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.

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