Midterm-Skill-Test	
Course Code: CPE 201L	Program: BSCpE
Course Title: Data Structure and Algorithm	Date Performed: 9/6/2025
Section: 2A	Date Submitted: 9/6/2025
Name: Disomnong, Jalilah M.	Instructor: Engr. Maria Rizette Sayo

1.Objectives

To implement an array of even integers less than 50 but not less that 20 and do the following operations:

a) Display the elements
b) Find the maximum element
c) Reverse the Array

2. Discussion

Array is a type of structure that stores data elements and refers to an orderly arrangement of data elements. Below are the some of basic operations of array:

- Display – operations that display the output and most basic and important array operations.
- Maximum – this was done by comparing each element to find the largest one.
- Reverse – this is to reverse the order of the array

3. Materials and Equipment

- Using Google Colab - this is used to perform the program
- Using GitHub - it is used to save the program and able to access anytime at the time it used to submit the document.
- Using Microsoft Word- this helps to edit and write the documentation of the program

4. Procedure

```python
def display(arr):
    print("Elements:", arr)

def max(arr):
    max = arr[0]
    for i in range(len(arr)):
        if arr[i] > max:
            max = arr[i]
    print("Maximum element:", max)

def reverse(arr):
    arr.reverse()
    print("Reverse element:", arr)


arr = [22,24,26,28,30,32,34,36,38,40,42,44,46,48]

display(arr)
max(arr)
reverse(arr)
```

Figure 1 Screenshort of source code link: https://colab.research.google.com/drive/1d_0V_p893X9i9jnyb-wqyKJVjLOWtaU0#scrollTo=xmML0aOKMHAf

5. Output

```
Elements: [22, 24, 26, 28, 30, 32, 34, 36, 38, 40, 42, 44, 46, 48]
Maximum element: 48
Reverse element: [48, 46, 44, 42, 40, 38, 36, 34, 32, 30, 28, 26, 24, 22]
```

Figure 2 Screenshot of the output link:https://colab.research.google.com/drive/1d_0V_p893X9i9jnyb-wqyKJVjLOWtaU0#scrollTo=xmML0aOKMHAf

6. Conclusion

In this skill test, I successfully implemented an array. I applied basic array operations including displaying the elements, finding the maximum value, and reversing the array. This skill test also allowed me to practice logical thinking and problem-solving using loops and conditions in programming. Overall, it provided a way for handling and manipulating data using arrays, which is essential in learning more advanced data structures and algorithms.

Lab Activity Rubric

Criteria	Ratings						Pts
SO 7 PI 1 Student Outcome 7.1 Acquire and apply new knowledge from outside sources. threshold: 4.8 pts	6 pts Excellent | Educational interests and pursuits exist and flourish outside classroom requirements,knowledge and/or experiences are pursued independently and applies knowledge learned into practice	5 pts Good | Educational interests and pursuits exist and flourish outside classroom requirements,knowledge and/or experiences are pursued independently	4 pts Satisfactory | Look beyond classroom requirements, showing interest in pursuing knowledge independently	3 pts Unsatisfactory | Begins to look beyond classroom requirements, showing interest in pursuing knowledge independently	2 pts Poor | Relies on classroom instruction only	1 pts Very Poor | No initiative or interest in acquiring new knowledge	6 pts
SO 7 PI 2 Student Outcome 7.2 Learn independently threshold: 4.8 pts	6 pts Excellent | Completes an assigned task independently and practices continuous improvement	5 pts Good | Completes an assigned task without supervision or guidance	4 pts Satisfactory | Requires minimal guidance to complete an assigned task	3 pts Unsatisfactory | Requires detailed or step-by-step instructions to complete a task	2 pts Poor | Shows little interest to complete a task independently	1 pts Very Poor | No interest to complete a task independently	6 pts
SO 7 PI 3 Student Outcome 7.3 Critical thinking in the broadest context of technological change threshold: 4.8 pts	6 pts Excellent | Synthesizes and integrates information from a variety of sources; formulates a clear and precise perspective; draws appropriate conclusions	5 pts Good | Evaluate information from a variety of sources; formulates a clear and precise perspective.	4 pts Satisfactory | Analyze information from a variety of sources; formulates a clear and precise perspective.	3 pts Unsatisfactory | Apply the gathered information to formulate the problem	2 pts Poor | Gather and summarized the information from a variety of sources but failed to formulate the problem	1 pts Very Poor | Gather information from a variety of sources	6 pts
SO 7 PI 4 Student Outcome 7.4 Creativity and adaptability to new and emerging technologies threshold: 4.8 pts	6 pts Excellent | Ideas are combined in original and creative ways in line with the new and emerging technology trends to solve a problem or address an issue.	5 pts Good | Ideas are creative and adapt the new knowledge to solve a problem or address an issue	4 pts Satisfactory | Ideas are creative in solving a problem, or address an issue	3 pts Unsatisfactory | Shows some creative ways to solve the problem	2 pts Poor | Shows initiative and attempt to develop creative ideas to solve the problem	1 pts Very Poor | Ideas are copied or restated from the sources consulted	6 pts

Total Points: 24