MID TERM - SKILL TEST						
Course Code: CPE 201L	Program: CPE					
Course Title: DATA STRUCTURE	Date Performed: 9/06/2025					
Section: 2-A	Date Submitted: 9/06/2025					
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1.Objectives

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

- a. Display elements
- b. Find the maximum element
- c. Reverse the array.

And to measure the capability of students.

2. Discussion

In this activity, I implement an array of even integers that are greater than or equal to 20 but less than 50. The task includes displaying each element of the array, finding the maximum element, and finally reversing the array.

3. Materials and Equipment

Google Collab and python PyCharm

4. Procedure

I first made my algorithm so I could organize my code so it won't look spaghetti code then I use the PyCharm while I don't have an internet so I could run down my code, and lastly when the internet is back I use the Google Collab to save my work and submit

5. Output

Algorithm

- 1. Initialize the Array:
- 2 .Modify the First Element:
- 3 .Find the Maximum Element:
- 4. Reverse the Array:
- 5. Output the Results:

```
arr = [i for i in range(20, 50, 2)]
    print("array elements:", arr)
    arr[0] = 14
    arr[0] = 20
    arr[0] = 22
    arr[0] = 25
    arr[0] = 24
    arr[0] = 26
    arr[0] = 28
    arr[0] = 30
    arr[0] = 32
    arr[0] = 34
    arr[0] = 36
    arr[0] = 38
    arr[0] = 40
    arr[0] = 42
    arr[0] = 44
    arr[0] = 46
    arr[0] = 48
    arr[0] = 50
    max_element = max(arr)
    print("maximum element:", max_element)
    reversed_arr = arr[::-1]
    print("reversed element:", reversed arr)
🚁 array elements: [20, 22, 24, 26, 28, 30, 32, 34, 36, 38, 40, 42, 44, 46, 48]
    maximum element: 50
    reversed element: [48, 46, 44, 42, 40, 38, 36, 34, 32, 30, 28, 26, 24, 22, 50]
    arr = [i for i in range(20, 50, 2)]
    print("array elements:", arr)
    max element = max(arr)
    print("maximum element:", max_element)
    reversed arr = arr[::-1]
    print("reversed element:", reversed arr)
🕁 array elements: [20, 22, 24, 26, 28, 30, 32, 34, 36, 38, 40, 42, 44, 46, 48]
    maximum element: 48
    reversed element: [48, 46, 44, 42, 40, 38, 36, 34, 32, 30, 28, 26, 24, 22, 20]
```

6. Conclusion

In conclusion, this activity was designed to assess students' practical coding abilities in the context of data structures. Through the use of arrays, I was able to efficiently implement the required solution, demonstrating an understanding of how to manipulate and manage data within an array. Throughout the process, I made several improvements and fixes to ensure the final implementation was both functional and optimized. This exercise has enhanced my problem-solving skills and reinforced the importance of choosing the right data structure for a given task.

Further, I implemented multiple approaches to fully utilize the array. By first creating an array of even integers between 20 and 50, I showcased the flexibility of Python's list comprehension technique. This allowed for efficient creation of the array while adhering to the given constraints.

Criteria	Ratings									Pts	
SO 7 PI 1 Student Dutcome 7.1 Acquire and apply new knowledge rom outside ources. hreshold: 4.8 pts	interests and pursuits interests exist and flourish exist and outside classroom outside requirements,knowledge and/or experiences are and/or experiences are		d Educational State and pursuits L and flourish ide classroom ritements,knowledge for experiences are ued independently		Satisfactory Look beyond Classroom C		3 pts Unsatisfactory Begins to look beyond classroom requirements, showing interest in pursuing knowledge independently		n om ion	1 pts Very Poor No initiative or interest in acquiring new knowledge	6 pts
SO 7 PI 2 Student Outcome 7.2 .earn independently hreshold: 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	Requires do or step-by- instruction complete a		iled ep	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 Dutcome 7.3 Critical hinking in he broadest context of echnological thange hreshold: 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 variet sources; formulates a clear and precise perspective.		Apply the gathered information	satisfactory Foly the a chered to compare the second sec		2 pts Poor Gather and summarized the information from a variety of sources but failed to formulate the problem		pts ery Poor ather iformation om a variety f sources	6 pts
SO 7 PI 4 Student Dutcome 7.4 Creativity and sdaptability to new and emerging echnologies breshold: 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 a creative and adapt the new knowledge to solve a probler or address an issue	Ideas are creative in solving a	r	3 pts Unsatisfactory Shows some creative ways to solve the proble		initiative and to attempt to		copied or restated from		6 pts