

## **Lab Task#5**

1. Write a program that accepts a single character input and checks whether it is a lowercase letter, uppercase letter, digit, or a special character using logical operators and nested if-else.
2. Write a program that takes an integer as input and checks if it is positive, negative, or zero using nested if-else statements.
3. Write a program that takes three integers as input and determines the largest among them using nested if-else.
4. Write a program to input the three sides of a triangle and check if a triangle is valid or not based on the triangle inequality theorem using logical operators and nested if-else.
5. Write a program to check if a person is eligible to vote (age  $\geq 18$ ) and whether they qualify as a senior citizen (age  $\geq 60$ ) using logical operators and nested if-else.
6. Write a program that calculates a person's BMI and classifies it as:  
    Underweight: BMI  $< 18.5$   
    Normal weight:  $18.5 \leq \text{BMI} < 24.9$   
    Overweight:  $24.9 \leq \text{BMI} < 29.9$   
    Obesity: BMI  $\geq 30$   
    Use nested if-else to determine the classification based on the calculated BMI value.
7. Create a program that calculates the final grade of a student based on multiple criteria, including attendance, assignment scores, and exam results, using nested decision structures.
8. Develop a program that uses logical operators to determine if a person is eligible for a loan based on age, income, and credit score.