

National University of Computer and Emerging Sciences, Lahore Campus



Course:	PF Lab	Course Code:	CL 118
Program:	BS (Computer Science)	Semester:	Fall 2021
Duration:	30 Minutes	Total Marks:	10
Paper Date:	2-Nov-21	Weight	5 %
Section:	A 1&2	Page(s):	2
Exam:	Quiz 1	Reg. No.	

Instruction/Notes: Honesty always gives fruit and Dishonesty is always harmful.

Question#1- [10 marks]

Write an astrology program. The user types in a birthday, and the program responds with the sign and horoscope for that birthday. The month may be entered as a number from 1 to 12. Then enhance your program so that if the birthday is only one or two days away from an adjacent sign, the program announces that the birthday is on a “cusp” and also outputs the horoscope for that nearest adjacent sign. This program will have a long multiway branch. Make up a horoscope for each sign. Your program should include a loop that lets the user repeat this calculation until the user says she or he is done.

The horoscope signs and dates are:

Aries	March 21–April 19
Taurus	April 20–May 20
Gemini	May 21–June 21
Cancer	June 22–July 22
Leo	July 23–August 22
Virgo	August 23–September 22
Libra	September 23–October 22
Scorpio	October 23–November 21
Sagittarius	November 22–December 21
Capricorn	December 22–January 19
Aquarius	January 20–February 18
Pisces	February 19–March 20

Question#2- [10 marks]

Write a program that calculates the balance of a savings account at the end of a period of time. It should ask the user for the annual interest rate, the starting balance, and the number of months that have passed since the account was established. A loop should then iterate once for every month, performing the following:

- A. Ask the user for the amount deposited into the account during the month. (Do not accept negative numbers.) This amount should be added to the balance.
- B. Ask the user for the amount withdrawn from the account during the month. (Do not accept negative numbers.) This amount should be subtracted from the balance.
- C. Calculate the monthly interest. The monthly interest rate is the annual interest rate divided by twelve. Multiply the monthly interest rate by the balance, and add the result to the balance.

After the last iteration, the program should display the ending balance, the total amount of deposits, the total amount of withdrawals, and the total interest earned.