Skill-Test (QUIZ)	
Course Code: CPE-201L	**Program:** BS CPE
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Name: Palmes, Lewis Clark L.	**Instructor:** Engr. Maria Rizette Sayo

1. Objectives

1. To implement and demonstrate the use of the Array data structure in Python.
2. To store and manipulate character data by appending each character of the student's full name into an array.
3. To apply traversal techniques to access and display each element within the array.
4. To reinforce understanding of linear data structures through hands-on application.
5. To practice basic Python programming constructs such as loops, functions, and list operations.

2. Discussion

I chose to do this skill-test using the Array data structure, which stores elements in a linear, indexed format. Arrays allow direct access to elements using an index and are ideal for storing sequential data. In this case, I used an array to store each character of my full name and then traversed the array to print every character. This shows how data can be accessed sequentially in an array and how iteration works in Python.

3. Materials and Equipment

- Google Colab: For writing and running the Python program in an online IDE.
- GitHub: For storing and version-controlling the source code.

- Python: The programming language used to implement the array operations.
- Laptop/PC and Internet Connection: Basic hardware and connectivity used to perform the task.

4. Procedure

- Opened Google Colab to create a new Python notebook.
- Declared an empty list to represent the array: name_array = [ ].
- Stored my full name in a string variable.
- Used a for loop to iterate over each character in the string and appended each one to the array using .append().
- Printed the complete array to show how the characters were stored.
- Created a function called traverse() that uses a loop to print each character from the array.
- Called the traverse() function to demonstrate how the array is accessed sequentially.
- Saved the notebook and uploaded it to GitHub as Skill-Test.

5. Output

Skill-Test

Objectives of the Skill-Test:

1. Choose only(1) Data Structure (Array, Linked-List (Singly, Doubly), Stack, Queue)
2. Create a Python program that appends each character of your Fullname and traverse each character.
3. Save your Python program as Skill-Test in your Colab and Github

```
[2] #Skill-Test
    #Using Array
    def traverse(name_array):
        print("\nTraversing the array:\n")
        for ch in name_array:
            print(ch)

    name_array = []

    full_name = "Lewis Clark L. Palmes"

    for character in full_name:
        name_array.append(ch)

    print("Array :",name_array)
    traverse(name_array)
```

Figure 1: Screenshot of source code

```
Array : ['L', 'e', 'w', 'i', 's', ' ', 'C', 'l', 'a', 'r', 'k', ' ', 'L', '.', ' ', 'P', 'a', 'l', 'm', 'e', 's']

Traversing the array:

L
e
w
i
s

C
l
a
r
k

L
.

P
a
l
m
e
s
```

Figure 2: Screenshot of the output of the program

This shows the contents of the array (name_array) after all characters of my full name ("Lewis Clark L. Palmes") have been appended. Each character including spaces and the period is stored as a separate element in the array. The program then traverses the array using a loop inside the traverse() function. Each character in the array is printed one by one on a new line. This demonstrates how arrays can be iterated sequentially to access and display each element. This output confirms that the array correctly stored each

character and that the traversal logic successfully printed each one in order.

6. Conclusion

Since I was already familiar with how arrays work, completing this skill-test was straightforward. I knew that arrays offer a simple way to store and access data sequentially, so I applied that understanding by storing each character of my full name into an array. Using basic Python operations like .append() and a for loop, I implemented the logic efficiently. Traversing the array with a separate function further reinforced how easily elements can be accessed using indexing and iteration. Overall, this task was a good way to put what I already knew into practice and helped me feel more comfortable working with arrays in Python.

7. Lab Activity Rubric

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