Case Study: SmartFarm – Empowering Farmers through Technology

Team Name: _____

Intra-University Mobile App Development Competition 2025
Organized by: Department of Computer Science, COMSATS University Islamabad, Wah Campus

Background

Agriculture remains one of the most important sectors in Pakistan, yet farmers continue to face several critical challenges such as unpredictable weather conditions, limited access to modern farming knowledge, lack of timely market price information, and difficulty in connecting directly with buyers and suppliers.

The use of mobile technology can play a significant role in addressing these issues by providing farmers with instant access to information, expert advice, and digital tools that can improve productivity and profitability.

This competition invites students to design and develop a **mobile application** that empowers farmers and promotes smart and sustainable agricultural practices through innovative technological solutions.

Competition Objective

Participants are required to **develop a mobile application prototype** that provides practical solutions to common agricultural challenges faced by farmers. The application should be easy to use, visually appealing, and impactful in improving farming efficiency.

Possible Features

Teams are free to choose any relevant idea, but their applications may include one or more of the following features:

- Weather forecasting and climate updates for crop planning
- Crop management guidance on sowing, irrigation, and pest control
- Real-time market rates and nearby market listings
- Buy and sell platform for agricultural goods and equipment
- Information on government schemes, subsidies, and loans
- Community forum for farmers to share experiences and solutions

Development Platforms

Participants may develop their app using any one of the following technologies:

- **Flutter (Dart)**
- **React Native (JavaScript/TypeScript)**
- **Native Android (Java or Kotlin)**

Evaluation Criteria

Extra marks will be awarded to students with additional features.

Criteria	Description	Marks	Obtained
Innovation and Impact	Relevance and originality of the idea	20	
User Experience (UI/UX)	Simplicity, design, and ease of use	20	
Functionality and Performance	Working features and stability	30	
Scalability and Feasibility	Practicality and potential for real-world adoption	15	
Presentation and Demo	Clarity, confidence, and communication of the idea	15	

Team Composition

- Maximum of **three members per team**
- Individual participation is also allowed
- Open to students from all departments

Awards and Recognition

Top 3 winning teams will represent **COMSATS University Islamabad, Wah Campus** in the **Visio Spark 2025** competition at **CUI Islamabad Campus**.