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 II 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

```
#Singly Linked List
class LinkedListNode:
   def __init__(self, name, nextNode = None):
        self.name = name
        self.nextNode = nextNode
class LinkedList:
   def __init__(self, head = None, tail = None):
        self.head = head
        self.tail = tail
    def insert(self, name):
        node = LinkedListNode(name)
        if self.head is None:
           self.head = node
            self.tail = node
           self.tail.nextNode = node
           self.tail = node
    def traverse(self):
       current = self.head
        while current is not None:
          print(current.name, "->", end = " ")
           current = current.nextNode
        print(None)
11 = LinkedList()
11.insert("]")
11.insert("U")
11.insert("D")
11.insert("E")
11.insert("W")
11.insert("A")
11.insert("Y")
11.insert("N")
11.insert("E")
11.insert("B")
11.insert("A")
11.insert("L")
11.insert("A")
11.insert("0")
11.insert("R")
11.insert("0")
11.traverse()
J -> U -> D -> G -> E -> W -> A -> Y -> N -> E -> B -> A -> L -> A -> O -> R -> O -> None
```

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.

Criteria			F	Ratin	gs						Pts
© SO 7 Pl 1 Student Outcome 7.1 Acquire and apply new knowledge from outside sources. threshold: 4.8 pts	exist and flourish exist and flourish outside classroom outside classroom requirements,knowledge and/or experiences are and/or experiences are		and pursuits flourish	Satis Lool class requisions show inter purs know	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		on om tion	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	Excellent Completes an assigned task independently and practices	5 pts Good Completes an assigned task without supervision or guidance	4 pts Satisfactory Requires minimal guidance to complete an assigned task	Requires deta or step-by-ste instructions to complete a ta		tep complete to independe		rest to a task	1 pts Very Poor No interest to complete a task independently		
Student Outcome 7.3 Critical thinking in the broadest context of technological change	Excellent Synthesizes and integrates information from a variety of sources; formulates a clear and precise	5 pts Good Evaluate information from a variety of sources; formulates a clear and precise perspective.	4 pts 2 Satisfactory Analyze Information Analyze Information Analyze Information Infor		3 pts Unsatisfac Apply the gathered informatic formulate problem	on to	2 pts Poor Gather and summarize the information from a variety of sources but failed to formulate the problem		information		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 creative and adapt the ne knowledge tr solve a probl or address an issue	ldeas are creative in solving a problem, o	Shows creative solve the		ome ways	Pool inition to attended devices to s	initiative and attempt to		pts fery Poor feas are opied or estated from the sources onsulted	6 pts