Student Name: POOVENDRAN S

Seat No: 169

Project ID: 3

Project title: Student Activity Log

Technical Components

Component	Tech Stack
Backend	Node.js with Express.js
Frontend	React
Database	MongoDB
API	OpenAPI

Implementation Timeline

Phase	Deadline	Status	Notes
Stage 1	/04/2024	Under review	Planning and Requirement gathering
Stage 2		In process	Design and Prototyping
Stage 3		In process	DB Designing
Stage 4		In process	Backend Implementation
Stage 5		Not started	Testing & Implementation

PROBLEM STATEMENT:

The decentralized nature of students within educational institutions leads to several challenges, including:

- Ensuring Safety and Security: Accurate tracking of students' whereabouts is crucial for their safety and security. Knowing when and where students check in and out helps in emergency situations and ensures that students are accounted for at all times.

- Enhancing Accountability: Tracking check-ins, check-outs, and activity logs promotes accountability among students. It ensures that students are attending classes and participating in required activities.

- Improving Resource Management: Monitoring student movements and activities helps in the efficient allocation of resources, such as classroom space, equipment, and staff time.

- Providing Data for Decision Making: Collecting data on student activities can inform decision-making processes related to academic planning, extracurricular activities, and facility management.

- Supporting Student Engagement: By understanding patterns of student engagement, institutions can tailor their programs and support services to better meet the needs and interests of their students.

PROJECT-FLOW:

Purpose:
To develop a student activity log by check in/check out method and at each venue can efficiently manages student schedules and activities, resolving existing issues of schedule conflicts and student activity management.

Scope:
This system includes user authentication, to check engagement of students at their certain venue and the work based on their engagement on tasks allotted by the faculty and to ensure the proper workdone by the students at the time given.

Business Context:
The centralized student activity log is aimed at enhancing clarity and timeliness across BIT, thus boosting organizational efficiency by minimizing scheduling conflicts. Primary stakeholders include students, faculty, administrative staff, and the IT department.

Consideration:

- All users possess active Google accounts for authentication.
- Users have regular access to internet-enabled devices.

Dependencies:

- Integration with Google OAuth for user authentication.
- Consistent performance and availability of check in and check out device (hardware) to integrate with this.

User personas:

- **Student:** Needs an up-to-date schedule to effectively plan activities.
- **Faculty:** Requires the ability to send out schedule updates and notices efficiently.
- **Admin Staff:** Manages system operations, resolves conflicts, and approves mail requests.

User Stories:

- As a student, I want to use my time effectively for the each works as I plan and to manage the time and view the weekly work time basis and monthly time basis for analysis.
- As a faculty member, I need to ensure students are involving in their work without any malpractice with their works and activities.

Functional Requirements:

- **User Authentication:** Secure login using Google OAuth.
- **Hardware or software Request Form:** Student check in or check out device is needed to get input from the user.
- **Dynamic Dashboard:** Real-time schedule viewing and interaction.
- **Priority Algorithm:** Automated prioritization of communications based on rules.

FLOW CHART:

SEPERATE PAGE FOR STUDENT

```
   ┌─────────┐          ┌──────────────────┐
   │  Login  │────────▶ │     Student      │
   └─────────┘          │ Check in/ Check Out│
        ▲               └──────────────────┘
        │                        │
        │                        ▼
        │               ┌──────────────────┐
        │               │ Temporary Data   │
        │               │ Storage for      │
        │               │ approval         │
        │               └──────────────────┘
        │                        │
        │                        ▼
        │                  ┌──────────┐   YES   ┌──────────────────┐
        │                  │ Faculty  │────────▶│ Student Dasboard │
        │                  │ Approval │         └──────────────────┘
        │                  └──────────┘                  │
        │                        │ NO                    │
        │                        ▼                       │
        │               ┌──────────────┐                 │
        │               │ Give Reason  │                 │
        │               └──────────────┘                 │
        │                        │                        ▼
        │            NO          │              ┌──────────┐
        └────────────────────────┤◀─────────────│ Approval │
                                                └──────────┘
                                                      │ YES
                                                      ▼
                                          ┌────────────────────┐
                                          │ Permanent storage  │
                                          │ for daliy and      │
                                          │ weekly basis       │
                                          └────────────────────┘
                                                      │
                                                      ▼
                                                ┌─────────┐
                                                │   END   │
                                                └─────────┘
```
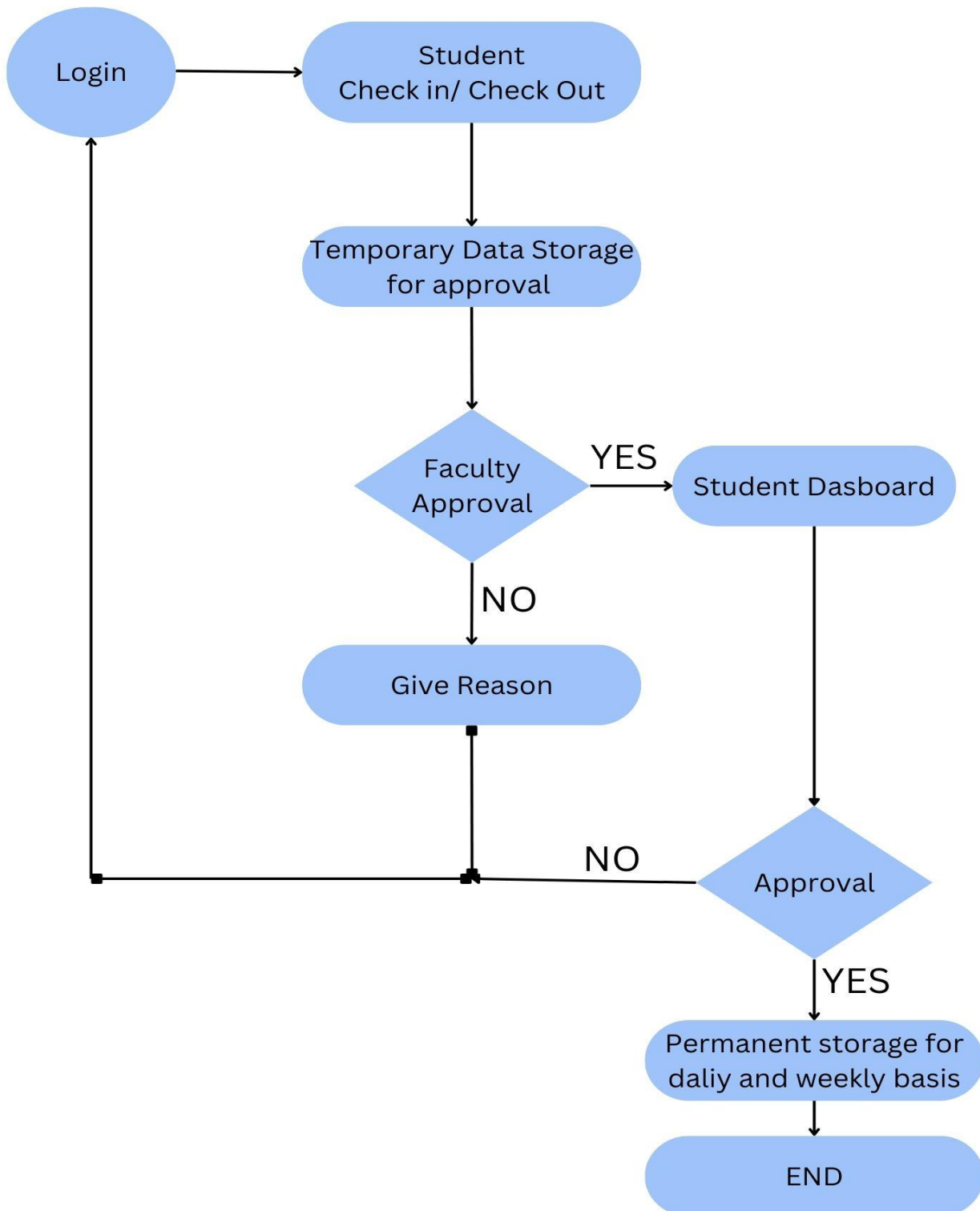
SEPERATE PAGE FOR FACULTY

FACULTY → Student Dashboard

Student Dashboard → APPROVAL

APPROVAL — YES → Upadate to student dashboard

APPROVAL — NO → Get Reason

Upadate to student dashboard → APPROVAL

APPROVAL — NO

APPROVAL — YES → Analysis of student dasboard

Analysis of student dasboard → END