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.
3. Knowledge of string instruction and MACRO

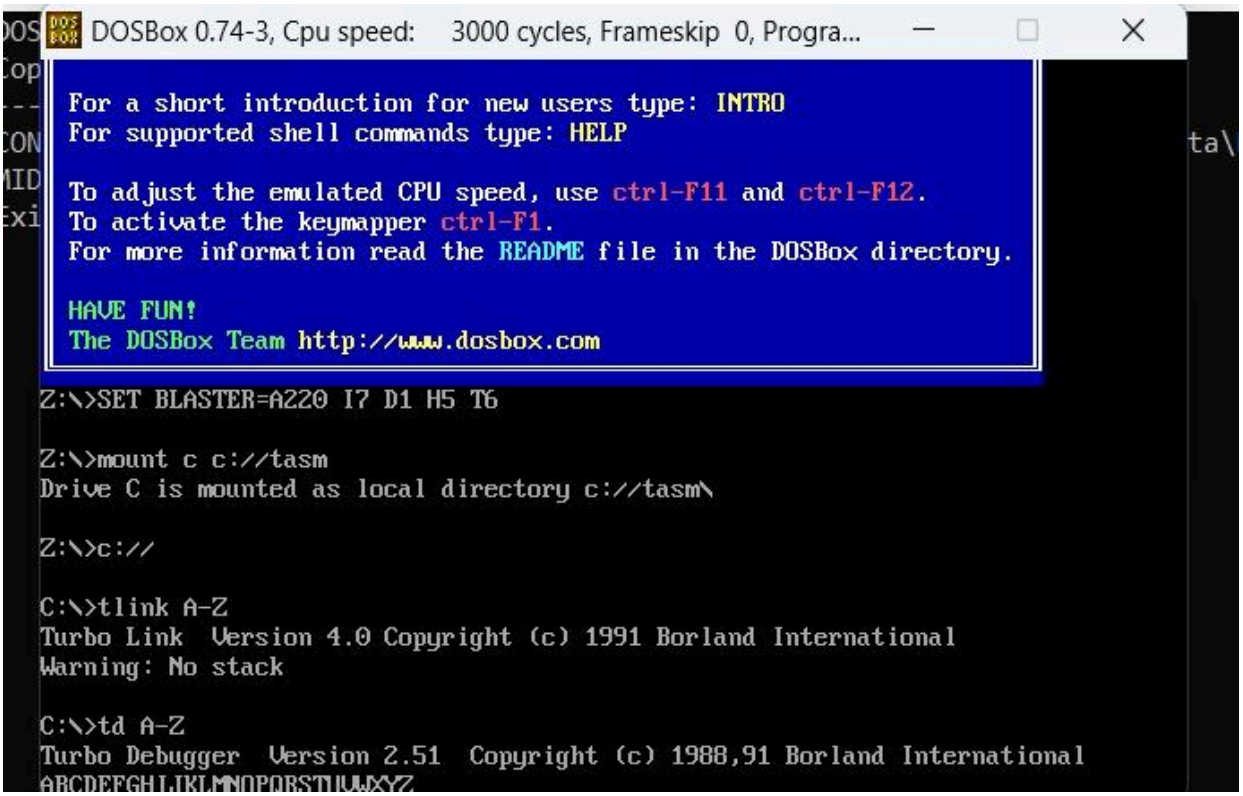
5. Algorithm:

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

32mul.asm | matadd.asm | MATADD.OBJ | matmul.asm | A-Z.

A-Z.asm

```
1   .model small
2   .data
3
4   .code
5   start:
6       MOV AX, @data
7       MOV DS, AX
8
9       MOV CX, 26   ; Number of characters from 'A' to 'Z'
10      MOV DL, 'A'  ; Start with 'A'
11
12  display_loop:
13      MOV AH, 02H   ; Function to display character
14      INT 21H
15
16      INC DL        ; Move to the next character
17      LOOP display_loop
18
19      INT 20H       ; Exit the program
20
21  end start
22
```



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:

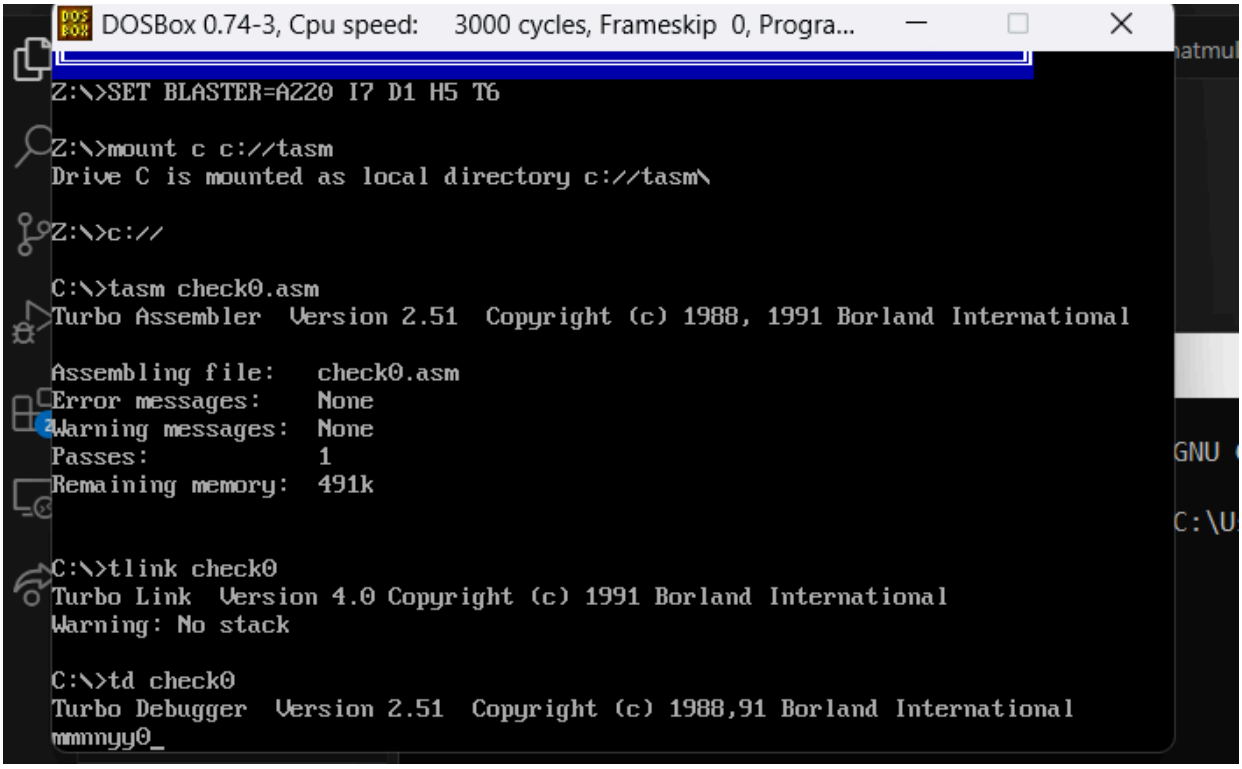
1. Initialize the data segment.
2. Read input from keyboard.
3. Compare input with ASCII value of ZERO.
4. If result is 0, go to step 7.
5. Move content of AL to DL, to display it on screen.
6. Display character on screen.
7. Stop

32mul.asm | matadd.asm | MATADD.OBJ | matmul.asm | A-Z.asm

check0.asm

```
.8086
.model small
.data

.code
start:
    MOV AX, @data
    MOV DS, AX

read_loop:
    MOV AH, 01H   ; Function to read a character from the keyboard
    INT 21H

    CMP AL, '0'   ; Check if the entered character is '0'
    JE end_program ; If '0', jump to end_program

    MOV DL, AL
    MOV AH, 02H   ; Function to display character
    INT 21H

    JMP read_loop ; Repeat the loop to read more characters

end_program:
    MOV AH, 4CH   ; Terminate program
    INT 21H

end start
```

Prepared by : Prof. Heenakausar Pendhari


DOSBox 0.74-3, Cpu speed: 3000 cycles, Frameskip 0, Progra...
Z:\>SET BLASTER=A220 I7 D1 H5 T6
Z:\>mount c c://tasm
Drive C is mounted as local directory c://tasm\
Z:\>c://
C:\>tasm check0.asm
Turbo Assembler Version 2.51 Copyright (c) 1988, 1991 Borland International
Assembling file: check0.asm
Error messages: None
Warning messages: None
Passes: 1
Remaining memory: 491k
C:\>tlink check0
Turbo Link Version 4.0 Copyright (c) 1991 Borland International
Warning: No stack
C:\>td check0
Turbo Debugger Version 2.51 Copyright (c) 1988,91 Borland International
mmmyy0_