National University of Computer and Emerging Sciences, Lahore Campus

Course:	**Programming Fundamental Lab**	**Code:**	**CL118**
Program:	**BS (Computer Science)**	**Semester:**	**Fall 2018**
Duration:	**3 hrs**	**T. Marks:**	**40**
Date:	**Tuesday 11-12-2018**	**Weight**	**40**
Section:	**F**	**Page(s):**	**1**
Exam:	**Lab Final**		

Instructions/Notes:
- Use of the internet, notes, codes, lab manuals, and flash drives is strictly prohibited.
- Plagiarism will result in **F** grade in lab.
- Code must be **indented properly**, failure to comply will incur a penalty.
- Submit the folder in the format L18-1234.

Question # 1: Sum of the digits in C-String   (10 marks)

Write a program which take series of the digit numbers with nothing separating them in a C-string. The program should display the sum of all the single-digit numbers.
Example,

Enter the input = 12345
Sum of the single digits = 15

Question # 2: Room Booking in Hotel   (15 marks)

Write a program that can be used to assign seats for a hotel. The hotel has 8 floors with 6 rooms in each floor. Floor 1 & 2 are first class, the remaining floors are economy class. Also, floor 1 to 5 are non-smoking. Ask the user to enter the following information.
- Type (First class or Economy)
- For Economy class, Smoking zone or non- smoking zone.

Keep taking the new information from customers and display the table (below) and to exit the program press -1.
Allocate the room according to the desired choice. And if no space is available then prompt an error message.
Display the following reservation plan on the screen.

Floor1	X	X	*	*	*	*
Floor2	*	*	*	*	*	X
Floor3	*	*	X	*	X	*
Floor4	*	X	X	X	X	X
Floor5	*	*	*	*	X	*
Floor6	X	*	*	*	*	*
Floor7	*	*	*	*	*	X
Floor8	X	X	X	*	*	X

Where X indicates it is occupied and * represents it is available.