



Instructions:

- 1- Create a folder with your full name on the desktop.
- 2- Create 10 Text Documents inside the folder and name them Q1, Q2 ... Q10.
- 3- Save your codes inside the Text Documents.
- **Q1.** Write a C++ program that asks the user to input three numbers, calculates their average, and prints it. Then check if the average is greater than or less than 10.

Please enter first number: 9
Please enter second number: 4
Please enter third number: 21

The average is: 11.33

The average is greater than 10.

Please enter first number: 5
Please enter second number: 2
Please enter third number: 9

The average is: 5.33

The average is less than 10.

Q2. Write a C++ program that asks the user to input two numbers and solves the following equation:

$$\frac{x^2}{v}$$

Where $y \neq 0$.

Enter value for x: 3
Enter value for y: 5

The result is: 1.8

Enter value for x: 8 Enter value for y: 0

y value must NOT be zero!

Q3. Write a C++ program that asks the user to input a number and checks whether it is odd or even.

Enter a number: 8

It's an even number

Enter a number: 3

It's an odd number





Q4. Write a C++ program to input two integers and check if the first integer is greater than the second one. If it is, print "First number is greater", otherwise, print "Second number is greater".

Enter first number: 23
Enter second number: 17

The first number is greater

Enter first number: **42** Enter first number: **81**

The second number is greater

Q5. Write a C++ program to determine if a user-input character is a vowel (a, e, i, o, u). Compare the entered character with each vowel and display whether it is a vowel or not.

Enter a character: k

The character k is not vowel!

Enter a character: E

The character E is vowel!

Q6. Write a C++ program that lets the user enter two numbers. If one of the numbers is greater than 10, the program should display "I am greater than 10", otherwise, it should display "I am smaller than 10".

Enter first number: 9
Enter second number: 2

I am smaller than 10

Enter first number: 12 Enter first number: 7

I am greater than 10

Q7. Write a C++ program that allows the user to enter a city name and its population, then checks if the given city and its population meet certain criteria. If the city is "Erbil" and the population is greater than or equal to 1 million, display "City approved", Otherwise, display "City not approved".

Enter the city name: **Duhok**Enter the population: **1200000**

City not approved

Enter the city name: **Erbil** Enter the population: **1400000**

City approved





Q8. Write a C++ program that lets the user enter 3 numbers and outputs the largest and smallest number.

Enter first number: **57**Enter second number: **102**Enter third number: **91**

The largest number is: 102 The smallest number is: 57 Enter first number: 23
Enter second number: 11
Enter third number: 73

The largest number is: 73 The smallest number is: 11

Q9. Write a C++ program that lets the user enter an exam mark (integer) and prints out its equivalent letter grade, which is assigned based on the following scheme.

| Letter | Grade Equivalent Out of 100 |
|--------|-----------------------------|
| AA (| 90-100 |
| ВА | 85-89 |
| ВВ | 80-84 |
| СВ | 75-79 |
| CC (| 70-74 |
| DC | 60-69 |
| DD | 50-59 |
| FD | 40-49 |
| FF (| 0-39 |

Enter an exam mark: **82** Equivalent letter grade is BB

Enter an exam mark: **65** Equivalent letter grade is DC

Enter an exam mark: **23** Equivalent letter grade is FF

Q10. Write a C++ program that allows a user to create an account by entering their username, email, password, and confirm password. If the password and confirm password do not match, it should print "Passwords do not match", otherwise, the user should be able to log in to the account if the username and password are correct and the "Welcome" message should display.

Enter username: ako.20

Enter email: ako20@yahoo.com Enter password: banana123

Enter confirm password: banana213

Password and confirm password do not match!

Enter username: sazan18

Enter email: sazan18@gmail.com

Enter password: cat#22

Enter confirm password: cat#22

Your account has been created successfully.

Login Form:

Enter email: sazan18@gmail.com

Enter password: cat222

Email or Password is incorrect!