



**KHULNA UNIVERSITY OF ENGINEERING AND TECHNOLOGY,
KUET**

SESSIONAL REPORT

Course No: CSE 2204

Department of: Computer Science and Engineering

Experiment No: 11

Name of the Experiment: To develop an assembly program that moves a string to another string variable

Remarks

Date of Performance: 24.05.21

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Year: 2nd

Semester: 2nd

No. of experiment: 11

Name of experiment: To develop a program that moves a string to another string variable

Objectives:

1. To practice on string type data in assembly language and learn some string related instructions.
2. To develop a program that copies a string variable's content to another variable.

Introduction:

A string is a data-type used in program such as an integer and floating point unit, but is used to represent a group of characters.

Generally we specify the length of the string by using the instruction `equ ($-str) (let`
`str` is a string variable.

In this program, we ~~star~~ are suppose to copy all the bytes of a string variable to another variable. To store some ^{space} data from memory for a variable we use `dup()` instruction in this program. We also use `CLD` and `MOVSB` instructions too.

Apparatus required: emu8086, laptop

Methodology:

Code:

```
org 100h
```

```
mov cx, len ; copy the value of len to cx
```

```
lea si, str1 ; copy the address of str1 to si
```

```
lea di, str2 ; copy the address of str2 to di
```

```
cld ; after executing CLD, si and di will  
automatically increase.
```

```
rep movsb ; this instruction executes until all the  
string bytes pointed by SI and DI  
are copied.
```

ret

str1 db "Kuet" ; 'str1' string declaration

str2 db 5dup(0) ; str2 string declaration which consists of 5 '0h'

len equ (\$-str1) ; length of str1

Result and discussion:

From this experiment, we had learnt about string's advance instructions such as 'cld', 'movsb'.

In this program, we tried to copy a string to another string variable. We had copied all the string byte using 'rep movsb' instruction and for pointing the next string element character

we used 'cld' instruction. In this program, we used various inputs and we came to a conclusion that our program performed well.

Conclusion:

This experiment was very necessary to learn assembly language well. We learnt strings instructions from this experiment. We used string data and performed on string data which helped us to get crystal clear idea about string data. As we took various inputs and every input time we got expected result so we can make conclusion that our program performed successfully.

References:

1. Microprocessors and Interfacing - by .D.V Hall
2. emu 8086 / ~~desk~~ documentation/index.html.