Quiz No.1 Skill Test	
Course Code: CPE201L	**Program: Computer Engineering**
Course Title: Data Structures and Algorithm	**Date Performed:August 30, 2025**
Section: CpE-2A	**Date Submitted:August 30, 2025**
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1. Objectives

1. Choose only one (1) Data Structure (Array, Linked-list, (Singly,Doubly), Stack, Queue)
2. Create a python program that appends each character of your Fullname and traverses each character.
3. Save your python program as Skil;-Test in your Colab and Github.

2. Discussion

I picked the Singly Linked List to create a python program that appends each character of my full name and traverses each of the characters. I created two classes that hold Node and LinkedList which hold many methods such as insert, traverse. The linked list is a linear data made up of nodes, where each node contains data and a pointer which in my case i named it “name” that connects it to the next node in the sequence. These are not stored in continuous memory locations unlike arrays but are linked together through these pointers. In the last part I used the insert method to append each character on my name and I used the traverse method to go through the linked list starting with the head which represents the first node and the tail which tracks the last node. This quiz highlights the use of data structure on handling sequences of data specifically when insertion and traversal operations are involved.

3. Materials and Equipment

Google Colab, Github

4. Procedure

Firstly, I copied my previous activities that involved a singly linked list. I modified it and named the data as “name’. The code has two classes named LinkedListNode which acts as the node and LinkedList which holds the overall linked list and it keeps track of the head and tail. Next, there is insert method which takes in argument “name” and there is an if-else statement inside it which says that if the head is empty the append character will become the head as it is the first character. Next, I created a traverse method which displays the characters of my full name and I used while statement so that after each character I can put “->” so that I could make it more readable and I used the end function so that it would be on the same line and not end up on new line each character. I named the function LinkedList() as ll for easy use of the class and I used the insert method to append each character of my full name one by one and at the end I called the traverse method.

5. Output

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J -> U -> D -> G -> E -> W -> A -> Y -> N -> E -> B -> A -> L -> A -> O -> R -> O -> None
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6. Supplementary Activity

Include here screenshots of the activity completion test.

7. Conclusion

In this quiz, I was able to apply the use of data structure and algorithm on creating a python program that appends each character of my full name and traverses each character of my full name. I use linked list, specifically the singly linked list as I saw it suitable to use in this case because when you append each

character it points it to the next one since its a name and permanent and you don't have to access previous element but just the next one since you append on it. I learned here to handle sequence of handling data and in this case its insertion and traversal operation.

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