Project Plan

**1. Title Page**

Project Name: Digital Garden: Transforming Agriculture Through Technology

Team Members:  
• Sarmila Magar  
• Bardan Poudel  
• Bikram Balal  
• Ramanjot Singh  
• Aakarsh Kundukulam

Class Code: (Add your class code here)

**2. Description of Project Goal**

To develop a digital platform that empowers small-scale farmers and home gardeners with AI-powered tools and smart agricultural insights. The aim is to improve crop yield, optimize resource use, and promote sustainable farming practices through technology.

**3. Roles and Responsibilities**

Bardan Poudel – Project Manager

Lead team coordination

Manage project timeline

Communicate with stakeholders

Oversee resource allocation

Bikram Balal – Software Developer

Build platform architecture

Implement core features

Ensure system security

Maintain technical documentation

Sarmila Magar – Data Scientist

Develop AI algorithms

Create prediction models

Implement image analysis tools

Train recommendation systems

Ramanjot Singh – UI/UX Designer

Design intuitive interfaces

Develop user-friendly journeys

Conduct usability testing

Ensure accessible design

Aakarsh Kundukulam – Agricultural Expert

Provide domain knowledge

Validate AI recommendations

Ensure practical relevance

Develop educational content for users

**4. Project Elements and Sub-elements**

Core Elements:

User Registration & Profile Setup

AI Plant Disease Detection

Fertilizer & Water Recommendations

Weather-Smart Planting Assistant

Advanced Features:

Market Analysis Dashboard  
 - Real-time price tracking  
 - Demand forecasting

AI Crop Assistant (Chatbot)  
 - 24/7 support for growers

Agricultural Job Board  
 - Local skill matching and work opportunities

**5. Timeline with Milestones**

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| --- | --- | --- |
| Phase | Timeframe | Milestones |
| Research & Planning | Week 1-2 | Market research, tech assessment |
| Design & Prototyping | Week 3-4 | UI/UX designs, wireframes, prototypes |
| Development | Week 5-6 | Core development, AI integration |
| Testing & Launch | Week 7 | Beta testing, feedback, public release |

**6. Risks**

Technical Challenges: Integrating AI models and real-time weather data might be complex.

User Adoption: Some users may lack technical skills or internet access.

Data Accuracy: Crop suggestions rely on accurate sensor and user input.

Time Constraints: Coordinating development and testing within the timeline.

**7. Communication and Work Plan**

Weekly Team Meetings: Status updates, issue tracking, task allocation.

Collaboration Tools: GitHub (code repo), Trello (task management), Slack/WhatsApp (team chat).

Documentation: Shared Google Drive for documents, reports, and logs.

Stakeholder Updates: Monthly progress reviews with mentors or instructors.