

SKILL-TEST	
Course Code: CPE 201L	Program: BSCpE
Course Title: Data Structure and Algorithm	Date Performed: August 30 2025
Section: 2-A	Date Submitted: August 30 2025
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1.Objectives	
<ul style="list-style-type: none"> • This activity was meant to assess the capability of students on coding • This was meant to strengthen the basic knowledge of students on the code 	
2. Discussion	
In this activity we created a program that appends each character of our full name and traverse each character, in my case I use the array, queue and stack to be able to finish my program.	
3. Materials and Equipment	
<ul style="list-style-type: none"> • Google colab • Queue, stack and array 	
4. Procedure	
<ul style="list-style-type: none"> • Understand the problem • Choose the class I will use on the program • Execute the program 	
5. Output	

```
1  from collections import deque
2
3
4  class Stack: 1 usage
5      def __init__(self):
6          self.stack = []
7
8      def push(self, dataval): 1 usage
9          self.stack.append(dataval)
10         return True
11
12     def pop(self):
13         if len(self.stack) <= 0:
14             return "Stack is empty"
15         else:
16             return self.stack.pop()
17
18     def retrieve(self): 1 usage
19         print("Stack Traversal:")
20         for item in reversed(self.stack):
21             print(item)
22
23
24     def traverse_name_with_custom_stack_and_queue(full_name): 1 usage
25         queue = deque()
26         stack = Stack()
27
28
29         for char in full_name:
30             queue.append(char)
31             stack.push(char)
32
33         print("Queue Traversal:")
34         for char in queue:
```

```
C:\Users\compu\PycharmProjects\pythonProject\.venv\Scripts\python.exe "C:\Users\compu\PycharmProjects\pythonProject\lab 5.py"
Queue Traversal:
```

```
M
A
R
K
```

```
A
N
G
E
L
```

```
T
A
L
A
G
T
A
G
```

```
Stack Traversal:
```

```
G
A
T
G
A
L
A
T
```

```
L
E
G
N
A
```

```
K
R
A
M
```

```
dequeue operations.  
Dequeued from front: M  
Dequeued from rear: G  
  
Queue after dequeue operations:  
A  
R  
K  
  
A  
N  
G  
E  
L  
  
T  
A  
L  
A  
G  
T  
A  
  
Process finished with exit code 0
```

6. Conclusion

In conclusion, this activity allows me to evaluate my current skills and identify areas for improvement. While I have a basic understanding of the concepts, I recognize that my knowledge isn't fully refined yet. I need to dedicate more time to studying and practicing the application of these classes so that I can better utilize them in future projects. This will not only strengthen my understanding but also enhance my ability to apply these skills effectively.

Total Points: 24