

Transforming Agriculture with Technology

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Content

Abstract
Introduction
Literature Review
Problem Statement
Project Scope
Use case diagram
Prototype
Technology Stack
Project Future Plan
Summary & Future Plans
References



Abstract

The basic idea behind our project is to give an online web based application and a web site to the farmers so that he can get the storage space faster without much wasting of time, money and efforts. Our system will also give a notification to the farmer regarding the expiry of stored goods in particular warehouse according to their lifespan. Our system will be a multilingual for understanding of farmers.



Introduction

It is a web based application that will allow the farmers

- To store their crops in a warehouse.
- Book space for their goods
- Take decision about which warehouse selection using past data analysis and geographical location.



Literature Review

1)Igor Oliveira, Renato L. F. Cunha, Bruno Silva, Marco A. S. Netto, “*A Scalable Machine Learning System for Pre-Season Agriculture Yield Forecast*”

Proposed system:

They have implemented a Deep Neural Network (DNN) as their machine learning model to predict Pre-Season Agriculture Yield Forecast by using algorithms.

2)Pamidi Srinivasulu, R Venkat, M. Sarath Babu, K Rajesh, “*Cloud Service Oriented Architecture (CSOA) for Agriculture through Internet of Things (IoT) and Big Data*”

Proposed System: The proposed work provides number of services that includes crop management, marketing, finance, e-commerce, web services via cloud, using various technologies like Big Data,Internet of Things (IoT), Cloud Computing, etc.

Literature Review

3)Shreya S. Bhanose, Kalyani A. Bogawar, Aarti G. Dhotre, Bhagyashree R. Gaidhani,
“Crop and Yield Prediction Model”

Proposed System:

They have proposed a system that uses data mining algorithm like k-Means, k- Means++ and traditional k-Means for crop and disease prediction as well as predict crop water requirement.

4)S. Pudumala, E. Ramanujam, R. Harine Rajashreeñ, C.Kavyañ, T. Kiruthikañ, J. Nishañ, “ *Crop Recommendation System for Precision Agriculture* ”

Proposed System:

They have use research data of soil characteristics, soil types, crop yield data collection and suggests the farmers the right crop based on their site-specific parameters leading to increase in productivity.

Literature Review

5) Prof. D.S. Zingade, Omkar Buchade, Nilesh Mehta, Shubham Ghodekar, Chandan Mehta, “ *Crop Prediction System using Machine Learning* ”.

Proposed System:

The proposed project will integrate the data obtained from repository, weather department and by applying machine learning algorithm: Multiple Linear Regression, a prediction of most suitable crops according to current environmental conditions is made.

Problem Statement

Problem in Existing System:

- Offline Warehouse System.
- Lot of Food get Wasted.
- Wait in long queue for booking Warehouse space.
- Waste of Time, money as well as efforts.
- Language Barrier.

Proposed Solution:

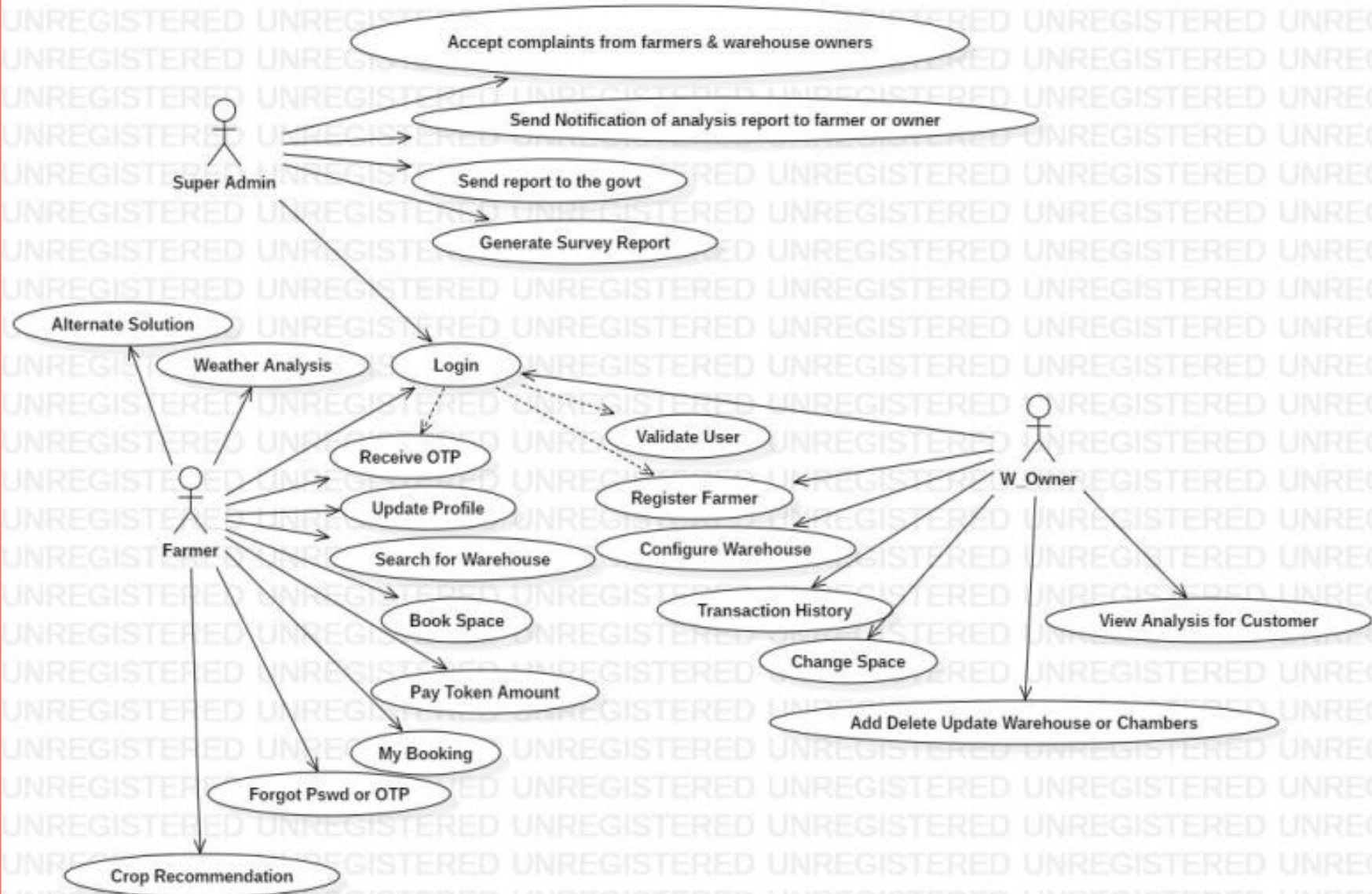
- Online Warehouse Booking System.
- Auto Notification before expiry of grains.
- Weather Analysis for crop prediction
- Multilingual Feature
- Suggestion for alternative storage of grains via informational videos.
- An Online forum for problem solving



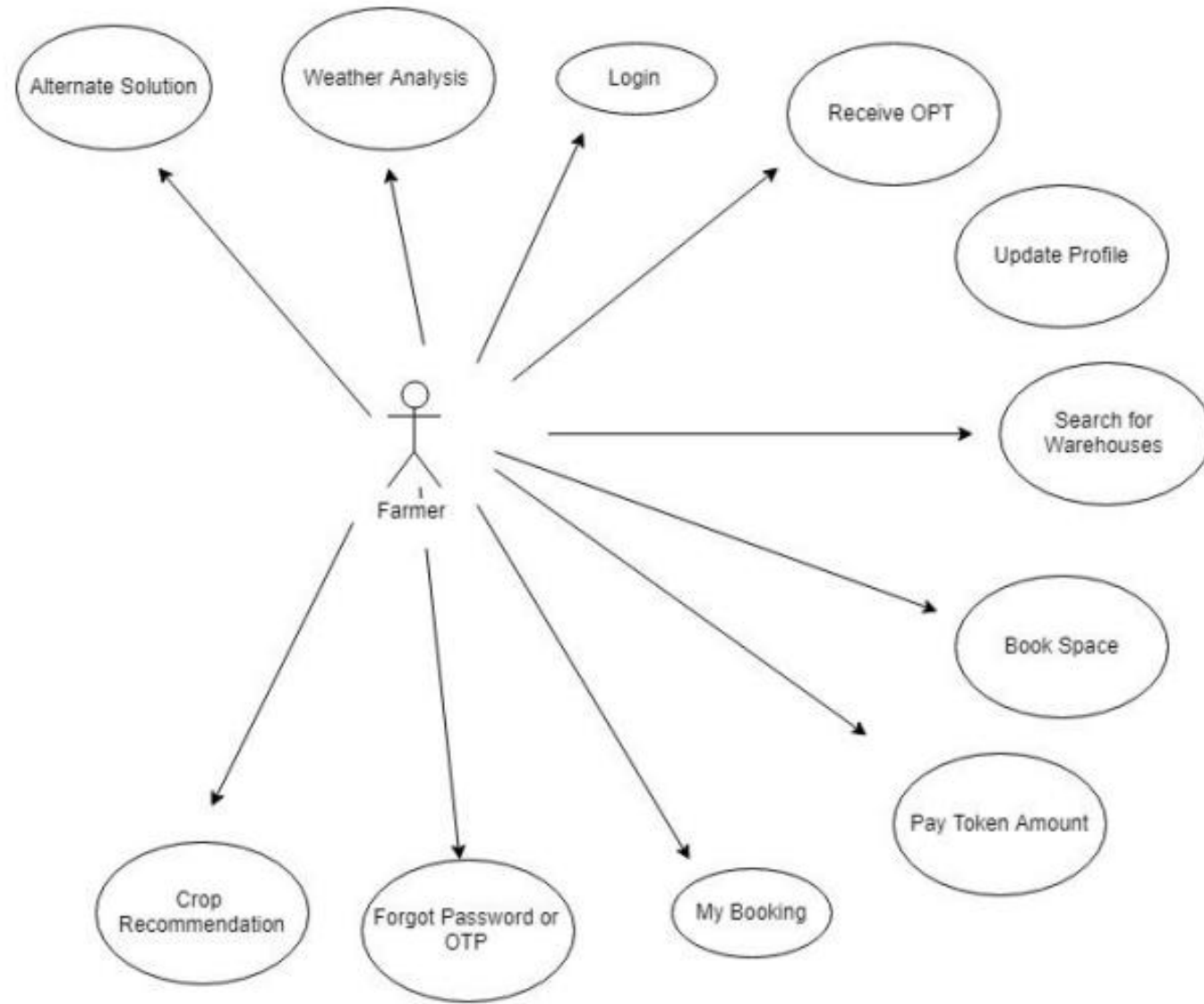
Project Scope

- To give platform for Warehouse booking online
- To provide an application that is multilingual
- To help the farmers with Weather Analysis
- To provide some alternative solution videos for storage
- To provide Forum for discussion

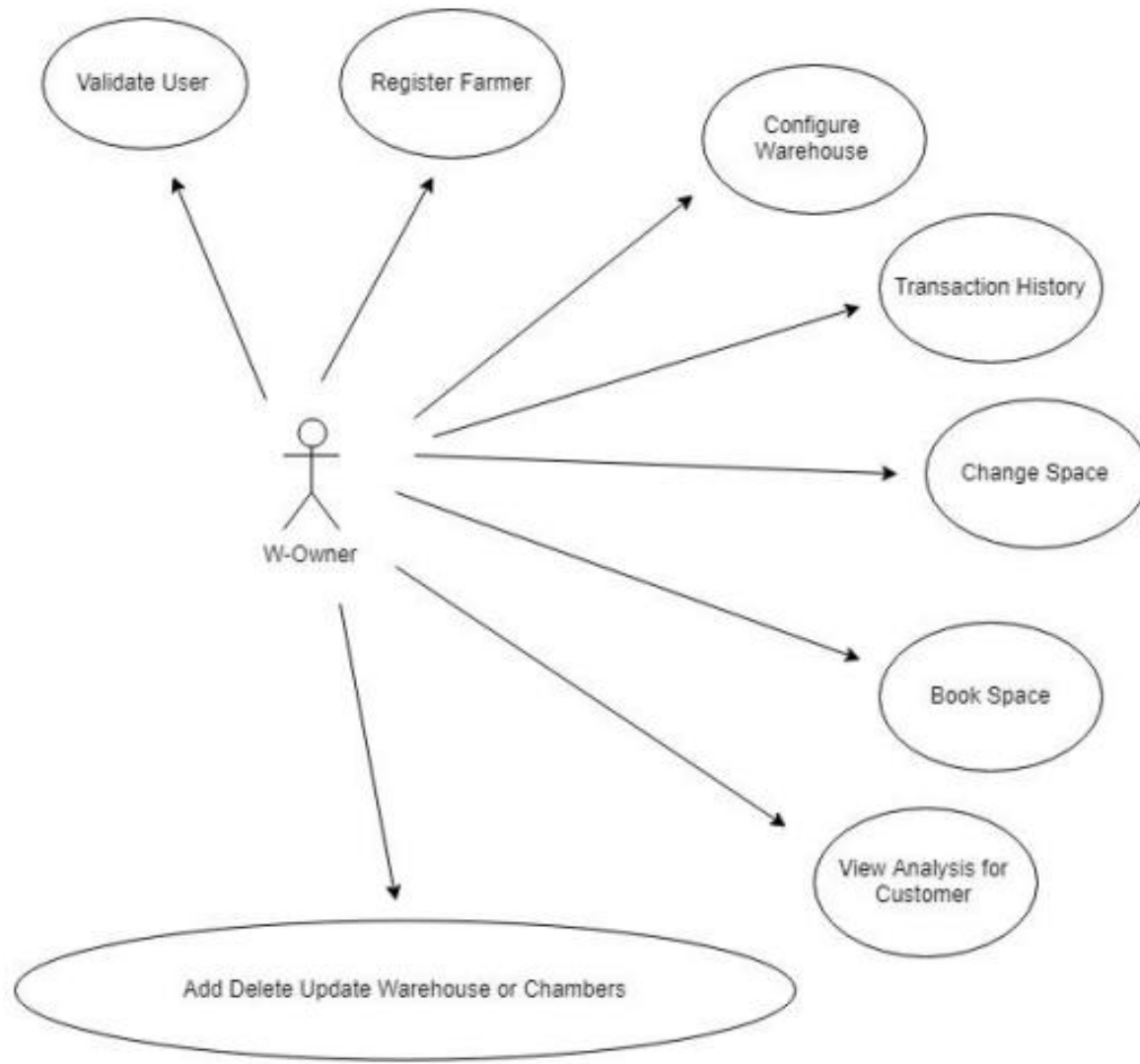
Use case



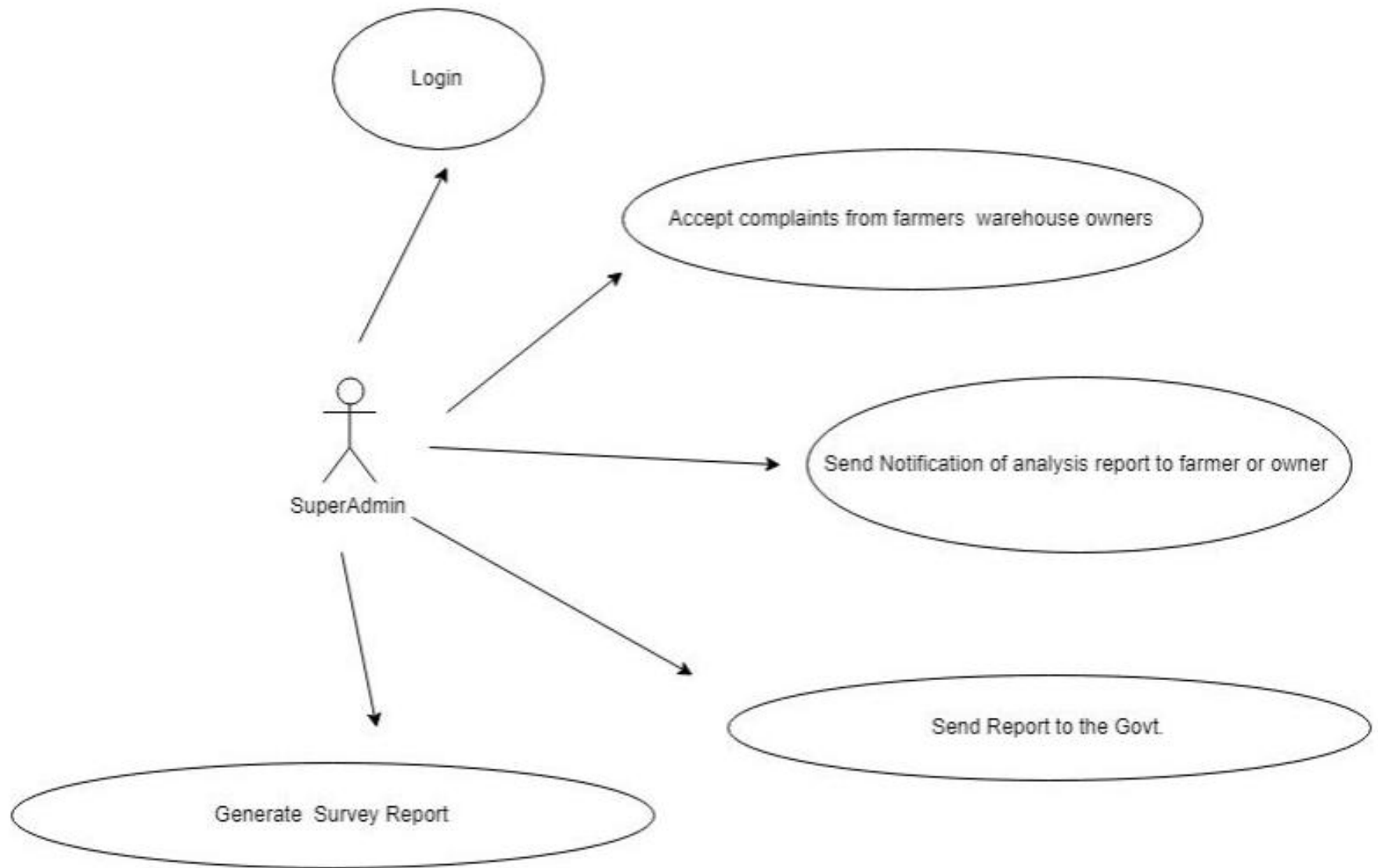
Use case - Farmer



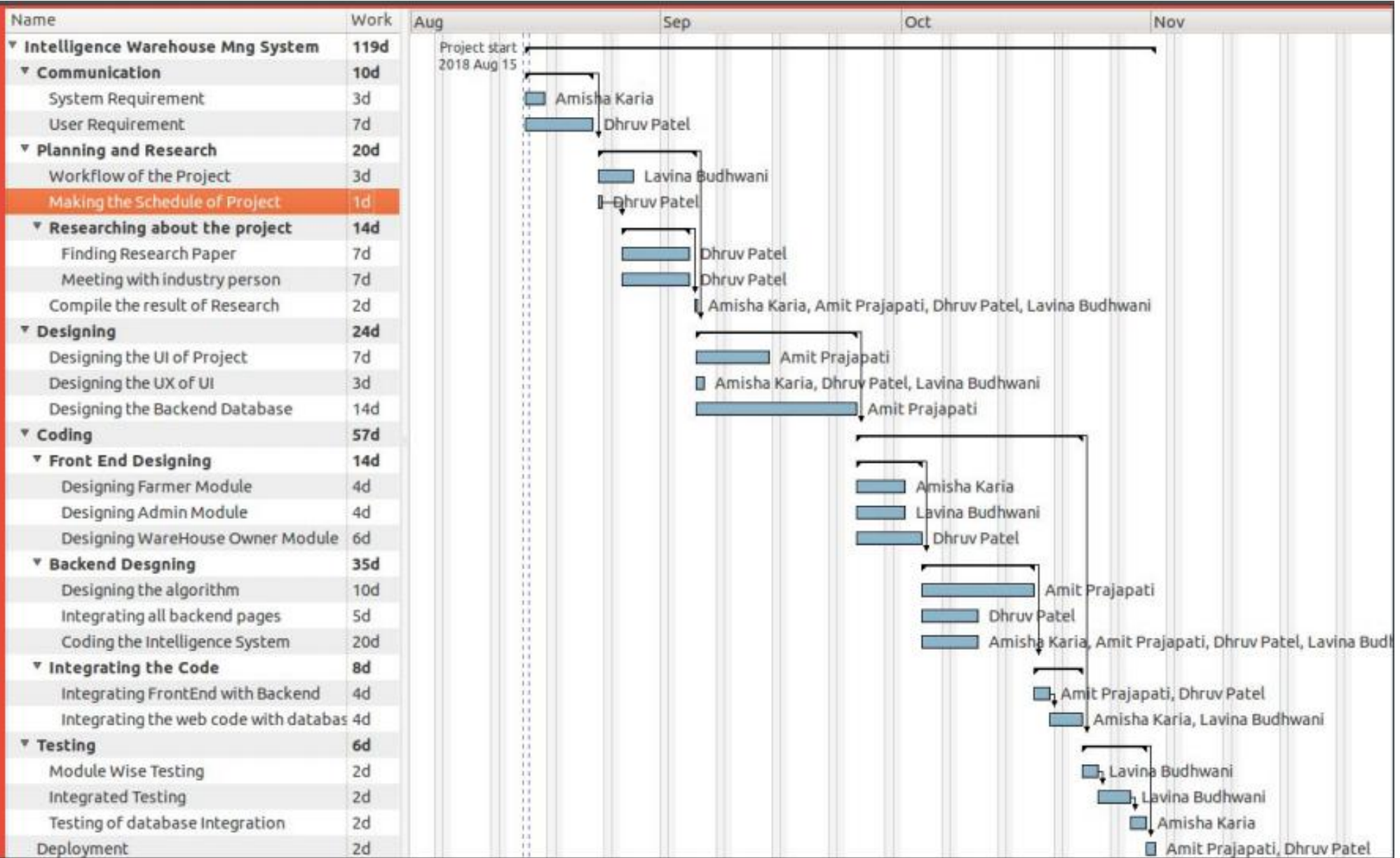
Use case - W-Owner



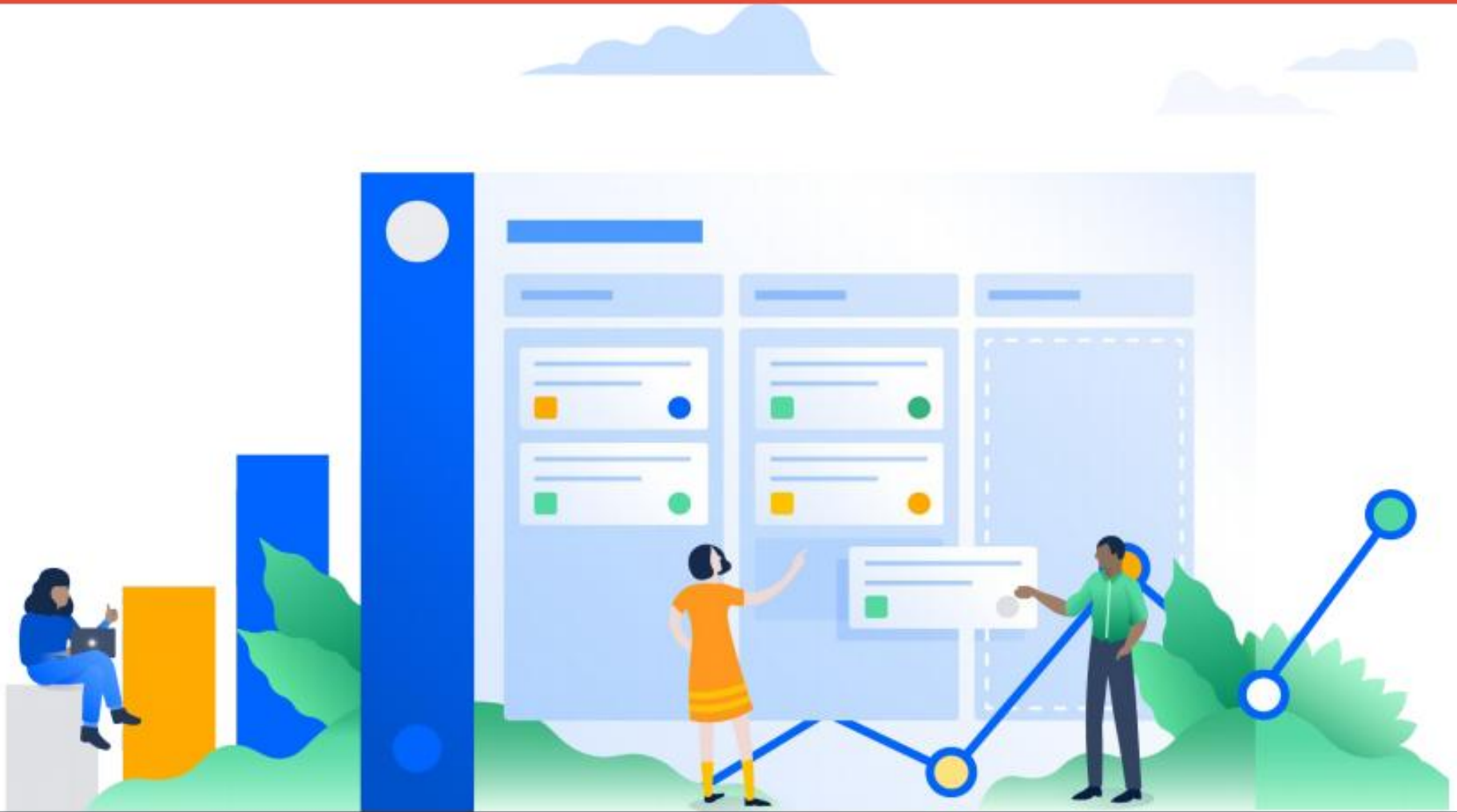
Use case - SuperAdmin



Project Future Plan



Prototype



Technology Stack

Front-end: Html, Css, JS libraries

Back-end: PhP, Python Framework-Django, Flask

Database: MySql, MongoDB

Web Server: Apache & Nginx



Summary

The phases that we have achieved till yet are as follows-

- Research
- SRS Document preparation
- Analysis of Technology Stack
- Prototyping



Future Plans

Coding

Implementation

Testing



References

- [1]Igor Oliveira, Renato L. F. Cunha, Bruno Silva, Marco A. S. Netto, “*A Scalable Machine Learning System for Pre-Season Agriculture Yield Forecast*”,arXiv:1806.09244v1
- [2]Pamidi Srinivasulu, R Venkat,M. Sarath Babu,K Rajesh,“*Cloud Service Oriented Architecture (CSOA) for Agriculture through Internet of Things (IoT) and Big Data*”,2017 International Conference on Electrical, Instrumentation and Communication Engineering (ICEICE2017).
- [3]Shreya S. Bhanose, Kalyani A. Bogawar, Aarti G. Dhotre,Bhagyashree R. Gaidhani,“*Crop and Yield Prediction Model*”,International Journal Of Advance Scientific Research And Engineering Trends,Volume 1 ||Issue 1 ||April 2016||ISSN (Online) 2456-0774.

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[4]S.Pudumala, E.Ramanujam,R.Harine Rajashreeñ, C.Kavyañ, T.Kiruthikañ, J.Nishañ,“*Crop Recommendation System for Precision Agriculture*”,2016 IEEE Eighth International Conference on Advanced Computing (ICoAC).

[5]Prof. D.S. Zingade,Omkar Buchade,Nilesh Mehta,Shubham Ghodekar,Chandan Mehta,” *Crop Recommendation System for Precision Agriculture*”,International Journal of Advance Engineering and Research Development Special Issue on Recent Trends in Data Engineering, Volume 4, Special Issue 5, Dec.-2017.

[6]Link of the drive of paper referred
https://drive.google.com/open?id=10a_-A85xa9Q93tmb40xGigKSSLf2H2lj



Thank You