbers (**use for loop**)

Q4. Write a C++ program that uses a for loop to ask a user to input 5 numbers and find the square of each number.

Q5. Write a C++ program that asks users to input 5 numbers and check if the number is positive or negative. (**Use while loop**)

Q6. Write a C++ program that prompts the user to enter an integer and then calculates its factorial. (Example:  $4! = 4 \times 3 \times 2 \times 1$ )

Q7. Write a program to display the multiplication table for a given number using a for loop.

Enter a number: 3

3 x 1 = 3

3 x 2 = 6

3 x 3 = 9

...

3 x 10 = 30



Q8- Write a C++ program that counts all the even and odd numbers within a range specified by the user, calculates the sum of all numbers in the range, and separately calculates the sums of the even and odd numbers.

Use while loop.

Output example:

Enter lowest: **5**  
Enter highest: **60**

There are 28 odds and 28 even numbers.  
The sum of all is 1820, sum of even numbers is 924 and sum of odd numbers is 896

Q9. Write a C++ program to create a calculator that repeatedly performs calculations for any two numbers entered by the user and exits when the user chooses to stop using it.

Use while loop.

Output example:

Enter Number 1: **5**  
  
Enter number 2: **8**  
  
Enter operation sign: +  
  
 $5 + 8 = 13$   
  
Press Y or y to do another operation or any other key to exit. **Y**  
  
Enter Number 1: **4**  
  
Enter number 2: **8**  
  
Enter operation sign: \*  
  
 $4 * 8 = 32$   
  
Press Y or y to do another operation or any other key to exit. **N**