

Digital labiray system – Proper Planning (Android + Flask)

Technology Stack (Final)

- Website
- Backend API: Python Flask
- Database: Firebase Firestore/ any DB
- Authentication: Firebase Auth (Email + Google)
- AI: OpenAI & Gemini APIs
- Hosting: Render / Railway (Flask API)

STEP 1: Authentication (Working First)

What to build

- Firebase Email & Password login
- Google Sign-In
- Role check (Admin / Student)

Actual working

- User logs in → Firebase returns UID
- App checks role from Firestore
- Redirects to Admin or Student screen



What to build

- Register the page
- Student login screen
- Admin Login screen
- Admin Dashboard
- Department list (CSE, ECE, etc.)
- DATE and time in login the page
- Book list semester wise
- User ID is uqiune
- Search the book
- Rewards [rating star]

Actual working

- Student selects department
- Search the book
- Access the book and read
- The visit the website then count the time start
- Store the student and admin

