# **Project Overview**

**Objective:** Implement a **Singly Linked List** in C to manage and display a sequence of roll numbers, supporting insertion and deletion at specific positions.

**Team Collaboration:** Utilizes GitHub for version control, including branches, commits, and pull requests.

**Visualization:** Incorporates Figma diagrams to illustrate singly linked list operations and structure.

**Documentation:** Includes a README file detailing the project's purpose, setup instructions, and sample outputs.

# **Key Features**

### **Singly Linked List Implementation**

The program supports the following operations:

* **Insertion at Position:** Insert a new roll number at a given position in the list.
* **Display:** Traverse and display the roll numbers from head → tail.

# **Sample Output**

Example program execution:

* Insertion of 1st roll no. : 8 -> NULL
* Insertion of 2nd roll no. : 8 -> 44 -> NULL
* Insertion of 3rd roll no. : 8 -> 44 -> 45 -> NULL
* Insertion of 4th roll no. : 8 -> 44 -> 45 -> 46 -> NULL
* Insertion of 5th roll no. : 8 -> 44 -> 45 -> 46 -> 47 -> NULL

# **GitHub Collaboration**

* **Branches:** Each teammate created a branch named after their roll number to contribute features.
* **Commits:** Regular commits documented development progress and code changes.
* **Pull Requests:** Used for reviewing and merging contributions into the main branch, ensuring code quality and consistency.
* **Merge Conflict Resolution:** Handled collaboratively when multiple contributors modified related parts of the code.

# **Visualization**

**Figma Diagrams** were created to visually represent:

* Insertion at a given position
* Deletion at a given position
* Traversal of the singly linked list

These diagrams help explain pointer updates (next) and the overall structure of the singly linked list.