Second Serie of Exercice for directed coursework

All the exercices must be written in C durig practical tutorial

Exercise 1: Logic Expressions and Operators

Write a program that takes two integer inputs from the user and determines if the first number is greater than the second number. If it is, print "The first number is greater." If not, print "The second number is greater."

Exercise 2: If/Else Instruction

Write a program that takes a user's age as input and checks if the age is greater than or equal to 18. If the age is 18 or older, the program should print "You are an adult." Otherwise, it should print "You are a minor."

Exercise 3: Combining If/Else If

Write a program that takes a numerical grade (0-100) from the user and converts it into a letter grade using the following scale:

- A: 90-100
- B: 80-89
- C: 70-79
- D: 60-69
- F: 0-59

Ensure that the program handles invalid input (grades outside the 0-100 range).

Exercice 4 : Combining If/Else If

Write a prgram to compute the membership in electronic journal, the journal has three membership categories :

- Full membership can access to any content
- basic membership can access to only ten contents per day.
- elemntry membership can access to only one content per day.

The subcribtion rules are as follow :

- Full membership is offred to members who are from Algeria or they have 3 years of basic membership
- basic membership is offred to members from Africa or to member who have promotion code “basic”
- elemntry membership is offred to all members who don’t justify the above cited criteria.

Exercise 5: Switch Case Statement

Write a program that takes a number from 1 to 7 and uses a switch case statement to print the corresponding day of the week. For example, if the user inputs 1, the program should print "Sunday."

Exercise 6: Complex Logic and Decision Making

Write a program that takes three integers from the user, representing the sides of a triangle. The program should determine if the triangle is equilateral (all sides are equal), isosceles (two sides are equal), or scalene (no sides are equal). Print the type of triangle accordingly.

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Exercise 7: Nested If Statements

Write a program that takes two integers as input, representing the length and width of a rectangle. Determine if the rectangle is a square (length and width are equal) or a rectangle (length and width are different). Print the result.

Exercise 8: Handling Multiple Conditions

Write a program that takes a year as input and determines if it's a leap year. A year is a leap year if it's divisible by 4 but not divisible by 100, or if it's divisible by 400. Print whether the given year is a leap year or not.

Exercise 9: Multiple Choices with Switch Case

Write a program that takes a single letter (A, B, C, D, or F) as input, representing a student's grade on a test. Use a switch case statement to print a message that provides feedback based on the grade. For example, if the user inputs 'A,' the program should print "Excellent work!"