University of Central Punjab

*(Incorporated by Ordinance No. XXIV of 2002 promulgated by Government of the Punjab)*
**FACULTY OF INFORMATION TECHNOLOGY**

# Computer Organization and Assembly Language

# Lab 12

**NOTE:**

1. *USE STRING OPERATIONS MOVS, LODS, CMPS, STOS, SCAS,REP where possible.*
2. *Tasks will be not graded if no single string instruction is used within the code.*
3. *Do not hardcode the length of the string in tasks, first find length and then perform the operations.*

## Task 1:

Find the length of string using *string instructions* and display on screen the message as shown below:

Sample String :

  I am a programmer

Total characters:

  17

Space characters:

  3

For example:

String1 db 'I am a programmer', 0

## Task 2:

Write a subroutine which copy the first 26 characters from **Array1** to **Array2** and display the updated **Array2** on screen using string instructions.

Let Array1 db 'Computer Organization and Assembly Language',0

Array2: times 26 db 0

## Task 3:

Write a subroutine which display the message with common characters if found within the two strings else display "No common characters found".

Let

string1 'hello world',0

String2 'computer science',0

Then display

**Total Common unique characters are**

  **o,e,r**

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Let

 string1 'Hardwork,0

String2 'Success',0

**"No common characters found"**

## Task 4:

Write a subroutine which count and display the occurrence of each of the characters found within the string. Note your code should be generic.

Let string1 "Hello World",0

Then display the unique characters with their occurrence on screen as shown below:

Sample String:

Hello World

| Character | occurrence |
|-----------|------------|
| h         | 1          |
| e         | 1          |
| l         | 3          |
| o         | 2          |
| w         | 1          |
| r         | 1          |
| d         | 1          |