



National University

of Computer & Emerging Sciences Peshawar Campus



Course: CS118 - Programming Fundamentals
Semester: Spring 2021

Assignment: 03 (Lists)
Instructor: Mr. Waqas Ali
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NOTE: Attempt all questions.

Submission

Write down the code on paper (your code must be well indented), scan your code using a software like camscanner, make pdf file and submit it on slate.

1. Given a list, print the no of times each integer in a list occurred.

For example, $L = [1, 2, 2, 3, 4, 9]$

Expected output:

1 occurred 1 times

2 occurred 2 times

3 occurred 1 times

4 occurred 1 times

9 occurred 1 times

2. Your state is in a process of creating a weekly lottery. Once a week, five distinct random integers between 1 to 40 (inclusive) are drawn. If a player guesses all of the numbers correctly, the player wins a certain amount.

Write a program that does the following:

- a) Generates five distinct random numbers between 1 and 40 (inclusive) and store it a list.
- b) Define a function that takes the list containing lottery number as a parameter and sort it.
- c) Prompts the player to select five distinct integers between 1 and 40 (inclusive) and stores the numbers in an array. The player can select the numbers in any order, and the array containing the numbers need not be sorted.
- d) Determines whether the player guessed the lottery numbers correctly. If the player guessed the lottery numbers correctly, it outputs the message “You win!”; otherwise it outputs the message “You lose!” and outputs the lottery numbers.

Your program should allow a player to play the game as many times as the player wants to play. Before each play, generate a new set of lottery numbers.

3. Define a function in Python which is given a list of lists. The function has to return the sub-list whose sum of elements is the highest.

Example:

List given to the function: $[[1, 2, 4], [8, 5, 4], [1, 1, 2, 3]]$

List returned by the function: $[8, 5, 4]$