LAB#06 EXERCISES

INSTRUCTIONS:

NOTE: Violation of any of the following instructions may lead to the cancellation of your submission.

1) Create a folder and name it by your student id (k21-1234).
2) Paste the .c (Save as type) file for each question with the names such as Q1.c, Q2.c and so on into that folder.

LOOPS OR OTHER HIGHER LEVEL CONCEPTS ARE NOT ALLOWED TO BE USED FOR SOLVING THE FOLLOWING PROBLEMS. USE NESTED IF OR IF-ELSE-IF STRUCTURE TO SOLVE THE PROBLEMS. DON'T USE LOGICAL OPERATORS. VIOLATION OF THIS CONDITION WILL RESULT IN ZERO MARKS.

Task 01: write a program which asks your grade as input and stores it in a variable only if the grade is in range 50-100. If the value is not in range, then the variable should return -1 value. Note: (Use conditional operator only)

Task 02: Consider the use case of task 01 where you want to check if the user entered number is negative then your program must display a message "The entered number is negative" otherwise the message "The entered number is positive" should be displayed. If the entered number is zero, then the message "The number is zero" should be displayed.
(Use conditional operator only)

Task 03: In cafeteria once a freshman offers your instructor for helping the programming assignment if your instructor buys him a cold drink. Your instructor agreed and went on counter and asked for drink price. The manger tells the price of three different cold drinks, dew, Pepsi and Coca cola. Your instructor can't figure out that which one price is high. Write a program which can help your instructor in finding the highest price of bottle. (Use Nested if else only).

Task 04: Re-write a program for considering the scenario of task-03 by using (conditional operator only). if you are asked to change both program for finding the minimum price then what changes will be done to the code.

Task 05: Write a program which asks your grade as input and display's a message accordingly.
Messages should be displays as:

75-100 display message: A
50-74 display message: B
0-49 display message: Fail
If grade is out the mentioned numbers, then message displayed will be: Invalid input
Note: a) Use conditional operator only
b) solve the same task using Nested if else

Task 06: Write a C program to check isosceles, scalene or equilateral triangle when sides are given using conditional operators.

Task 07: Teacher asks the student to check whether the input number is divisible by 7 or not. For checking the divisibility, take the last digit and double it, take the rest of the digits and subtract the doubled last digit repeat until the result is 7, -7 or 0.
For Eg:
10976 -> 1097-12 = 1085 -> 108-10 = 98 -> 9-16 = -7
49 -> 4 - 18 = 14 -> 1 - 8 = -7

Task 08: Write a program that asks for the number of calories and fat grams in a food. The program should display the percentage of calories that come from fat. If the calories from fat are less than 30% of the total calories of the food, it should also display a message indicating that the food is low in fat.
One gram of fat has 9 calories, so Calories from fat = fat grams * 9
The percentage of calories from fat can be calculated as: calories from fat/total calories
Input validation: Make sure the number of calories and fat grams are not less than 0. Also, the number of calories from fat cannot be greater than the total number of calories. If that happens, display an error message indicating that either the calories or fat grams were incorrectly entered.