Quiz No. 1 Skill Test (Array)	
Course Code: CPE 201L	**Program:** Bachelor of Science in Computer Engineering
Course Title: Data Structure and Algorithms Laboratory	**Date Performed:** 8/30/2025
Section: BSCpE 2A	**Date Submitted:** 8/30/2025
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1. Objectives

a. Write a program using Array method or functions,
b. Understand the usage of array in data structure; and
c. To know how to access and input data in an array.

2. Discussion

Array is a type of linear data structure that can hold one or more data with the same data types. It also refers to the orderly arrangement of data elements and contiguous block of memory. The items are accessible via indexing, allowing easy access through individual elements. Other programming languages such as C++, Java etc., python does not have native array type. Instead, python uses lists, module (array), and Numpy.

3. Materials and Equipment

- **Desktop/Device:** You cannot program if you don't have any devices
- **Windows Operating System:** It is very important that the device you are using a functionable.
- **Python IDE:** You may use Google Colab, Pycharm, or Visual Studio Code.

4. Procedure

- Create a file that has name "Skill Test.py"
- Import array as arr
- Create your main function
- Assigned array
  Arr.typecodes
  name = arr.array("u", [ ])
- Allow user input
- This are the sample code:

```
import array as arr

def main():
   arr.typecodes
   name = arr.array('u', [])
```

```
    x = True
    while x:
        print("""\nMenu:
1. Input Letter.
2. Traverse Array.
3. Length of Array.
4. Horizontal Name.
5. Exit.""")
        choice = int(input("Enter your Choices (1-5): "))
        if choice == 1:
            input_letter(name)
        elif choice == 2:
            traverse_array(name)
        elif choice == 3:
            array_length(name)
        elif choice == 4:
            horizontal_line(name)
        elif choice == 5:
            print("\nExiting the program...")
            x = False
        else:
            print("Invalid Choice. Choose between 1-5.")

def input_letter(name):
    totoo = True
    while totoo:
        ilagay = input("""\nEnter Letter to add
(Type Quit to stop adding letters): """)
        if ilagay == "Quit":
            print("Word 'Quit' detected. Exiting input loop.")
            totoo = False
            print("-"*25)
        else:
            name.append(ilagay)
            print(f"Letter {ilagay} added.")

def traverse_array(name):
    print("\nName: ")
    for i, element in enumerate(name):
        print(element)
def array_length(name):
    print(f"\nLength of array: {len(name)}")

def horizontal_line(name):
    print(f"\nName in Horizontal Line: {''.join(name)} ")
```

```
if __name__ == "__main__":
    main()
```

5. Output

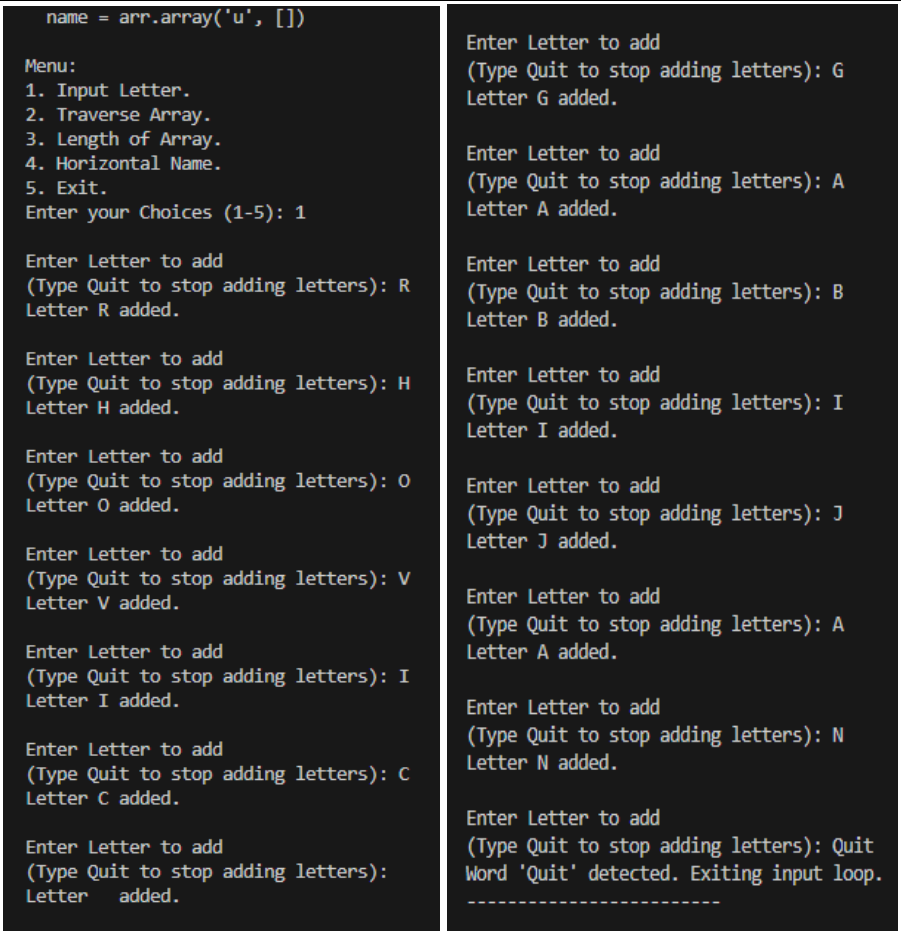

Figure 1.0 Input letter

```
Menu:
1. Input Letter.
2. Traverse Array.
3. Length of Array.
4. Horizontal Name.
5. Exit.
Enter your Choices (1-5): 2

Name:
R
H
O
V
I
C

G
A
B
I
J
A
N
```

Figure 2.0 Traverse Array

```
Menu:
1. Input Letter.
2. Traverse Array.
3. Length of Array.
4. Horizontal Name.
5. Exit.
Enter your Choices (1-5): 3

Length of array: 14
```

Figure 3.0 Length of Array

```
Menu:
1. Input Letter.
2. Traverse Array.
3. Length of Array.
4. Horizontal Name.
5. Exit.
Enter your Choices (1-5): 3

Length of array: 14

Menu:
1. Input Letter.
2. Traverse Array.
3. Length of Array.
4. Horizontal Name.
5. Exit.
Enter your Choices (1-5): 4

Name in Horizontal Line: RHOVIC GABIJAN
```

Figure 4.0 Horizontal Name

This program demonstrates the use of Array data structure using Python language. It allows user input to choose from the choices which is input letter, traverse array, length of array, horizontal format of array, and exit. So, the user can add or manipulate the data.

7. Conclusion

In conclusion, Array is a linear data structure that contiguous block of memory and refers to the orderly arrangement of data. It can hold more than one data with the same data types. Python does not have built array function, instead it uses lists, array module, and/or Numpy. The program I created are example of an Array that allow user to input data and accessing it using traverse function or in horizontal format ".join" function. I learned the different used of Array.

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	