

Programming Fundamentals (CL-1002)

Lab Task 06

Deadline: October 24, 2021 (02:00 PM After noon) (Submit on Google Classroom)

Points: 80

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 that takes a number evaluates it and display it's a Positive number, Negative number or equals to Zero. Use ternary operator only to solve the question.

Task_02: Take 3 numbers from the user. Sort and print them in ascending order. Also print the nature of number if all numbers are 0,0,0 then display "all ZERO". If numbers are 3,5,6 display "all POSSITIVE", If numbers are -9,8,11 display "POSSITIVE/ NEGATIVE". If numbers are -11, -6, -2 display "all NEGATIVE". Must use ternary operator to solve the question specially the nature of a number.

Task_03: Write a program that takes an integer from the user and check the number is equivalent to a character or not. If the number is lies between [0 – 9] then check is it's a prime no or not. In case, the number would represent an ASCII code for a character then check the character a vowel or not.

Hint: You can use ASCII chart

Task_04: You need to take the date in 3 variables (dd,mm,yyyy). After taking input from the user verify that date and month must lie within the range i-e, (dd: 01-31, mm: 1-12 and year is of 4-digits). If any one of these went wrong display the message IN VALID Date otherwise display data using the options a for British(dd/mm/yyyy) and b for American format (mm dd, yyyy) of date

Expected Input: Date(dd) = 11
Month(mm) = 04
year(yyyy) = 2021

Expected Output:
April 11,2021 // American format
11/ 04/ 2021 // British format

Note: you need to verify the dd, mm, and yy variable after getting all input from the user.

Task_05: All keys on the keyboard are count as a character some are alphabet(a-z), some are numbers (0-9) and the rest of others are counted as special characters. You need to write a program that 5 characters as an input form the user. If the inputted character is a number, then just display the message: "Enter character is a Number" otherwise list and count how many of them are alphabets or special characters.

Task_06: The State Bank of Pakistan uses the services of NTS (National Testing system) to conduct the test and interviews for different positions (Clerck, Economist, Treasurer and Chief for Economic Policy). You need to help the NTS to automate the process

- Clerck
Age: 22 -29; Education: Bachelors; Experience: 0-2 years
- Economist
Age: 25 -32; Education: Master's; Experience: 3-5 years
- Treasurer
Age: 30 -35; Education: Master's; Experience: 4-7 years

- Chief for Economic Policy

Age: 32 -40; Education: Master's; Experience: 7-10 years

If a person fulfils multiple criteria, then list him/ her for the post.

Task_07: Write a program that displays the area of a square, rectangle, right-angle triangle, parallelogram, or a circle based on the user's choice. If the user enters 0, the program should read the side of the square and display its area. If the user enters 1, the program should read the radius of the circle and display its area.

Task 08: Write a program which takes a user selected choice number as an input and calculate the factorial of that number. But make sure that the number would not be a negative integer. Also, the number should be a single digit integer(X) i-e, X = [0-9]. Use Nested Switch-Case only.

Hint use goto statement for finding factorial part and prime checking part.

Enjoy Coding