Introduction to Programming Lab

Homework 01

01. Write a C++ program that prompts the user to input three integers. The program should then determine and display the largest and smallest numbers among the three inputs. Use if-else statements to achieve this.

For example, if the user inputs 5, 8, and 3, the program should output "Largest: 8" and "Smallest: 3".

02. Write a C++ program that prompts the user to input a temperature in Celsius (as a floating-point number). The program should then convert the temperature to Fahrenheit using the formula:

F = ((9/5) * C) + 32

Finally, the program should display the temperature in Fahrenheit.

For example, if the user inputs a temperature of 20 degrees Celsius, the program should output "Temperature in Fahrenheit: 68".

03. Write a C++ program to determine the type of a triangle based on the lengths of its sides. The program should prompt the user to input three integer values representing the lengths of the sides of a triangle. Then, it should determine whether the triangle is equilateral, isosceles, or scalene, and display the result.

For example, if the user inputs the side lengths as 5, 5, and 5, the program should output "The triangle is equilateral."

If the user inputs the side lengths as 3, 4, and 5, the program should output "The triangle is scalene.

04. Write a C++ program that prompts the user to input a character. The program should then determine whether the entered character is a vowel or a consonant and display the result.

For example, if the user inputs the character 'a', the program should output "The character 'a' is a vowel."

If the user inputs the character 'b', the program should output "The character 'b' is a consonant."

Implement this using if-else statements in C++.

05. Write a C++ program to classify a person into different age groups based on their age input. The program should prompt the user to input their age, and then classify them into one of the following age groups:

- Child (0-12 years)

- Teenager (13-19 years)

- Adult (20-59 years)

- Senior (60+ years)

For example, if the user inputs their age as 25, the program should output "You are classified as an Adult."