MIDTERM - Skill Test	
Course Code: 201L	**Program:** BSCpE
Course Title: Data Structure and Algorithm	**Date Performed:** Sep 06, 2025
Section: 2A	**Date Submitted:** Sep 06, 2025
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1.Objectives

Implement an array of less than 50 but not less than 20

- Display the Array
- Find the Maximum Element
- Reversed the Array

- To demonstrate the use of functions.

- To practice array operations including filtering, reversing, and finding maximum values.
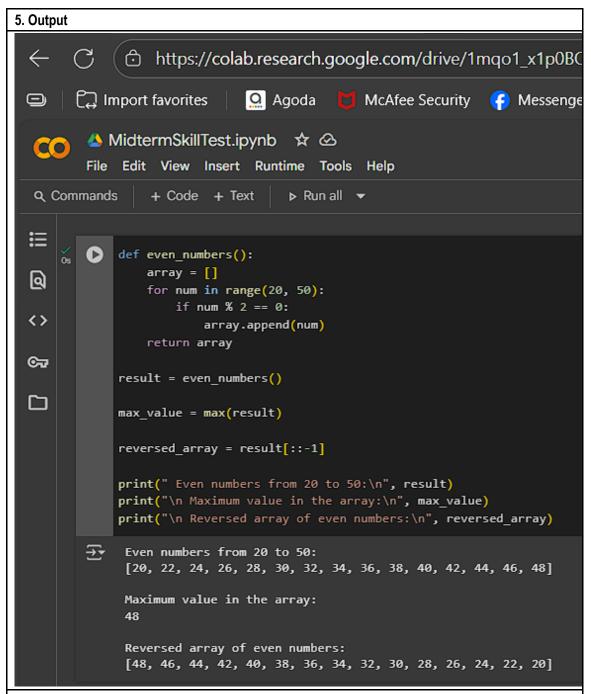
2. Discussion

In this Skill Test, I generate a list of even numbers within a specific range using a 'for' loop and conditional statements. By remembering logic in a function, I manage to use the importance of reusable code. The use of slicing ('[::-1]') used to reverse the array efficiently, and the built-in 'max()' function helped to identify the highest value in the list.

3. Materials and Equipment

- Google Colab
- Word
- GitHub

4. Procedure

- Define a function 'even_numbers()'
  - Initialize the Array
  - Check every number in the range 20 to 50 by using for loop.
  - Check if it's the array has no remainder
  - Appends even numbers to a list.
- 2. Call the function and store the result in a variable.
- 3. Use slicing to reverse the list.
- 4. Apply 'max()' to find the highest even number.
- 5. Print the results using `\n` to separate sections:
  - Original even numbers
  - Maximum value
  - Reversed array

5. Output

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```python
def even_numbers():
    array = []
    for num in range(20, 50):
        if num % 2 == 0:
            array.append(num)
    return array

result = even_numbers()

max_value = max(result)

reversed_array = result[::-1]

print(" Even numbers from 20 to 50:\n", result)
print("\n Maximum value in the array:\n", max_value)
print("\n Reversed array of even numbers:\n", reversed_array)
```

```
Even numbers from 20 to 50:
[20, 22, 24, 26, 28, 30, 32, 34, 36, 38, 40, 42, 44, 46, 48]

Maximum value in the array:
48

Reversed array of even numbers:
[48, 46, 44, 42, 40, 38, 36, 34, 32, 30, 28, 26, 24, 22, 20]
```

6. Conclusion

This activity tests my programming skills in Python, including function creation, list manipulation, and my output formatting. By structuring the code and output clearly, I improved both the readability and maintainability of my work.

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