CSE7101- Capstone Project
Review-2

PSCS_281_Mobile App for Direct Market Access for Farmers

Batch Number:ISE_18

Roll Number	Student Name
20221ISE0107	JASWANTH T
20221ISE0111	SHALINI L R
20221ISE0110	SAI CHANDAN M B

Under the Supervision of

Assistant professor Ms. Babitha S
School of Computer Science and Engineering
Presidency University

Name of the Program: Information Science and Engineering
Name of the HoD: Dr. Zafar Ali Khan N
Name of the Program Project Coordinator: Ms Suma N G
Name of the School Project Coordinators: Dr. Sampath A K , Dr. Geetha A

Problem Statement Number: **PSCS_281**

Organization: Ministry of Agriculture and Farmers Welfare

Category: Software

Problem Description: Farmers frequently encounter significant barriers in accessing local and broader markets, resulting in lower income and financial insecurity.

· Farmers face difficulties accessing markets which drives down their income.

· Reliance on middlemen reduces profit margins and market reach.

· Direct access between farmers and buyers is limited.

Content

- Problem Statement
- Objectives
- Background and Related work for title Selection
- Analysis of Problem Statement
- Innovation or Novel Contributions
- Git-hub Link
- Timeline of the Project
- References

Problem Statement

- Problem :-

  Farmers face limited market access due to poor transport, infrastructure, and reliance on middlemen, which reduces their income.

  Lack of timely market price information and transparency causes farmers to get unfair prices.

  Many farmers have low digital literacy, poor internet access, and limited capacity to use technology platforms.

- Solution :-

  A mobile app connecting farmers directly to consumers and retailers to cut out middlemen.

  Real-time market price updates, secure digital payments, and transaction management features.

  User-friendly design with local language and voice support to include farmers with low literacy.

- Impact :-

  Mobile applications increase farmers' income by providing direct access to markets, reducing reliance on intermediaries, and improving price transparency.

Problem Objectives

- Eliminate intermediaries to enable fair pricing.
- Empower farmers with direct market communication.
- Facilitate seamless digital transactions.
- Support multi-language and voice assistance.
- Provide real-time market and weather insights.

Literature Review & Related Work

- Market challenges for farmers.
- Role of mobile/digital platforms in direct access.
- AI-driven pricing and logistics solutions.
- Secure payment integrations enhancing trust.

Proposed Solution and Features

- User-friendly interface for product listing and management.
- Real-time price negotiation.
- Secure digital payments (UPI, wallets, bank transfers).
- AI-driven price recommendations and market insights.
- Integrated logistics and delivery tracking.
- Multilingual and speech-enabled accessibility.
- Rating and review system for trust and transparency.

System Architecture

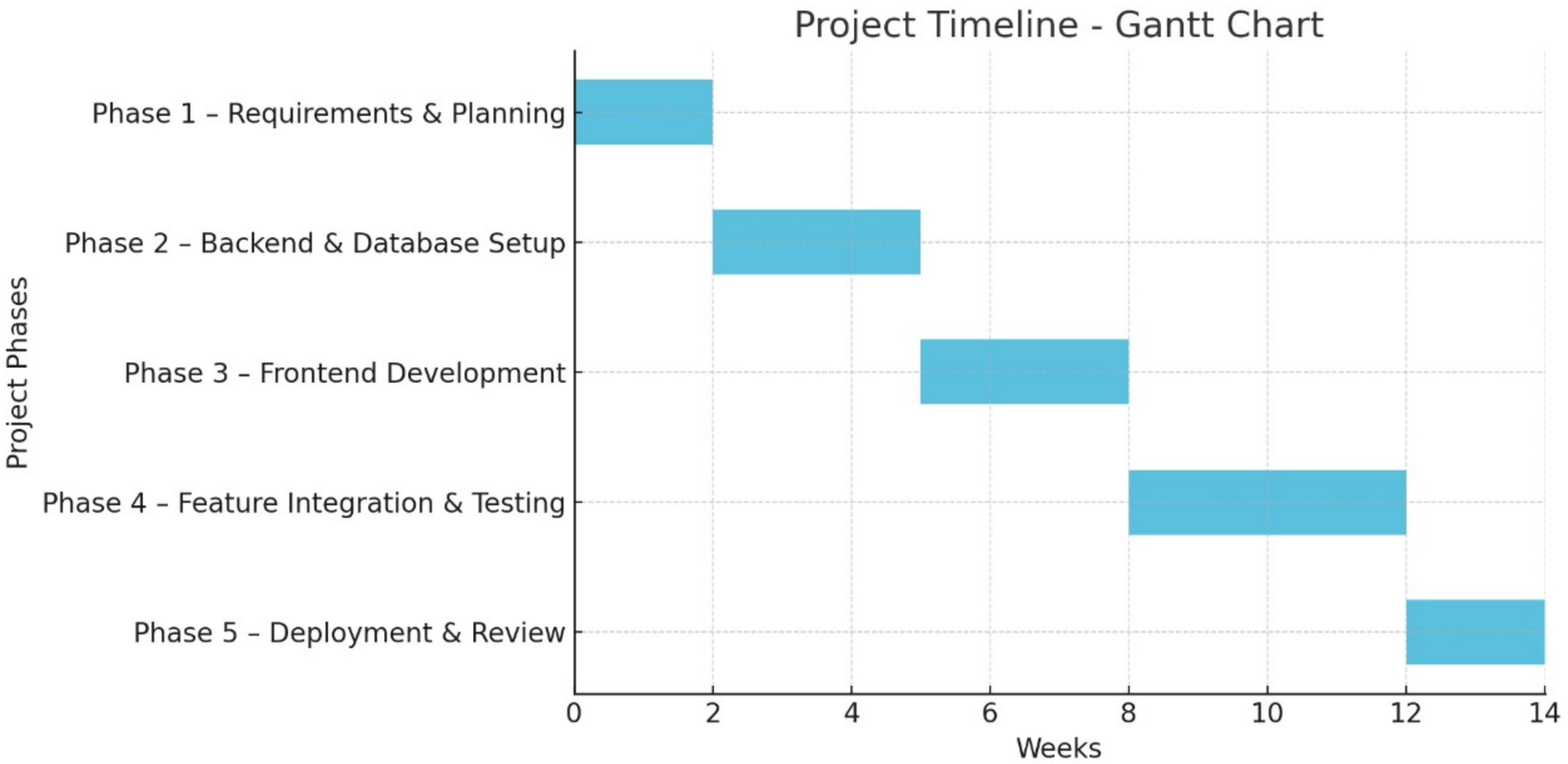
- Frontend tech (Android, Kotlin).
- Backend (Firebase, Node.js, AI/ML modules).
- Payment gateways and blockchain for secure transactions.
- Logistics and delivery APIs for optimized routing.

Challenges and Future Enhancements

- Internet connectivity and digital literacy issues.
- Offline modes, expanded logistic networks.
- AI-powered crop demand prediction.
- Value-added services and sustainability focus.

Github Link

https://github.com/Shalini0828/Mobile-App-for-Direct-Market-Access-for-Farmers


Project Timeline - Gantt Chart
Phase 1 – Requirements & Planning
Phase 2 – Backend & Database Setup
Phase 3 – Frontend Development
Phase 4 – Feature Integration & Testing
Phase 5 – Deployment & Review
Project Phases
0
2
4
6
8
10
12
14
Weeks

References (IEEE Paper format)

1. A. Kumar, S. Sharma, and R. Singh, "Mobile Application for Direct Market Access of Farmers," *International Journal of Emerging Technology and Advanced Engineering*, vol. 7, no. 3, pp. 45-52, Mar. 2024.
2. P. Gupta and M. R. Chauhan, "Reducing Middlemen: Mobile Apps for Direct Farmer-to-Consumer Sales," *IEEE Transactions on Agriculture Informatics*, vol. 9, no. 1, pp. 75-82, Jan. 2025.
3. S. R. Patil and A. N. Patil, "Development of an E-Marketplace Mobile Application for Farmers," in *Proceedings of the 2024 IEEE International Conference on Agricultural Technology*, Pune, India, Feb. 2024, pp. 120-125.
4. N. Verma, K. Singh, and D. K. Yadav, "A Mobile-based Smart Market Access System for Farmers," *IEEE Access*, vol. 12, pp. 56023-56030, 2024.
5. M. S. Ali and F. Ahmed, "Enhancing Farmers' Income through Mobile Applications: A Review," *IEEE Sensors Journal*, vol. 23, no. 5, pp. 2120-2128, Mar. 2025.

References (IEEE Paper format)

6. R. Desai and S. Patel, "Mobile Technology for Direct Agricultural Marketing: Challenges and Solutions," *IEEE Consumer Electronics Magazine*, vol. 15, no. 2, pp. 48-55, Apr. 2024.

7. T. Kaur and J. Singh, "Integrated Mobile Platform for Farmer Market Linkage and Price Negotiation," in *2025 IEEE Symposium on Smart Agriculture*, Bengaluru, India, Jan. 2025, pp. 30-35.

8. R. Nair and S. S. Roy, "Blockchain and Mobile Apps for Secure Direct Farmer-to-Buyer Transactions," *IEEE Transactions on Industrial Informatics*, vol. 21, no. 1, pp. 975-982, Jan. 2025.

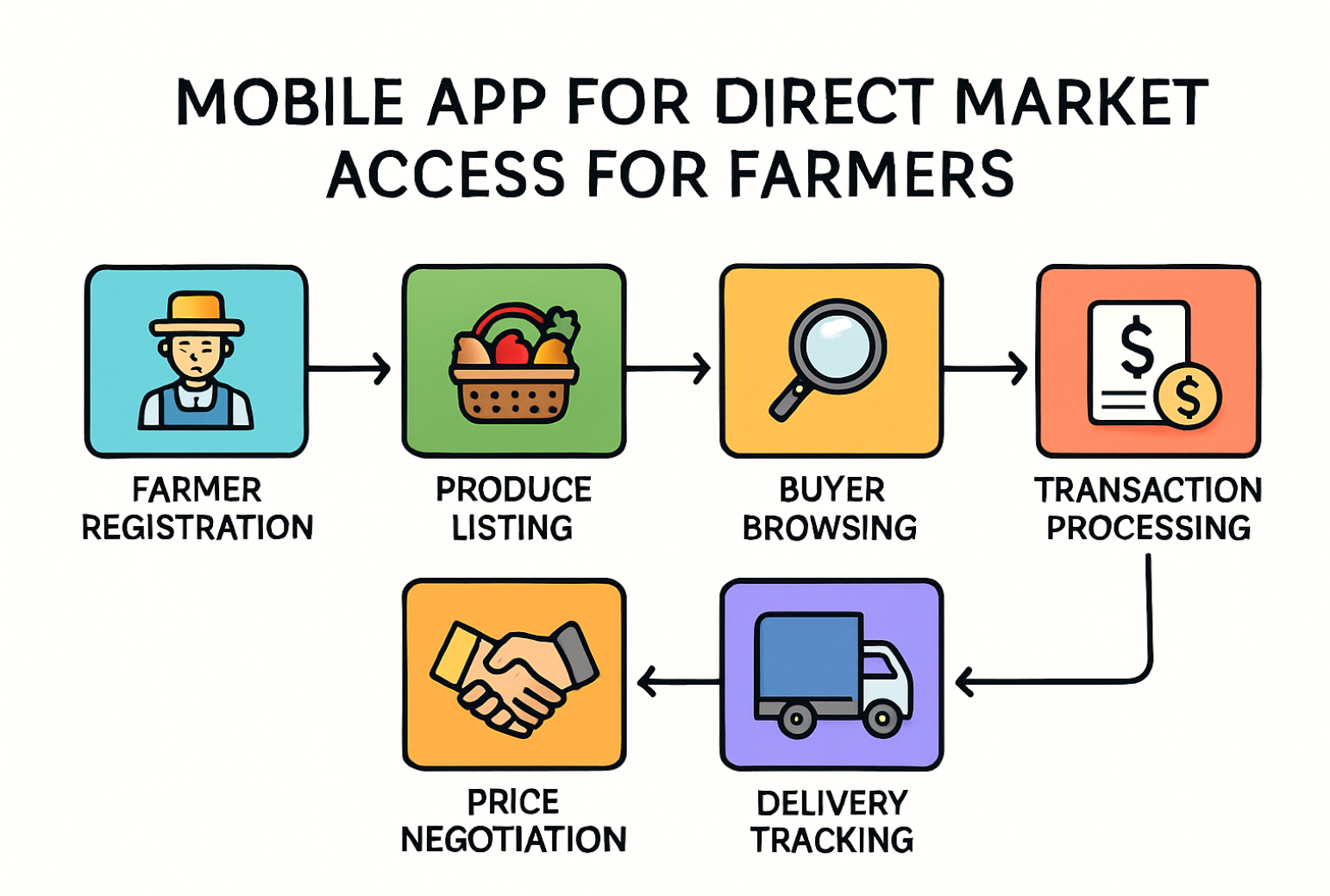
9. A. J. Fernandez and L. M. Cruz, "A Voice-Enabled Mobile App to Facilitate Market Access for Rural Farmers," in *Proc. IEEE Global Humanitarian Technology Conference*, San Jose, CA, Oct. 2024, pp. 112-119.

10. B. P. Singh, A. Kumar, and M. Tiwari, "Multi-Lingual Mobile Application for Farmer-Consumer Direct Market Access," *IEEE Transactions on Mobile Computing*, vol. 19, no. 11, pp. 4321-4329, Nov. 2024.

Conclusion

- Mobile app significantly bridges market access gaps.
- Empowers farmers economically.
- Promotes sustainable and direct agricultural trade.

Work flow diagram:




Thank
You!