LeetCode Analysis Dashboard – UI/UX Documentation

1. Project Overview

The **LeetCode Analysis Dashboard** is a web-based application designed for **college administrators and faculty** to track students' **competitive programming performance**. It provides real-time insights into students' progress, contest ratings, and problem-solving skills, helping educators assess and improve coding proficiency within the institution.

2. Objectives

- Provide an **intuitive, visually appealing dashboard** for tracking student performance on **LeetCode**.
- Enable **faculty and administrators** to analyze student rankings, contest ratings, and problem-solving trends.
- Offer **data visualization** to simplify performance tracking and identify students needing improvement.
- Ensure a **responsive, user-friendly, and accessible UI** for a seamless experience across devices.

3. Target Users & Use Cases

Primary Users:

- **College Faculty & Administrators** – Monitor student progress, identify top performers, and provide targeted guidance.
- **Students** – View personal coding progress, compare rankings, and improve problem-solving skills.

Use Cases:

1. **Faculty Dashboard:** View **contest rankings, problems solved, and overall progress** of students.
2. **Student Progress Tracking:** Students can check their individual **LeetCode ratings, submissions, and strengths/weaknesses**.
3. **Data Insights:** Visual charts display **coding performance trends, strengths, and areas for improvement**.
4. **Performance Comparison:** Faculty can **compare students' problem-solving efficiency** for targeted mentorship.

4. UI/UX Design Approach

4.1. Design Principles

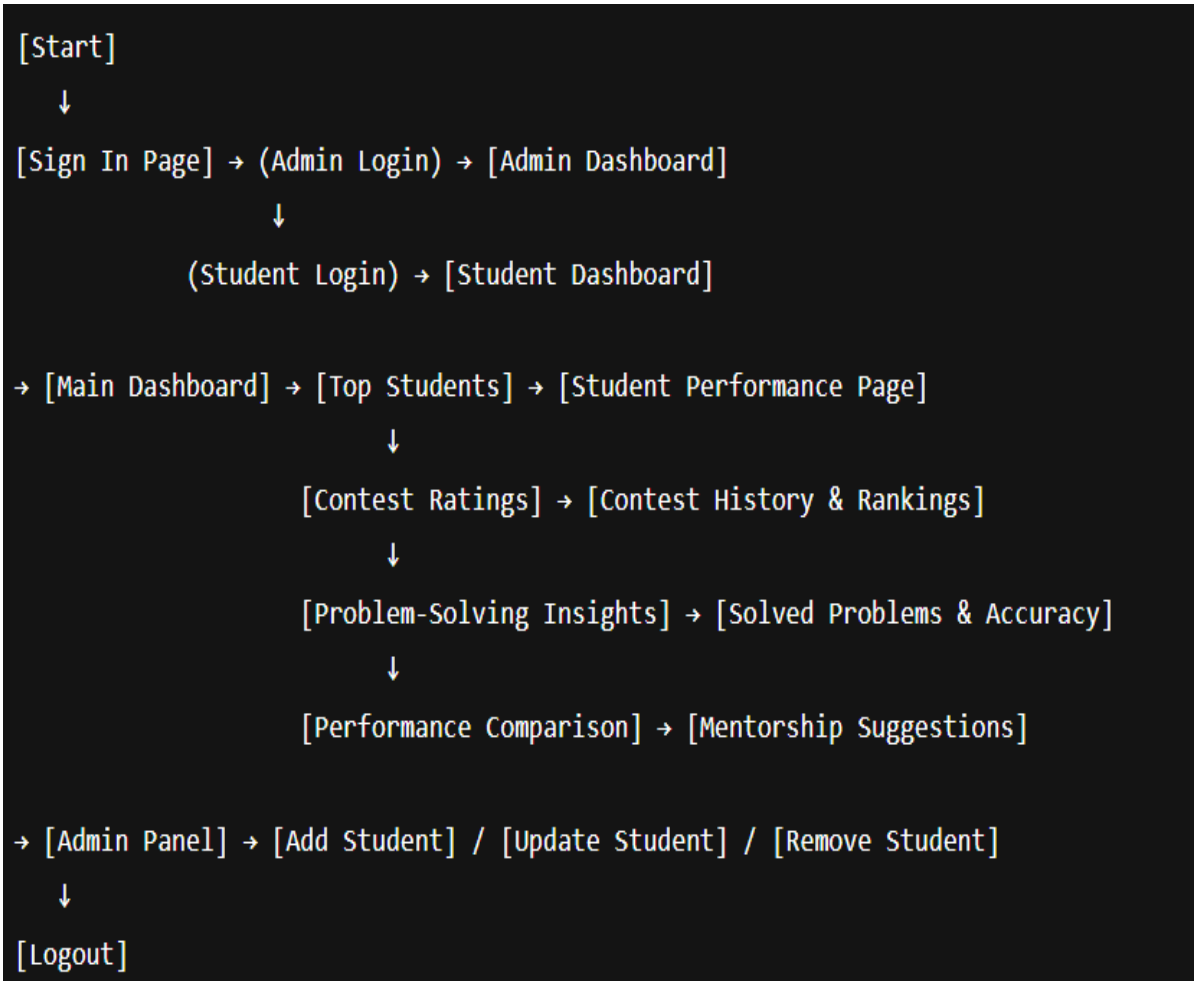
- **Minimalist & Dark-Themed UI:** Provides a professional look, reducing eye strain during extended usage.
- **Data-Driven Layout:** Uses **graphs, tables, and statistics** for clear data representation.
- **Consistent Navigation & Color Scheme:** Ensures a **seamless and engaging user experience**.

4.2. Tools Used

- **Figma / Adobe XD** – Wireframing and prototyping
- **Miro / Whimsical** – UI Flow and User Journey Mapping
- **Canva** – Creating UI Style Guide

5. UI Flow Diagram

The **UI Flow** represents how users navigate through the dashboard, ensuring an efficient workflow.



User Journey:

1. **Sign In Page:**
    - Secure login with **admin/student credentials**.
2. **Main Dashboard:**
    - Overview of **top students, contest ratings, and performance analytics**.
3. **Student Performance Page:**
    - Displays **detailed problem-solving history, trends, and rating changes**.
4. **Contest Ratings Page:**
    - Displays **past and upcoming contest results, ranking shifts, and comparison charts**.
5. **Problem-Solving Insights:**
    - List of **problems solved, difficulty levels, and average submission accuracy**.
6. **Admin Panel (Add/Update Students):**
    - Allows faculty to **add or update student records** for tracking.

6. Key Features & UI Components

Feature	Description
Sign-In Page	Secure login for students & faculty.
Dashboard Overview	Displays contest ratings, student rankings, and solved problems count.
Student Performance Page	Individual profile with progress trends and problem-solving history.
Leaderboard & Rankings	Sortable table ranking students based on **rating, consistency, and accuracy**.
Problem-Solving Stats	Graphs showing **difficulty level distribution, accuracy, and efficiency**.
Admin Management Panel	Faculty can **add, update, or remove student data** from the system.

7. UI Style Guide

Color Scheme:

- **Primary:** Dark Blue (#0D1B2A) – Background
- **Secondary:** Purple (#5D3FD3) – Highlights
- **Accent:** Orange (#FF7F50) – Graphs & Alerts

Typography:

- **Heading Font:** Montserrat (Bold, 18px)
- **Body Font:** Roboto (Regular, 14px)

Icons & Components:

- **Icons:** Lucide / Font Awesome
- **Buttons:** Rounded edges with hover animations
- **Graphs & Charts:** Line charts, bar graphs, and scatter plots for data visualization

8. Accessibility & Responsiveness

- **Optimized for all screen sizes** (Desktop, Tablet, Mobile).
- **High contrast mode** for better readability.
- **Keyboard-friendly navigation** and **ARIA attributes** for screen readers.

9. Conclusion

This **LeetCode Analysis Dashboard UI/UX project** provides **an intuitive, data-driven experience** for both faculty and students. The design ensures **seamless navigation, efficient data tracking, and visually engaging analytics**, making it a valuable tool for **competitive coding analysis in educational institutions**.