

# CSE 4408

# System Analysis and Design

## Lab 3: Project Management

Date: 28.05.2025

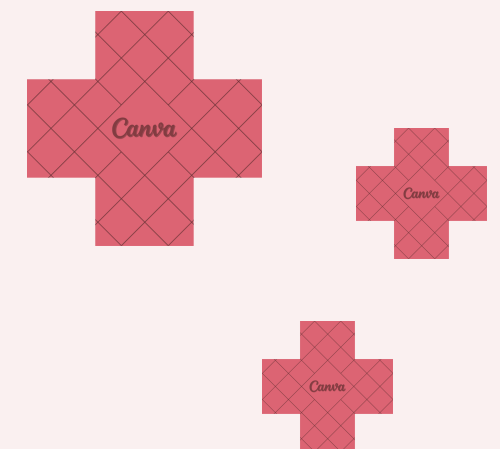
# MedRadAr

by team **CookiesAndCaches**

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# Problem Definition

## Key Issues

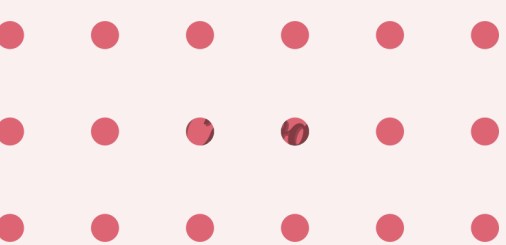
- Scattered and outdated information about medicine availability
- Patients waste time calling or visiting multiple pharmacies
- Lack of centralized platform for filtering pharmacies by location and stock
- No real-time updates on out-of-stock medicines



# Problem Definition

## Project Objectives

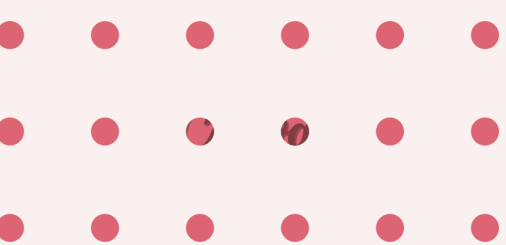
- Develop a system that allows location-based filtering of pharmacies
- Enable real-time visibility of medical stock in nearby stores
- Simplify user experience with intuitive search and filtering
- Integrate AI to suggest alternative medicine for patients.



# Problem Definition

## High-Level Requirements

- User authentication system
- Pharmacy and inventory management dashboards
- Location-based filtering and map integration
- Real-time stock updates and AI-powered suggestions
- Possible medicine order feature



# Problem Definition

## Constraints

- **Budget Limits:** Free-tier tools only; no premium API usage
- **Manual Updates:** Pharmacy stock may not sync automatically
- **Privacy Compliance:** No sensitive health data allowed
- **Skill Gaps:** Limited experience with APIs, AI, real-time features



# Project Justification

## ● Management Backing

- Organization should allow this system for students welfare
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## ● Appropriate Timing

- High demand during health/exam stress
  - New students need local pharmacy info
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## ● Strategic Goal Alignment

- Improves student health access
  - Encourages digital pharmacy adoption
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## ● Practicality

- MVP can be launched quickly
  - Cloud tools reduce cost and effort
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## ● Worthwhile Investment

- Saves time in finding medicine
  - Expandable to other campuses
  - Low-cost with free cloud services
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# Preliminary Feasibility Assessment

## Technical Feasibility

### ● Technological Availability

- Google maps API
- Preferred Stack: MERN
- Readily available authentication tools

### ● Skill+ Infrastructure Availability

- The student team is comfortable with web development; AI and cloud support via open tools

### ● Potential Obstacles

- Lack of technical readiness from local pharmacies
- Unreliable inventory updates, risking outdated or inaccurate data
- Sustainability challenges if no long-term team maintains the system



# Preliminary Feasibility Assessment

## Technical Feasibility

### ● Hardware vs Cloud/SaaS

#### Why Cloud/SaaS?

- No physical servers needed
- Accessible from anywhere via APIs
- Scalable & low-cost—ideal for student projects
- Easier maintenance with auto-updates

#### Why not local hardware?

- Expensive and harder to maintain

### ● Anticipated Deployment Challenges

- Pharmacy Onboarding
- Internet Dependency
- Staff Training
- Data Accuracy
- Maintenance and Scaling

# Preliminary Feasibility Assessment

## Economic Feasibility

### ● Tangible Benefits

- Reduces time and labor
- Faster Emergency Response
- Increased Pharmacy Sales
- Reduced Manual Errors
- Data-Driven Insights

### ● Tangible Costs

- Development time (~90–100 Hours)
- Cloud Hosting and Database Costs
- Device/Internet Setup for Pharmacies
- Training and Onboarding
- Maintenance and Support

**+** *At this stage, benefits outweigh costs.  
MedRadar addresses a critical need, is low-cost, scalable,  
and delivers high-impact value in time and efficiency.*

# Preliminary Feasibility Assessment

## Operational Feasibility

- **High likelihood of user acceptance**
  - Tech-savvy users
  - Pharmacy staff seeking process optimization
- **Fits into workflow**
  - Simple dashboards and live updates will enhance current process
- **Change Management**
  - Minimal resistance expected but smooth adoption still requires basic training and clear communication

# Project Cost & Benefits

## ● Tangible Benefits

- Saves users' time in finding medicines
- Faster emergency response
- Prevents sales loss from low visibility
- Enables future data-driven insights
- Generate revenue through order and sales from the pharmacy

## ● Intangible Benefits

- Builds user trust in local pharmacies
- Pushes digital adoption for small businesses
- Strengthens platform reputation in community

# Project Cost & Benefits

## ● Tangible Costs

- Development time and effort.
- Domain registration and hosting.
- Maintenance time (debugging, feature updates).
- Future server/hosting fees.

## ● Intangible Costs

- Limited experience with frameworks and tech stacks.
- Pharmacy resistance to digital shift
- Effort to keep inventory updated
- Data privacy concerns

# High Level Budget Outline

Category	Description	Estimated Cost
Project Team	Team of 3 contributes 90+ hrs voluntarily	\$0
Hardware	Not needed; uses cloud infrastructure	\$0
Software	Built in free tool & Premium API kits (optional)	~\$10-15 (optional)
Training	Simple + user-friendly UI; 5 hours demo based training per pharmacy	\$0
Miscellaneuos	Deployment Costs, Visual polishing etc	~\$10-15 (optional)

# Thank you!

*Feel free to ask any questions!*