

Project Plan 2.1: Kirana App

Project Title: Kirana: Local E-Commerce and Communication Platform

Project Manager: Muhammad Arib

Team: Devinity

Date: September 10, 2025

1. Project Overview

The Kirana App project aims to develop a mobile-first web application that addresses a clear gap in the Karachi market. It combines a privacy-first messaging service with a hyper-local marketplace for small, informal businesses. By offering features tailored to local needs—such as an Urdu interface, enhanced privacy controls, and a simple onboarding process for vendors—the project provides a trusted digital ecosystem. This initiative empowers local commerce and provides a secure alternative to mainstream communication apps, with a core promise of keeping user data within Pakistan.

2. Project Objectives & Success Criteria

Objectives:

- To design, develop, and deliver a functional Minimum Viable Product (MVP) of the Kirana App within 10-weeks of a university semester.
- To integrate a privacy-focused chat service with a user-friendly local marketplace.
- To create a simple and effective onboarding process for local, informal businesses.
- To validate the app's core concept through User Acceptance Testing (UAT).

Success Criteria:

- The functional prototype, demonstrating all in-scope features, is deployed by the project end date.
- The application passes UAT with a target group of at least 20 users and sellers without critical errors.
- The final project achieves a user satisfaction rating of 65% or higher in feedback surveys.
- All project documentation is completed and submitted as per course requirements.

3. Scope Statement

In-Scope Features (MVP):

- **General:** A responsive, mobile-first web app with Urdu and English language support.
- **User Management:** Secure user registration via phone/email and profile management.
- **Chat Features:** Private messaging with individual controls for read receipts, message deletion, and extended 30-minute message edit window.

- **Bazaar Features:** Simple seller profile creation and onboarding, area-based seller discovery, and a user review system.

Out-of-Scope Features:

- Native mobile applications (iOS/Android).
- Integrated online payment gateways.
- In-app delivery or logistics services.
- Advanced administrative or analytics dashboards.

4. Project Estimations (Based on FPA)

- **Total Unadjusted Function Points (UFP):** 120
- **Technology Stack:** Next.js 15 (TypeScript) for Frontend; Firebase for Backend (Auth, Firestore, Messaging).
- **Estimated Custom Code (KLOC):** ~3.3 KLOC
- **Realistic Project Size (inc. libraries and location api integrations):** 5 KLOC
- **Estimated Effort:** 13 Person-Months

5. Work Breakdown Structure (WBS) & Schedule

The project is structured into five key phases over a 10-week timeline.

| Phase | Start Date | End Date | Duration | Key Deliverables |
|----------------------------|--------------|--------------|----------|---|
| 1. Planning & Requirements | Aug 2, 2025 | Aug 14, 2025 | ~13 Days | Project Charter, Scope Docs, SRS |
| 2. Design & Prototyping | Aug 15, 2025 | Aug 27, 2025 | ~13 Days | UI/UX Designs, Clickable Prototype, System Architecture |
| 3. Development | Aug 28, 2025 | Sep 24, 2025 | 28 Days | Functional MVP with core features |
| 4. Testing & Deployment | Sep 25, 2025 | Oct 5, 2025 | 11 days | Test Reports, Deployed |
| | | | | Staging Server |

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|---------------------------|-------------|--------------|--------|-----------------------------|
| 5. Project Closure | Oct 6, 2025 | Oct 10, 2025 | 5 Days | Final Report & Presentation |
|---------------------------|-------------|--------------|--------|-----------------------------|

Major Milestones:

- **Requirements Sign-Off:** August 18, 2025
- **Design & Prototype Approval:** August 27, 2025
- **Development Complete (MVP):** September 24, 2025
- **UAT Begins:** September 25, 2025
- **Final Project Submission:** October 10, 2025

6. Project Team & Responsibilities

| Role | Name(s) | Primary Responsibilities |
|-----------------------------|----------------------------|--|
| Project Manager | Muhammad Arib | Overall planning, execution, monitoring, and reporting. |
| Business Analyst | Haider | Requirements gathering, documentation (SRS), and analysis. |
| Design Team (UI/UX) | Arib, Riyan | UI Design, User Flow, DataBase Design. |
| Development Team | Arib | Frontend (Next.js) and Backend (Firebase) development. |
| QA/Testing Team | Haris, Moin | UAT, manual Testing, bug tracking and testing report. |
| Marketing/Engagement | Moin, Riyan, Haider, Haris | Seller and Customer recruitment. |
| Faculty Lead | Ms. Maryam | Project Sponsor, Change Control Board, final evaluation. |

7. Risk Management

| Risk | Likelihood | Impact | Mitigation Strategy |
|----------------------|------------|--------|---|
| Scope Creep | Medium | Medium | Adhere to the defined Scope Change Control Process. |
| User Adoption | High | High | Focus on a seamless onboarding experience. Market the unique selling points: privacy, local data, and multi-language support. |
| Seller Engagement | Medium | Medium | Simplify the seller onboarding process to be as frictionless as possible. Provide simple guides (in English and Urdu) and offer direct support to the initial test group. |
| Technical Challenges | Medium | High | Leverage the high-productivity Next.js/Firebase stack to minimize backend complexity. Maintain clear communication between developer and testers to resolve issues quickly. |

8. Tools and Communication Plan

- **Weekly Team Meetings:** Wednesdays via Google Meet to discuss progress, roadblocks, and next steps.
- **Weekly Stakeholder Updates:** A concise progress report will be uploaded to GitHub and final updated docs on Google Drive.
- **Tech Stack:**
 - **Programing Language:** Type Script
 - **Frontend Framework:** Next JS 15 (App Router)
 - **Backend:** Firebase
- **Primary Tools:**
 - **Task Management:** WhatsApp
 - **Documentation:** Google Docs
 - **Version Control:** GitHub

- **Design:** Figma
- **Team Communication:** WhatsApp