A PROJECT REPORT ON
"KhetMitra"

Submitted By,

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PROF. KHUSHBU PATEL

In partial fulfillment of the requirements of the

3ⁿᵈ Semester of Master of Computer Applications

Subject Name : Minor Project (MC03094171)

SARDAR VALLABHAI PATEL INSTITUTE OF

TECHNOLOGY, VASAD

October 2025

Milestone-2

Declaration

we hereby declare that the work presented in this milestone report titled **"KhetMitra"** submitted, as part of the partial fulfillment of the requirements for the project is an original contribution and has been carried out by me/us under the guidance of **PROF. KHUSHBU PATEL** .

we further declare that the work is original and has not been copied from any other source. The data and results presented are genuine and have not been fabricated or manipulated. This submission represents the current milestone of the ongoing project work and is being submitted on time as per the academic/project schedule.

we understand that any violation of academic integrity may lead to disciplinary action as per institutional policies.

Submitted by:

Student's Name	Enrolment Number	Student's Signature
Jeet Nathwani	245300694017	
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Submitted To:

Project Guide's Name	Signature
PROF. KHUSHBU PATEL	

Milestone -2

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5. Agile Documentation

5.1 Agile Project Charter

<table>
<tr><td colspan="5" align="center">Project Charter</td></tr>
<tr><td>Project Title</td><td colspan="2">KhetMitra</td><td>Internal guide</td><td>PROF. KHUSHBU PATEL</td></tr>
<tr><td>Project Start Date</td><td>30/06/2025</td><td>Project End Date</td><td>11/10/2025</td><td></td></tr>
<tr><td colspan="5" align="center">Business Model</td></tr>
<tr><td colspan="3" align="center">Project Scope</td><td colspan="2" align="center">Deliverables</td></tr>
<tr><td colspan="3">KhetMitra is a digital platform designed to connect landowners who are unable to cultivate their land with the company's agricultural management team. The platform facilitates the cultivation, management, and sale of produce, ensuring that the profits are shared among the landowner, agent, and company in a transparent and efficient way.</td><td colspan="2">Web Application
Admin dashboard
Create Proposal
Accept or Reject Proposal</td></tr>
<tr><td colspan="3" align="center">Risk and Issues</td><td colspan="2" align="center">Assumption/Dependencies</td></tr>
<tr><td colspan="3">Server downtime or hosting failure may affect accessibility.
Landowners may provide incomplete or inaccurate land details.
Lack of coordination between landowners, agents, and company staff.
Government policy changes regarding land usage.</td><td colspan="2">The project depends on stable internet connectivity and functioning APIs (Email).
Timely availability of data from landowners and agents is assumed.
It's assumed that all users will have basic digital literacy to use the platform.</td></tr>
</table>

Milestone Schedule			
Sr no.	**Milestone**	**Target-Submission Date**	**Actual Date**
1	Requirement Analysis	13/07/2025	20/07/2025
2	Designing component (All Daigrames)	21/07/2025	15/08/2025
3	Implementation and development	16/08/2025	05/10/2025
4	Final System Integration & QA Pass	06/10/2025	10/10/25
5	Final Project Submission	11/10/2025	11/10/25
Project Team			
Team Member 1	Jeet Nathwani-245300694017		
Team Member 2	Milan Parmar-245300694034		
Team Member 3	Hitesh solanki -245300694060		

5.2 Agile Roadmap / Schedule

1st QUARTER (Requirement Analysis)	2nd QUARTER (Designing component (All Daigrames))
(13/07/2025 – 20/07/2025) • Gather and document functional and non-functional requirements. • Identify stakeholders, prepare use cases, and finalize project scope.	**(14/07/2025 – 15/08/2025)** • Create system architecture, ER diagrams, DFDs, UML diagrams, and wireframes. • Finalize database and interface designs for all user modules.
3rd QUARTER (Implementation and Development)	**4th QUARTER (Final System Integration & QA Pass)**
(16/08/2025 – 05/10/2025) • Develop frontend and backend modules using Agile sprints. • Integrate APIs, database connections, and core business logic.	**(11/10/2025 – 11/10/2025)** • Integrate all modules into a unified system. • Conduct quality assurance testing, bug fixing, and final deployment
FINAL QUARTER	
(13/10/2025 – 17/10/2025) Finalizing all documentation, preparing the final presentation, and system submission.	

5.3 Agile Project Plan

Sprint No.	Task Name	Responsible	Start Date	End Date	Days	Status
Sprint 1	Project Setup & Environment Configuration	Jeet	30-06-2025	01-07-2025	2	Complete
Sprint 1	Gather User Stories & Finalize Scope	Jeet	02-07-2025	03-07-2025	2	Complete
Sprint 1	Implement User Registration & Login (Auth)	Milan	04-07-2025	06-07-2025	3	Complete
Sprint 1	Database Schema Design (MongoDB)	Hitesh	07-07-2025	09-07-2025	3	Complete
Sprint 2	Design UI and logo	Hitesh	10-07-2025	13-07-2025	4	Complete
Sprint 2	Sign Up page	Milan	10-07-2025	13-07-2025	4	Complete
Sprint 2	Google Auth	Jeet	14-07-2025	16-07-2025	2	Complete
Sprint 2	Develop Land Save API (POST /lands)	Jeet	14-07-2025	16-07-2025	3	Complete
Sprint 2	Develop Proposal APIs & Integration	Milan	17-07-2025	20-07-2025	4	Complete
Sprint 3	Crop Recommendation Module (POC)	Jeet	28-07-2025	01-08-2025	5	Complete
Sprint 4	Analytics & Reports	Hitesh	02-08-2025	12-08-2025	11	Complete
Sprint 4	Admin Panel & Controls	Jeet	13-08-2025	18-08-2025	6	Complete
Sprint 5	Final Integration & Unit Testing	All	19-08-2025	28-08-2025	10	Complete
Sprint 5	Comprehensive QA & Bug Fixing	All	29-08-2025	07-09-2025	10	Complete
Sprint 5	Finalize Project Documentation	All	08-09-2025	11-10-2025	34	Complete
Sprint 6	Final Presentation Preparation & Submission	All	11-10-2025	11-10-2025	1	Complete

5.4 Agile User Story (Minimum 3 Tasks)

The user stories define the system's functional requirements from the end-user's perspective. These stories are prioritized to guide the development teams on what value they need to deliver in each sprint.

Sr. No.	Module Name / User Story Title	Description
User Story 1	Landowner Registration & Proposal Submission	As a landowner, I want to register and submit a land proposal, so that the manager can review and approve or reject it.
User Story 2	Proposal Review & Approval	As a manager, I want to view land proposals submitted by landowners, so that I can accept or reject them efficiently.
User Story 3	WhatsApp Communication – Landowner	As a landowner, I want to see a WhatsApp contact button once my proposal is accepted, so that I can directly communicate with the manager.
User Story 4	WhatsApp Communication – Manager	As a manager, I want to see a WhatsApp contact button for approved landowners, so that I can coordinate cultivation and related tasks easily.
User Story 5	User Authentication & Access	Users (landowners/managers) must securely log in using their credentials to access the system.

5.5 Agile Release Plan

This Agile Release Plan outlines the goals, features, sprint schedule, and risk mitigation strategies for the KhetMitra application, ensuring alignment with project deadlines and success criteria.

Release 7	Release Name / Module	Features Included	Target Date
Release 1	Landowner Registration & Login	User registration, login, JWT authentication	15-10-2025
Release 2	Land Proposal Submission	Submit land proposals, save to DB	22-10-2025
Release 3	Proposal Review & Approval	Manager dashboard, accept/reject proposals	29-10-2025
Release 4	WhatsApp Communication	WhatsApp button for landowner & manager	05-11-2025
Release 5	Notifications & Status Updates	Proposal status notifications	12-11-2025
Release 6	System Integration	End-to-end workflow testing	19-11-2025
Release 7	Final Documentation	User manual, API docs, Agile reports	26-11-2025

5.6 Sprint Backlog Table

Sprint 5	User Story / Module	Task	Assigned To	Priority	Status	Sprint #
Sprint 1	Landowner Registration & Login	Design registration form and API	Frontend & Backend	High	To Do	Sprint 1
Sprint 1	Landowner Registration & Login	Implement JWT authentication	Backend	High	In Progress	Sprint 1
Sprint 2	Land Proposal Submission	Create land proposal form & API	Frontend & Backend	High	To Do	Sprint 2
Sprint 2	Land Proposal Submission	Validate proposal data and save to DB	Backend	High	To Do	Sprint 2
Sprint 3	Proposal Review & Approval	Manager dashboard to view proposals	Frontend	High	To Do	Sprint 3
Sprint 3	Proposal Review & Approval	Implement accept/reject functionality	Backend	High	To Do	Sprint 3
Sprint 3	WhatsApp Communication – Landowner	Display WhatsApp button for approved proposals	Frontend	Medium	To Do	Sprint 3
Sprint 3	WhatsApp Communication – Manager	Display WhatsApp button for approved landowners	Frontend	Medium	To Do	Sprint 3
Sprint 4	Notifications	Implement notifications for proposal status	Backend	Medium	To Do	Sprint 4
Sprint 4	System Integration	Test end-to-end workflow	QA Team	High	To Do	Sprint 4
Sprint 5	Documentation	Prepare user manual, API docs, and Agile reports	PM / Tech Writer	Medium	To Do	Sprint 5

5.8 Agile Test Plan

Test 9	Date	Action	Expected Result
1	18-08-2025	Test landowner registration API	New landowner account is created securely.
2	21-08-2025	Test manager registration & login API	Manager account created and can log in successfully.
3	25-08-2025	Landowner submits land proposal (POST /proposals)	Proposal is saved and visible to the manager for review.
4	30-08-2025	Manager reviews and approves/rejects proposal	Proposal status updates correctly; accepted proposals show WhatsApp button for landowner.
5	06-09-2025	Landowner checks WhatsApp button visibility	WhatsApp button is displayed only if proposal is accepted.
6	10-09-2025	Manager checks WhatsApp button for approved landowners	WhatsApp button is displayed for all approved landowners.
7	18-09-2025	Verify notifications for proposal status	Landowner receives status notification (accepted/rejected).
8	05-10-2025	System Integration Testing	All modules connect and function end-to-end.
9	11-10-2025	Final Documentation Review	Documentation complete and consistent with system features.

5.8 Earned-value and burn charts

Earned Value Calculation:

Earned Value (EV) represents the value of the work completed at a specific point in time. It is calculated based on the **planned value (PV)** and the **actual value (AV)** of the work Completed. The formula to calculate the EV is:

EV=(Actual Hours/Planned Hours)×10

Sprint	Planned Hours (PV)	Actual Hours (AV)	EV (Calculated)
Sprint 1	36	36	10.0
Sprint 2	27	12	4.44
Sprint 3	14	0	0.0
Sprint 4	21	0	0.0
Sprint 5	24	0	0.0

Using the formula for each sprint:

- **For Sprint 1:**
  EV = 36 / 36 * 10 = 10.00

- **For Sprint 2:**
  EV = 12 / 35 * 10 = 3.43

- **For Sprint 3:**
  EV = 0 / 14 * 10 = 0.00

- **For Sprint 4:**
  EV = 0 / 21 * 10 = 0.00

- **For Sprint 5:**
  EV = 0 / 24 * 10 = 0.00

  So, we have calculated the **Earned Value** for each sprint.

- **Burn Chart:**

A **Burn Chart** is a graphical representation of the cumulative progress of work completed over time. It shows how much work was **planned** and how much was **earned** for each sprint.

Sprint Number	Cumulative Planned Hours	Cumulative Actual/Earned Hours
Sprint 1	32	32
Sprint 2	59 (32 + 27)	44 (32 + 12)
Sprint 3	73 (59 + 14)	44 (44 + 0)
Sprint 4	94 (73 + 21)	44 (44 + 0)
Sprint 5	118 (94 + 24)	44 (44 + 0)

Now, we plot these points on a graph:

- **X-axis:** Sprint Number (1, 2, 3, 4, 5, 6)
- **Y-axis:** Cumulative Earned Hours

Connecting these points on the graph will give us a visual representation of the **Cumulative progress of earned hours** over the sprints.

Agile Burn Chart of Think sense Process Miner