

FixFlow



Maintenance management app
CS691

Team members



Viraj Choksi

Cloud & DevOps



Harshil Goti

Backend & Data Administrator



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Frontend/ML Developer



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Product & QA

Agenda

- ❖ Problem Statement
- ❖ Product Description
- ❖ Personas
- ❖ Technology Description
- ❖ Project timeline
- ❖ Team Agreement
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Problem Statement

- ❖ Current maintenance reporting in high-density residential environments, such as dorms and apartment complexes, is hindered by fragmented communication and a lack of visual context. Property managers often rely on vague, text-only requests that fail to specify the severity or technical requirements of an issue. This "information gap" leads to significant operational inefficiency, most notably the "double-trip" phenomenon, where technicians arrive unprepared and must return later with the correct tools, thereby doubling labor costs and delaying essential repairs.
- ❖ Beyond physical maintenance hurdles, the lack of a centralized digital system creates an accountability and transparency crisis. Tenants often feel ignored due to the absence of real-time status updates, while management lacks the structured data needed to track response times or identify recurring infrastructure failures. Without a documented audit trail, buildings face increased risks of property damage and liability, making it nearly impossible for administrators to optimize their workflows or verify compliance with safety standards.

Product Description

- ❖ **FixFlow** is a mobile-first maintenance management ecosystem designed to eliminate the inefficiencies of traditional facility reporting through a photo-centric, "smart triage" approach. By mandating visual evidence during the submission process and utilizing a backend priority engine, the platform automatically categorizes and ranks work orders based on severity, ensuring that critical issues like leaks or electrical hazards are addressed immediately. The system bridges the gap between residents and management by providing tenants with live status tracking and administrators with a data-rich dashboard, backed by a robust audit log that ensures 100% transparency and accountability for every repair.

Persona 1

Profile: Marcus is a 20-year-old Junior at Pace University living in an on-campus residence hall. He is a full-time student with a heavy course load and a part-time job. He doesn't have time to wait on hold with campus security or visit the facilities office in person. He relies entirely on his smartphone to manage his life.

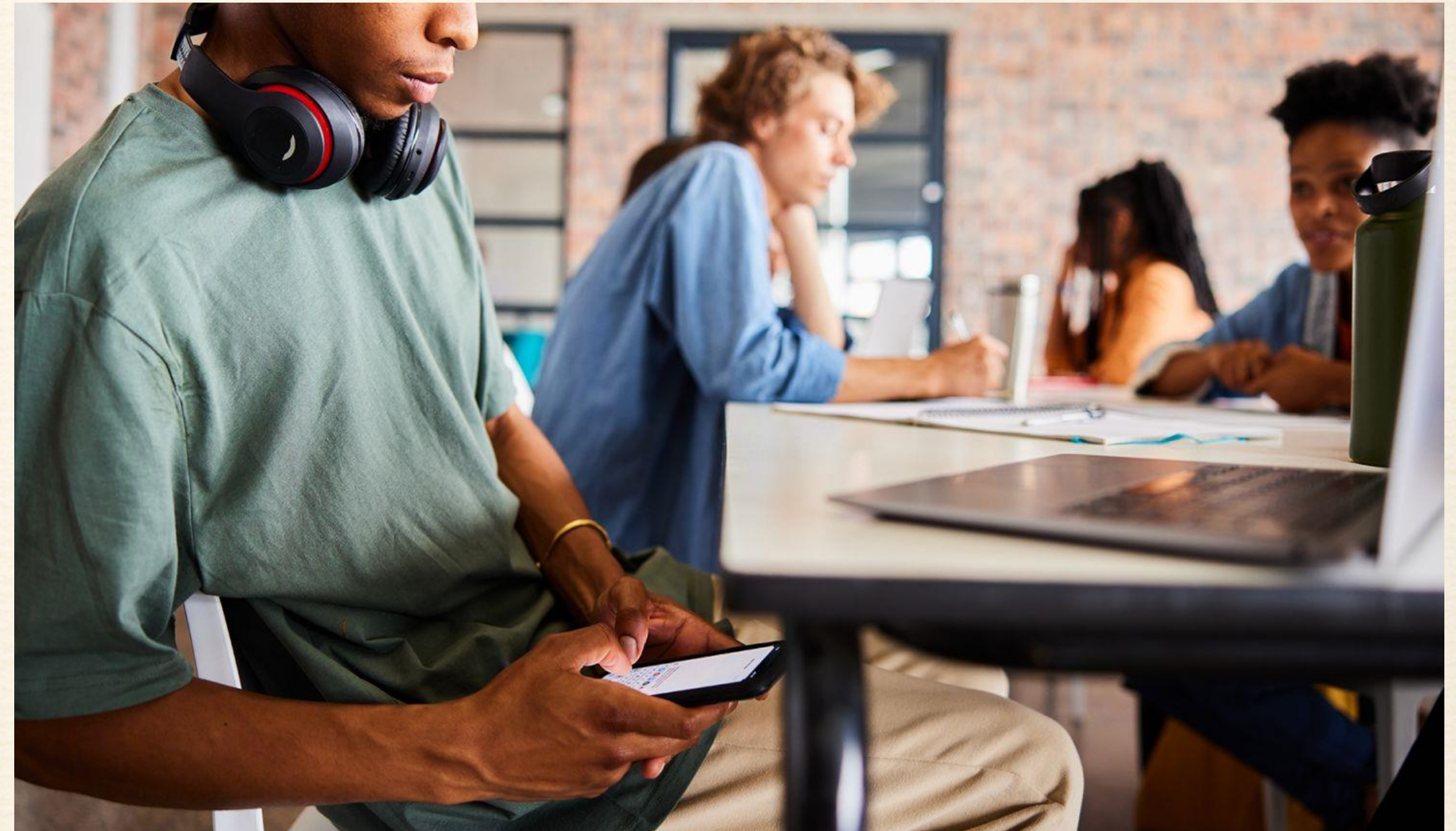
- **Name:** Marcus
- **Age:** 20
- **Location:** New York, NY (Pace University Housing)
- **Status:** Student / Resident
- **Tech Literacy:** High (Prefers apps over phone calls)
- **Living Situation:** Shared Suite

Frustrations:

- Not knowing if his maintenance request was actually received.
- Maintenance staff showing up when he is in the middle of a remote exam.
- Having to explain the same issue multiple times to different people.

Goals:

- Reporting a problem in under 30 seconds.
- Getting real-time notifications about when a technician will arrive.
- Having a functional, safe living space to study in.



Persona 2

Profile: David is a 45-year-old lead maintenance technician with 15 years of experience. He is skilled at his job but often frustrated by the lack of information in work orders. He hates arriving at a "clogged sink" only to realize he needs a specific industrial snake tool that he left back at the central workshop, 15 minutes away.

- **Name:** David
- **Age:** 45
- **Location:** Westchester, NY
- **Job:** Facilities Technician
- **Work Style:** Practical, hands-on, mobile.
- **Family:** Married with two kids.

Frustrations:

- Walking across a large campus only to find he brought the wrong tools for the job.
- Illegible handwritten notes or vague descriptions like "it's broken."
- Getting blamed for delays when he wasn't notified of a priority emergency.

Goals:

- Seeing a photo of the issue before he leaves the shop to prepare.
- Closing out tickets digitally so he doesn't have to do paperwork at the end of the day.
- Efficiently completing his daily route to reduce overtime.

Persona 3

Profile: Elena is a 38-year-old Property Manager responsible for three large dormitory buildings. She needs to keep costs low and resident satisfaction high. She cares about "the big picture"—knowing which buildings have the most issues and ensuring her team is working efficiently. She is the person who will be interested in the "Audit Logs" you mentioned.

- **Name:** Elena
- **Age:** 38
- **Location:** New York, NY
- **Job:** Senior Property Manager
- **Tech Literacy:** Moderate (Wants clean, easy-to-read data)
- **Interests:** Data analytics, budget optimization.

Frustrations:

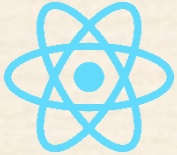




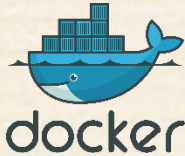

- Having no clear data on how long it takes for a ticket to go from "Open" to "Closed."
- Dealing with angry parents/residents complaining about ignored requests.
- Unpredictable repair costs caused by small issues turning into major floods.

Goals:

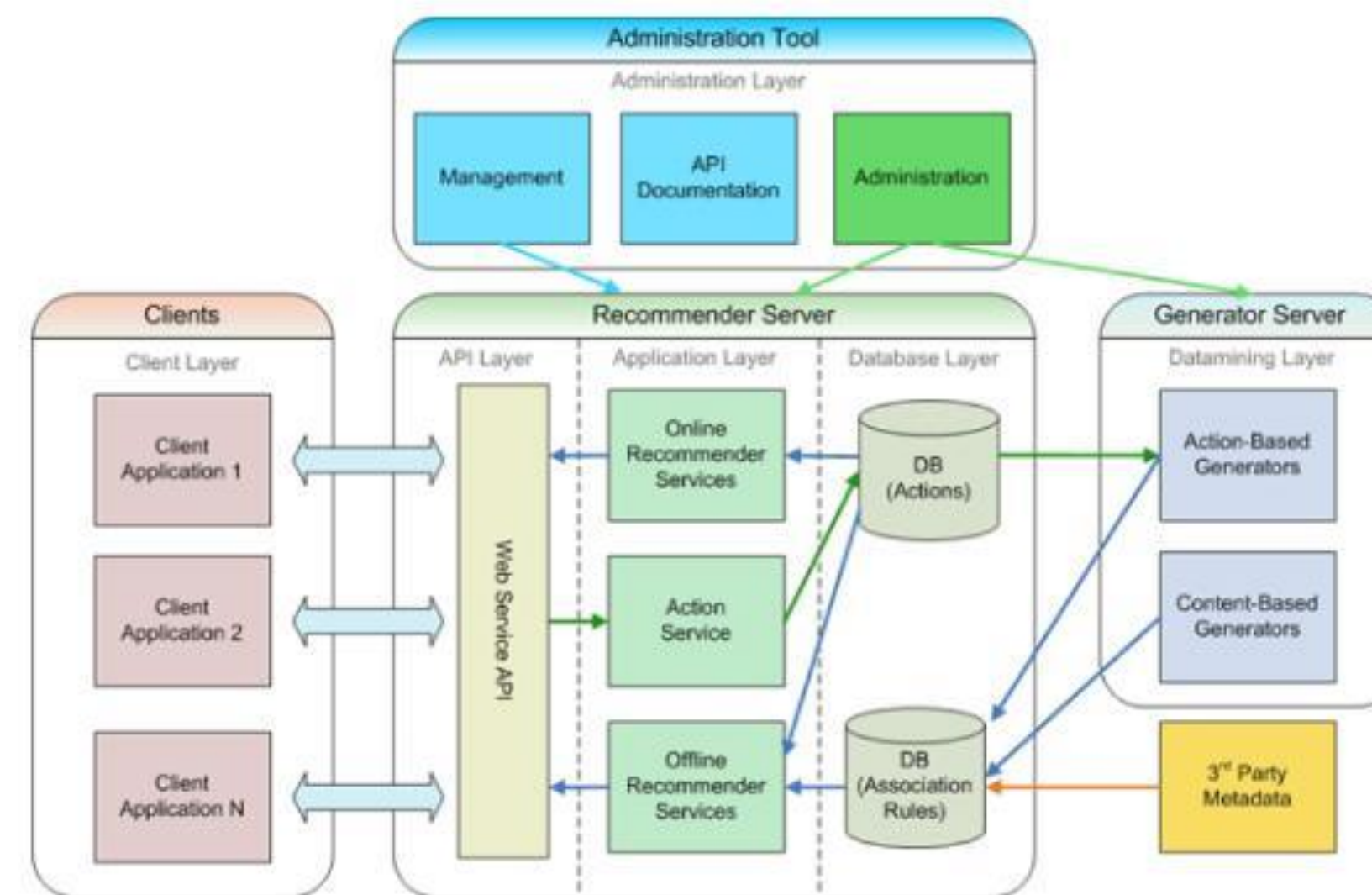
- Identifying recurring issues (e.g., "Building B has constant pipe leaks") to justify renovations.
- Ensuring the maintenance team is meeting their Service Level Agreements (SLAs).
- Maintaining a 100% digital audit trail for liability and safety compliance.



Technology Description

- ❖ React JS 
- ❖ TensorFlow 
- ❖ MongoDB 
- ❖ AWS 
- ❖ Github 
- ❖ Docker 
- ❖ Express JS 

Architecture of Full Stack Web Application



Project Timeline

Sprint	Task Name	Assigned To	Status	Priority	Est. (Days)
Sprint 1	Feb 8 - Feb 18				Total: 14
	Finalize Project Proposal & Team Agreement	Krish Jasani	Done	High	3
	System Architecture Design (Node.js/React)	Harshil Goti	Done	High	4
	Set up GitHub Repo & Project Boards	Shriken Patel	Done	Medium	2
	Initial Database Schema (MongoDB)	Viraj Chokshi	Done	High	3
	Deliverable 1 Submission	Viraj Chokshi	Working on it	Medium	2
Sprint 2	Feb 18 - Mar 4				
	User Authentication & JWT Auth	Harshil Goti	Not Started	High	4
	Frontend UI Mockups & Material UI Setup	Shriken Patel	Not Started	Medium	3
	REST API Setup (CRUD for HomeHub)	Harshil Goti	Not Started	High	4
	AWS Setup & Docker Configuration	Viraj Chokshi	Not Started	Low	3

Team Agreement

TEAM AGREEMENT



Introduction

The purpose of this team working agreement is to outline standardized expectations for the Lightning Bolt project concerning, but not limited to, the working relations and group structure among team members in CS-691. The contents herein addressed are:

1. Communication
2. Decision making
3. Responsibility
4. Participation
5. Leadership
6. Consequences

The members of the team are:

1. Harshil Hiteshbhai Goti
2. Krish Kanubhai Jasani
3. Shriken Jigar Patel
4. Viraj Rajeshkumar Chokshi

Communication:

Communication between team members shall be through e-mail, phone conversations, and weekly team meetings. Members will check their e-mail once daily and reply when requested or necessary. Team meetings are scheduled every Tuesday evening at 6:00 pm. If a member cannot attend a team meeting, they must communicate to all members 24 hours prior to the meeting. Failure to communicate their absence will result in a strike (see "Consequences" below).

Decision Making

All ideas and directions will be kept open until a final consensus decision is made by the group. Final ideas and decisions will be adopted in one of two ways: secret ballot or coin toss. Failure to communicate or acting on a decision not sanctioned by the entire team, will result in one strike. (Please refer to "Consequences" section.)

Responsibility

Members of the team are expected to complete all tasks assigned to them by the due date. If unforeseen obstacles prevent task completion, this will be handled accordingly. Difficult or unclear

responsibilities must be voiced to other team members swiftly so that they can be clarified or redefined.

Leadership

Leadership is strictly informal with a democratic debate system used for decision-making. A primary meeting facilitator will be assigned prior to each meeting. The facilitator will be responsible for compiling an agenda and directing the smooth flow of the meeting. Natural leadership will evolve over time, and this working agreement shall be edited to accommodate such future logistical changes.

Group Progress

The group will create a timeline that includes dates for expected completion of work and other group objectives. This timeline will help the group to determine progress and how rules should be enforced regarding participation of each group member.

Consequences

Consequences will be based on a strike program with three strikes resulting in a probationary status and four strikes resulting in removal from the team. While on probation the team member must demonstrate his/her ongoing commitment to the team by writing an explanatory paper and requesting reinstatement to the team.

Strikes may be given for any one of the following reasons:

1. Missed meetings without either communication 24 hours prior or a legitimate conflict.
2. Failure to abide by the rules presented in this working agreement.
3. Low commitment and substandard work presented in assigned tasks.

Summary

The ideas and requirements set forth in this working agreement are established to provide the best possible working conditions for completing the assigned project.

If you have any questions concerning this memo, or the contents therein, please direct them to the group secretary:

Viraj Chokshi,

vc62862n@pace.edu

(718)4139344.

Retrospective

What went well?

- ❖ We as a team have planned to keep our objective simple to finish and produce what was expected.
- ❖ Team had good time working together.
- ❖ Active response from team to get involved in tasks with clear thoughts.
- ❖ The key was participation and motivation to complete task in time and every member knew what they had to do.
- ❖ We had several discussion sessions.
- ❖ Overall, every meeting session is effectively used to gain progress and complete sprint on time.

What Could Be Improved?

- ❖ We frequently try to communicate to discuss about project and advancements even after the sprint completion.
- ❖ Setting up time limit for the tasks and learning from previous semester student's sprints performance to make improvements and where can we be better.

What we plan to commit for next sprint?

- ❖ Maintain consistency in performance, improvement is key.
- ❖ Previous students sprint retro can be helpful for improving team balance in which areas team is lacking, where we can work according to that.
- ❖ Previous retro stats can be helpful in filling the gaps of next sprint.

Group Wiki-Page Link

❖ <https://github.com/Virajchokshi/FixFlow/wiki>

Thank You !