**Lab Task 04**



**Superior University Gold Campus**

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| **Roll No** | **SU92-BSSEM-S24-029 (Section – 3A)** |
| **Subject** | **Data Structures and Algorithms (Lab)** |
| **Class** | **BS – Software Engineering** |

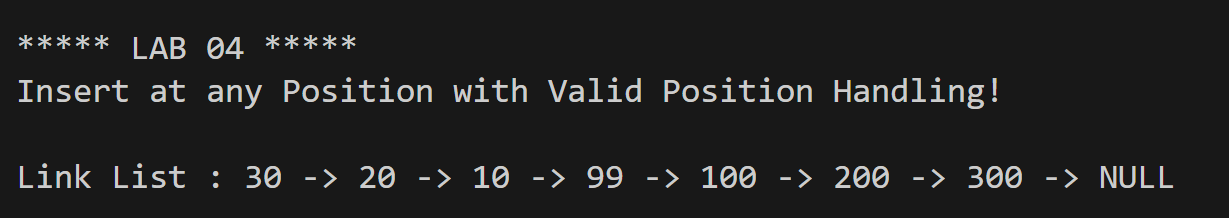
# **Lab 04: Singly Linked List (Insert at Specific Location)**

This program extends a **singly linked list** by adding a function to insert a node at a **specific position**. The Node class stores data and a pointer to the next node.

The **insert\_at\_pos** function inserts a new node at a given position: if the position is 1, it uses **insert\_at\_start**; otherwise, it traverses the list to the desired position and links the new node.

It also handles invalid positions by checking if the position is out of bounds. The program demonstrates inserting nodes at the start, end, and a specific position, then displays the list to show the updated structure. This ensures dynamic and flexible manipulation of the linked list.

**Outputs:**

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