

project report format

1. INTRODUCTION

1.1 Project Overview

The Cafeteria Menu Display System is a digital solution aimed at replacing traditional manual menu boards with a dynamic and real-time display system. It ensures that students, faculty, and visitors can view the current day's menu, prices, offers, and nutritional information easily.

1.2 Purpose

The purpose of this project is to improve user experience in cafeterias by providing updated menu information on digital screens or web apps, reducing confusion, and helping users make quick and informed food choices.

2. IDEATION PHASE

2.1 Problem Statement

Students and staff often face difficulty knowing the day's menu, available items, and prices in cafeterias. Manual

boards are not updated regularly, leading to dissatisfaction and confusion.

2.2 Empathy Map Canvas

Says: "I want to know what's available before I go."

Thinks: "I hope they have my favorite food today."

Does: Walks to the cafeteria and checks manually.

Feels: Frustrated when the item is not available or when prices are not clear.

2.3 Brainstorming

Ideas generated:

Web application for menu display

Integration with kitchen for real-time updates

QR code-based access

Nutritional information display

Feedback collection option

3. REQUIREMENT ANALYSIS

3.1 Customer Journey Map

User → Opens app or checks digital screen → Views menu → Selects food → Orders easily with full knowledge.

3.2 Solution Requirement

Admin Panel to update menu

Student/User interface to view menus

Daily menu scheduler

Nutritional and allergen info

Notification system for offers

3.3 Data Flow Diagram

Level 0 DFD:

User → View Request → System → Fetch Menu from Database → Display Result

3.4 Technology Stack

Frontend: ReactJS / Streamlit

Backend: FastAPI / Node.js

Database: MongoDB / Firebase

Deployment: Heroku / Render / AWS

Optional: Raspberry Pi for digital signage

4. PROJECT DESIGN

4.1 Problem-Solution Fit

Problem: Inaccessible, outdated cafeteria menu boards

Solution: Real-time digital display and web/mobile access to the cafeteria menu

4.2 Proposed Solution

A responsive digital menu board accessible via screen, app, or QR, that updates in real-time with user-friendly UI.

4.3 Solution Architecture

Admin Panel → Controls and updates menu

Database → Stores menu info

Backend API → Fetches data

Frontend UI → Displays data to users

5. PROJECT PLANNING & SCHEDULING

5.1 Project Planning

Phase Timeline

Requirement Gathering Week 1

Design & Architecture Week 2-3

Development Week 4-6

Testing & Feedback Week 7

Deployment Week 8

6. FUNCTIONAL AND PERFORMANCE TESTING

6.1 Performance Testing

Load test API calls to menu endpoint

UI responsiveness on various devices

Backend update delay test

Real-time sync test for display screens

7. RESULTS

7.1 Output Screenshots

Admin Menu Update Page

Student Menu View Page

Digital Display Interface

QR Scan Redirect Page

(Add images of screenshots here if available)

8. ADVANTAGES & DISADVANTAGES

Advantages:

Real-time updates

Easy access via mobile/web

Saves time and increases transparency

Can promote special offers or nutrition tips

Disadvantages:

Requires initial digital setup

Dependency on stable internet

Technical maintenance needed

9. CONCLUSION

The Cafeteria Menu Display System transforms traditional food service communication into an intelligent, efficient experience. It benefits users by ensuring access to up-to-date information, thereby improving cafeteria operations and satisfaction.

10. FUTURE SCOPE

Integration with pre-order or payment system

AI-based recommendation system

Multi-language support

Feedback analytics for popular dishes

11. APPENDIX

Source Code: [GitHub Repository Link]

Dataset Link: [e.g., Sample Menus or Nutritional Datasets]

Demo Link: [Live or Video Demo]

