UNIVERSITY OF CALOOCAN CITY

COMPUTER ENGINEERING DEPARTMENT

Data Structure and Algorithm

LINKED LIST SEATWORK

Submitted by:
Bron, Jhustine A.

Instructor:
Engr. Maria Rizette Sayo

August 11, 2025

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1. **What is a singly linked list, and how does it differ from an array?**

-A singly linked list is a structure made of nodes, where each node holds data and a pointer to the next node. Unlike arrays, elements aren't stored in consecutive memory, allowing the list to grow or shrink easily but making direct access slower since you must traverse from the start.

2. **When would you prefer a linked list over an array, and vice versa?**

-Arrays have a fixed size, fast random access, and store data in contiguous memory, making them good when the size is known and quick access is needed. Linked lists have flexible size and allow fast insertions or deletions but require sequential access, so they're better when frequent changes are needed.

3. **How are linked lists used in real-world applications (e.g., browser history, undo functionality)?**

-Linked lists are used in browser history to link visited pages, undo features in editors to track changes, and playlists to manage songs that can be added or removed without affecting the rest of the sequence.

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