Activity about Singly Linked List

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

- A linked list is a linear data structure that includes a series of connected nodes. Here, each node stores the data and the address of the next node. On other hand, array is a collection of items of the same variable type that are stored at contiguous memory locations (e.g. int arr[5] = {4, 12, 25 ,32, 43}).

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

- I would use a linked list if I will be adding or removing items in the middle or start of the list often, because it's easy to change links without moving many items. Then, if I need fast access to items by their position, or if I know the number of items in advance and don't need to add or remove much, I'd use array.

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

- linked lists are used in music players, where each song is linked to the one before and after it. This allows to move to the next or previous song easily, whether you start from the beginning or the end of the list.

4. Cite your reference/s

[1] "Linked List data structure." https://www.programiz.com/dsa/linked-list

[2] GeeksforGeeks, "Array Introduction," *GeeksforGeeks*, Jul. 31, 2025. https://www.geeksforgeeks.org/dsa/introduction-to-arrays-data-structure-and-algorithm-tutorials/

[3] GeeksforGeeks, "Applications of linked list data structure," *GeeksforGeeks*, Jul. 11, 2025. https://www.geeksforgeeks.org/dsa/applications-of-linked-list-data-structure/