Skill test	
Course Code: CPE 201L	**Program: BSCPE**
Course Title: Data Structure and Algorithms	**Date Performed: August 08, 2025**
Section: 2A	**Date Submitted: August 08, 2025**
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1.Objectives

This activity aims to enhance the skill of the students by creating a program that stores each character of a name in a singly linked list and displays the name in an order.

2. Discussion

This program uses a singly linked list to store each letter of a name. Each node keeps one character and a link to the next node. By connecting each node, the whole name can be formed. The program then traverses the list starting from the head node to display the name.

3. Materials and Equipment

Google colab – used for coding the program
Pycharm – used for coding the program

4. Procedure

The program starts by creating a node class with data and next. The name stored as an array of characters, the first character becomes the first node or the head node. Each of the remaining characters of the name is added as a new node linked to the previous one, then it will traverse, and the characters will be printed until the name is displayed.

5. Output

```
class Node:
    def __init__(self,data):
        self.data = data
        self.next = None

name = [" J", "O", "H", "N",
         "K", "E", "N", "N", "E", "T", "H",
         "T", "U", "M", "A", "M", "P", "O",
         "S", "O", "R", "E", "L", "L", "A", "N", "O"]

head = Node(name[0])
current = head

for ch in name [1:]:
    current.next = Node(ch)
    current = current.next

temp =  head
print ("Full name:")
while temp:
    print(temp.data, end="\n ")
    temp =  temp.next
```

```
Full name:
 J
 O
 H
 N
 K
 E
 N
 N
 E
 T
 H
 T
 U
 M
 A
 M
 P
 O
 S
 O
 R
 E
 L
 L
 A
 N
 O
```

6. Conclusion

In conclusion, this program shows how a singly linked list can store and display data. Each character of the name is placed on each node also and linked together to form a singly linked list, and by traversing the list, the complete name is printed in order.

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