Green University of Bangladesh
Department of Computer Science and Engineering (CSE)

Faculty of Sciences and Engineering
Semester: (Fall, Year:2025), B.Sc. in CSE (Day)

Lab Report NO# 03
Course Title: Microprocessors & Microcontrollers Lab
Course Code: CSE 304 Section:232_D2

Lab Experiment Name: Take an array from the user and print the array.

Student Details

	Name	ID
1.	Md. Sohan Millat Sakib	222902036

Lab Date : 03-12-2025
Submission Date : 10-12-2025
Course Teacher's Name : Sagufta Sabah Nakshi

Lab Report Status

Marks: …… **Signature:.....**
Comments:..... **Date:.....**

1. TITLE OF THE LAB REPORT EXPERIMENT

Take an array from the user and print the array.

2. OBJECTIVE

- To write a simple Assembly program for this task.
- To understand how Assembly language works.
- To learn how conditions work in Assembly.
- To learn how jump and loop work in Assembly.

3. Procedure

- First, we created an empty array called **A**.
- Then we asked the user to enter the array length and saved it in **BL**.
- We printed a message and started a loop.
- The loop ran until it reached the value in **BL** and stored each user input into array **A**.
- After taking all inputs, we used another loop to print the full array.

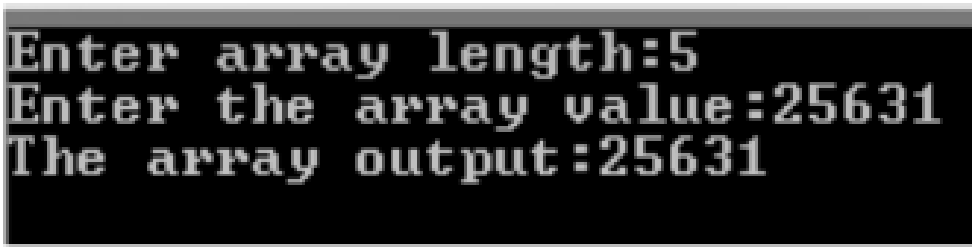
3. Implementation:

```
.MODEL SMALL
.STACK 100H
.DATA
STR1 DB 'Enter array length: $'
STR2 DB 'Enter the array value: $'
STR3 DB 'The array output: $'
A DB 100 DUP(?)

.CODE
MAIN PROC
   MOV AX, @DATA
   MOV DS, AX

   ; Ask for array length
   LEA DX, STR1
   MOV AH, 09
   INT 21H

   MOV AH, 01
   INT 21H
   SUB AL, 48
```

```
    MOV BL, AL

    ; New line
    MOV DX, 10
    MOV AH, 02
    INT 21H

    MOV DX, 13
    MOV AH, 02
    INT 21H

    ; Ask for array values
    LEA DX, STR2
    MOV AH, 09
    INT 21H

    MOV CL, BL
    MOV AL, 0
    MOV SI, 0

FIRST:
    MOV AH, 01
    INT 21H
    SUB AL, 48
    MOV A[SI], AL
    INC SI
    LOOP FIRST

    ; New line
    MOV DX, 10
    MOV AH, 02
    INT 21H

    MOV DX, 13
    MOV AH, 02
    INT 21H

    ; Print array values
    LEA DX, STR3
    MOV AH, 09
    INT 21H

    MOV CL, BL
    MOV SI, 0

SECOND:
    MOV DL, A[SI]
    ADD DL, 48
    MOV AH, 02
    INT 21H
    INC SI
```

```
    LOOP SECOND

RET
MAIN ENDP
END MAIN
```

4. Test Result/Output:



5. Analysis and Discussion

- The program worked correctly.
- It successfully took inputs from the user and printed the whole array.
- Loops and user input handling in Assembly were understood better after this task.