FR. Conceicao Rodrigues College of Engineering Department of Computer Engineering

7. DISPLAY A TO Z ON SCREEN.

1. Course, Subject & Experiment Details

Academic Year	2023-24	Estimated Time	Experiment No. 7– 02 Hours
Course & Semester	S.E. (Comps) – Sem. IV	Subject Name	Microprocessor
Chapter No.	2	Chapter Title	Instruction Set and Programming
Experiment Type	Software	Subject Code	CSC405

Rubrics

Timeline (2)	Practical Skill & Applied Knowledge (2)	Output (3)	Postlab (3)	Total (10)	Sign

2. Aim & Objective of Experiment

7(A) DISPLAY A TO Z ON SCREEN

Objective: To store A to Z Alphabets on an array and display them on user screen.

3. Software Required

TASM Assembler

4 . Brief Theoretical Description

Pre-Requisites: 1. Knowledge of TASM directives.

2. Knowledge of DOS interrupts.

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3. Knowledge of string instruction and MACRO 5.

Algorithm:

- 1. Initialize the data segment.
- 2. Store all Alphabets in array.
- 3. Initialize counter to 1AH.
- 4. Load starting Address of array in to SI.
- 5. Get each character in DL.
- 6. Display Character on user screen.
- 7. Increment SI.
- 8. Decrement counter.
- 9. Repeat step 5 to 8 until count becomes Zero.
- 10. Stop

CODE:

```
.8086
.model small
.data counter equ
26 start_ascii equ
65
```

.code main:

```
MOV AX,@DATA
MOV DS,AX
```

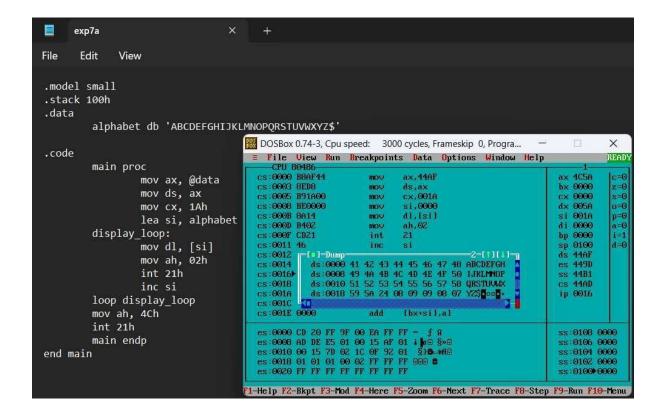
MOV CX, counter MOV SI, start_ascii display_loop: MOV DX, SI

INC SI DEC CX JNZ display_loop

MOV AH,4CH INT 21H

END main

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7(B) DISPLAY CHARACTER FROM KEYBOARD UNTIL 0 IS ENTERED.

Objective: To Read Character from Keyboard and display on screen until 0 is pressed.

Theory: Instructions used in program are:

MOV AH,08H

INT 21H

Read Input From Keyboard without echo and store at AL.

MOV AH,02H

INT 21H

Display Character on screen. Character should be in DL register.

Algorithm:

- 1. Initialize the data segment.
- 2. Read input from keyboard.
- 3. Compare input with ASCII value of ZERO.
- 4. If result is 0, go to step 7.
- 5. Move content of AL to DL, to display it on screen.

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```
6. Display character on screen.
7. Stop
CODE:
.8086
.model small
.stack 100h
.data
.code START:
       mov ax,@data
       mov ds,ax
mov ah,08H int 21h
cmp al,'0' je
exit_program
mov ah,02h int 21h
       jmp start exit_program:
       mov ah,4ch
       int 21h end
start
```

