



UITs

UNIVERSITY OF INFORMATION
TECHNOLOGY AND SCIENCES

Assignment on

Lab Report- 05

Course Title

Microprocessor and MicroControllers

Course Code

CSE 360

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03 Sept, 2025

Problem No: 01

Experiment No: 01

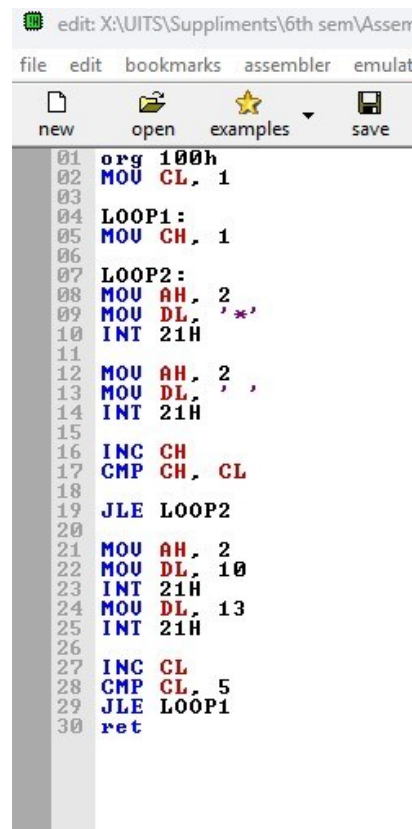
Experiment Name: Write an assembly language program to print an array of characters and an array of strings

Process:

Set registers to point to the array's beginning. To access each character in the character array and load it into the corresponding register, utilize a loop or direct offset. The address of each string in the string array should be loaded into the register using a loop or direct offsets. To display every character or string on the screen, use the int 21h function 09h.

For the string array, print a new line after every string. Continue doing this until every character or string in the array has been shown.

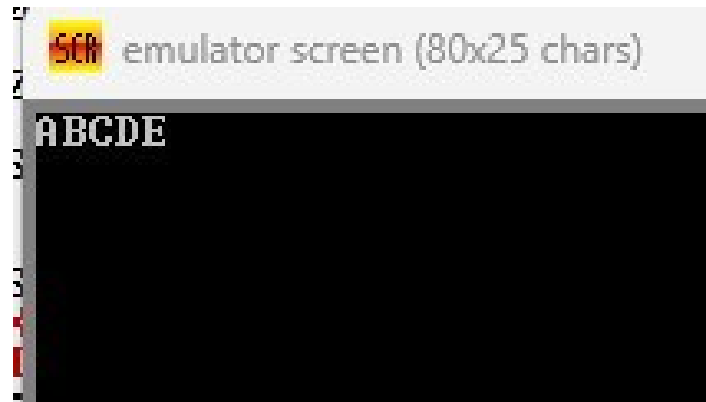
Implementation:



```
edit: X:\UITS\Suppliments\6th sem\Assen
file edit bookmarks assembler emulat
new open examples save
01 org 100h
02 MOV CL, 1
03
04 LOOP1:
05 MOV CH, 1
06
07 LOOP2:
08 MOV AH, 2
09 MOV DL, '*'
10 INT 21H
11
12 MOV AH, 2
13 MOV DL, ' '
14 INT 21H
15
16 INC CH
17 CMP CH, CL
18
19 JLE LOOP2
20
21 MOV AH, 2
22 MOV DL, 10
23 INT 21H
24 MOV DL, 13
25 INT 21H
26
27 INC CL
28 CMP CL, 5
29 JLE LOOP1
30 ret
```

Result:

The application displays every character array element on the screen. Every string in the string array is printed on a separate line by the application.



Conclusion:

Both a string array and a character array are successfully printed on the screen by the applications. They explain how to read and display individual characters and strings in a sequential manner using registers, memory addressing, and the int 21h output function in 8086 assembly language.

Problem No: 02

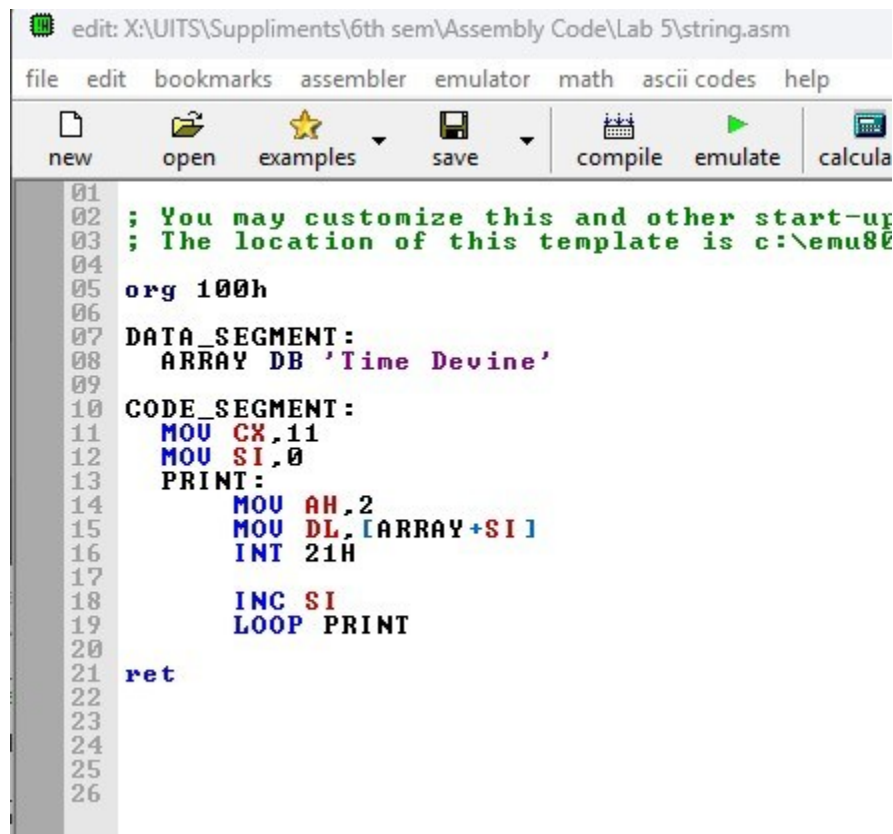
Experiment No: 02

Experiment Name: Write an assembly language program to print an array of characters and an array of strings

Process:

Set up registers to point to the array's beginning. To access each character in the character array and load it into the corresponding register, utilize a loop or direct offset. The address of each string in the string array should be loaded into the register using a loop or direct offsets. To show each character or string on the screen, use the int 21h function 09h. For the string array, print a new line after every string. Continue doing this until every character or string in the array has been shown.

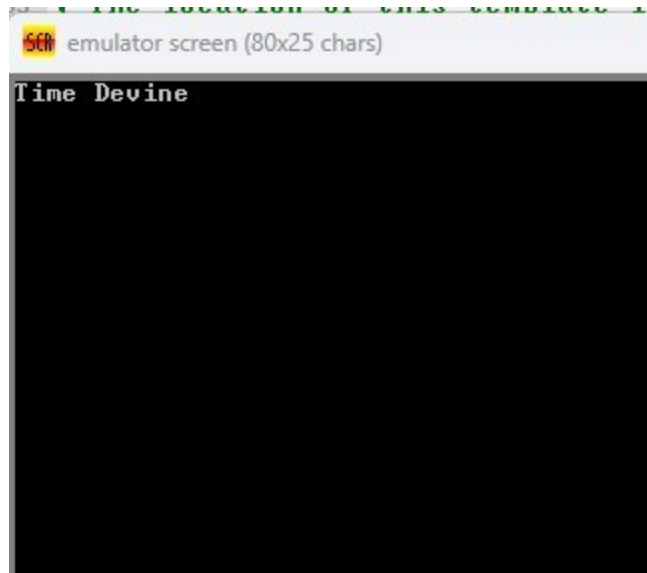
Implementation:



```
edit: X:\UITS\Suppliments\6th sem\Assembly Code\Lab 5\string.asm
file  edit  bookmarks  assembler  emulator  math  ascii codes  help
new  open  examples  save  compile  emulate  calcula
01
02 ; You may customize this and other start-up
03 ; The location of this template is c:\emu80
04
05 org 100h
06
07 DATA_SEGMENT:
08     ARRAY DB 'Time Devine'
09
10 CODE_SEGMENT:
11     MOV CX,11
12     MOV SI,0
13     PRINT:
14         MOV AH,2
15         MOV DL,[ARRAY+SI]
16         INT 21H
17
18         INC SI
19         LOOP PRINT
20
21     ret
22
23
24
25
26
```

Result:

Every character array element is printed on the screen by the application. Every string in the string array is printed on a separate line by the application.



Conclusion:

Both a string array and a character array are successfully printed on the screen by the applications. They explain how to read and display individual characters and strings in a sequential manner using registers, memory addressing, and the int 21h output function in 8086 assembly language.