CSC107 2.0 Computer Programming - Laboratory I
Lab sheet 07

To understand and practice the use of conditional statements through simplified real-world scenarios. Do not use loops.

1. Write a C program that converts temperature from Celsius to Fahrenheit and provides suggestions based on the temperature:

   If temperature < 0°C: Suggest "It's freezing. Stay warm!"
   If temperature < 15°C: Suggest "It's cold. Wear a jacket."
   If temperature < 25°C: Suggest "The weather is pleasant."
   If temperature >= 25°C: Suggest "It's hot. Stay cool and hydrated.

2. Write a C program that takes a person's age as input and categorizes them into one of the following age groups:

   If age < 13: Child
   If age >= 13 and < 20: Teenager
   If age >= 20 and < 60: Adult
   If age >= 60: Senior

3. Write a C program that takes a menu choice from the user and displays the selected dish and its price. Assume the menu options are:

   Pizza (Rs 2500)
   Burger (Rs 800)
   Pasta (Rs 1200)
   Salad (Rs 700)
   Use conditional statements to display the appropriate message based on the user's choice.

4. Write a C program to check the eligibility of a person for a loan based on their age, income, and credit score. A credit score is a numerical representation of an individual's creditworthiness,which is used by banks based on the individual's credit history. The eligibility criteria are as follows;

   Age: The applicant must be between 18 and 65 years old.

   Income:
   If the applicant is below 25 years old, they must have an income of at least Rs 75,000.
   If the applicant is 25 years or older but below 40, they must have an income of at least Rs 95,000.

If the applicant is 40 years or older, they must have an income of at least Rs 150,000.

Credit Score:

If the applicant is below 30 years old, they must have a credit score of at least 650.

If the applicant is 30 years or older, they must have a credit score of at least 700.

5. Write a C program to determine the final grade of a student based on their exam score and attendance rate. The grading criteria are as follows:

   If a student's exam score is 90 or higher, check their attendance rate; if it is 95% or higher, assign a grade of 'A+', otherwise assign a grade of 'A'. For students with an exam score between 75 and 89, assign a grade of 'B+' if their attendance rate is 90% or higher, and a grade of 'B' if it is below 90%. If a student's exam score is between 50 and 74, assign a grade of 'C+' if their attendance rate is 80% or higher, and a grade of 'C' if it is below 80%. Lastly, if a student's exam score is below 50, assign a grade of 'F', regardless of their attendance rate.

6. Write a C program for a *hotel management system* that calculates the rate of a room based on the type of room and the length of stay. The room types and their base rates are as follows:

Room Type	**Rates**
Single Room	Rs 12 000 per night
Double Room	Rs 15 000 per night
Suite	Rs 18 000 per night

The hotel offers discounts based on the length of stay;

Length of stay	**Discount from total cost**
1 night	No discount
2 -3 nights	10% discount
4 -7 nights	15% discount
More than 7 nights	20% discount