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| **National University of Computer and Emerging Sciences, Lahore Campus** | | | | |
| C:\Users\saif\AppData\Local\Microsoft\Windows\Temporary Internet Files\Content.Word\final design.jpg | **Course Name:** | **Programming Fundamentals** | **Course Code:** | **CS 118** |
| **Program:** | **BS(CS)** | **Semester:** | **Fall 2018** |
| **Duration:** | **2 hr** | **Total Points:** | **30** |
| **Paper Date:** | **11/8/2018** | **Weight** | **25** |
| **Section:** | **H** | **Page(s):** | **2** |
| **Exam Type:** | **Lab Mid** |  |  |
| **Instruction/Notes:** | Taking some illegal online/offline help (i.e. cheating) might earn you an **F** grade in the entire course. | | | |

**Question1: (5 marks)**

Write a program to calculate the place value of digit in an integer. Your program would take 2 integers from the user, an integer between 0 and 10 million, and another integer – a single digit in the first number. Your program would then output the place value of that digit in the number.

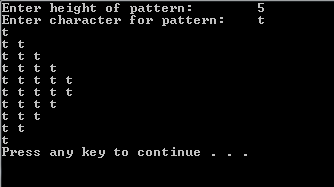
**For example**, if the user inputs an integer *56918* and you want to determine the place value of *6*, the output would be “Thousands”.

You can include a check for whether that specific digit is present or not.

*Sample Units are; tens; hundreds; thousands; ten thousands; hundred thousand; millions.*

**Question 2: (5 Marks)**

Write a program that prints a triangular pattern. The program asks the user to enter the height of the triangle and the character to use. For example:



**Question 3: (10 Marks)**

You are given an array of integers and a number K. You have to find the any continue sub-array whose elements sum is K. Please note that, the array may have positive, negative, and zeros as its element.

**Example:**

Input: [7 0 9 -10 0 789], K = 0

Output: Array from index 1 to Index 1.

Input: [1 2 3 5 -10] K = 0

Output: Array from Index 1 to Index 4.

If K = -2, Output would have been SubArray from Index 2 to Index 4.

GOOD LUCK ☺