National University of Computer and Emerging Sciences

COAL Lab Midterm

Computer Organization and Assembly Language

Time Allowed	90 Minutes	**Student Name**	
Maximum Marks	100	**Roll Number**	
Lab Instructors	Sarosh Humayun, Haiqa Saman	**Date**	

1. **The codes will be checked for plagiarism. If found, the paper will be canceled.**
2. **Submit your code on classroom in due time, late submissions will not be marked.**

Activity 1: [50 Marks]

Given an array of size N, and a sum S, find a triplet from the given array, such that its sum equals S.
Input: array = {12, 3, 4, 1, 6, 9}, sum = 24;
Output: 12, 3, 9
Explanation: There is a triplet (12, 3 and 9) present
in the array whose sum is 24.

Input: array = {1, 2, 3, 4, 5}, sum = 9
Output: 5, 3, 1
Explanation: There is a triplet (5, 3 and 1) present
in the array whose sum is 9.

You may declare a second array to store the subarray in (this array would be initialized with zeros, and be the same size as the original array). **Leave it as is, if a triplet is not found in the original array.**

Activity 2: [50 Marks]

In the second task you would be printing an **Inverted right angled triangle** on the screen using a **subroutine**, based on the parameters passed.

You would pass 3 parameters. Param1 would contain a **row number.** Param2 would contain a **column number.** And Param3 would contain the **height of the triangle.** The top of your triangle should start at the row number and column number passed through params. Assume that the passed position would be such that the triangle fits inside the terminal.

A triangle of height 6 would look something like this:

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*****
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