Programming Fundamentals (CL-1002)
Lab Task 04
Deadline: October 03, 2021 (02:00 PM After noon) (Submit on Google Classroom)
Points: 100

Instructions:
1. Solve each problem in separate file, Name the code file with problem no (Task_01, Task_02,.)
2. Copy these files (Task_01, Task_02,.) in a folder and name the folder like that K21XXXX. where XXXX is your 4-digit Student Id.
3. Now compress that folder using WinRAR software and submit on google-classroom.
4. Do not attach .exe file, otherwise it will show a threat or virus and not allow me to download.
5. Make sure you must Press the Turn-In button after uploading the solution folder. Otherwise, it will not be submitted.

Task_01:
Write a program in which you can ask the user to input two numbers and perform different mathematical operations like, division, multiplication, addition, subtraction and display the result on the screen.

Task_02:
Write a program that takes a real number as an input and apply different operations to observe the difference. Operations to calculate floor, ceiling round-off, power and square root using math.h

Task_03:
Write a program in which you ask the user two input numbers and perform the following operations on user input.
a)   Number1 > Number2
b)   Number1 < Number2
c)   Number1 = Number2
d)   Number1 <= Number2
e)   Number1 mode Number2, display Quotient
f)   Number1 mode Number2, display Reminder

Task_04:
Solve the given expression as per their precedence in C-Language

a) x = 9 + 4 * (6 / 21) - 10;
b) y = 45 % 5 + 2 * (25 – 2) / 3;
c) z = (30 *(91 * (34 + (19 - 11 / (3)))));

Task_05:
Ali, Kiran, Alex and sara are planning to watch movie in Nuplex. But the problem is that on weekend the movie ticket is bit expensive i-e; PKR=1250 then weekdays. Luckily on Wednesday they have 20% discount offer. Now you need to help them in calculating the total amount of 4-tickets after discount. Also, how it cost to an individual.

Task_06:
Write a program to calculate the volume of sphere and circumference of a circle by taking the radius from the user by using math.h

$$V = \frac{4}{3}\pi r^3 \qquad C = 2\pi r$$

Volume of Shphere   Circumference of a Circle

Task_07:
Write a program to calculate the Merit for the admission test of NUCES. Your merit score breakup is calculated like that 20% marks of Matriculation, 20% marks of Intermediate and 60% marks of your Admission Test score. You need to input the obtained marks from the user and calculate its specific percentage for each.

Matriculation Marks: (20% of obtained marks) out of (Max.Marks = 1100)
Intermediate Marks: (20% of obtained marks) out of (Max.Marks = 1200)
Admission Test Marks: (60% of obtained marks) out of (Max.Marks = 100)

Total Score: 100%

Task_08:
Write a program in C that swaps two numbers without using third variable.

Task_09:
Write a program in C that swaps the digits in a number. Suppose you have a 5-digit integer i-e: 54832. You need to swap these digits in a number. The new number would be like that 23845.
[Hint: You can use mode and divide operator to swap].

Task_10:
Write a program in C that add the digits in a number. Suppose you have a 7-digit integer i-e: 5148232. You need to add these digits in a number. The new number would be 25 (5+1+4+8+2+3+2).
[Hint: You can use mode and divide operator to swap].

Enjoy Coding