

# Kisan Vikas App

**CP301 Development Engineering Project,**

**Department of Computer Science &  
Engineering, IIT Ropar**

**GROUP 9**

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# Acknowledgment:

We would like to thank:

Farmers of village Ramgarh who gave us invaluable data about the problems they are facing in farming and day-to-day lives.

Our professors Dr. Puneet Goyal and Dr. Devraj P. for guiding us and for giving us this opportunity to build this app for our farming community.

Also our TA Mr. Akash Saini for his support.

# Introduction

Rural life is quite different compared to urban life and so are their needs. This project is aimed to ease rural people's daily lives.

In this project we have developed an app with various functionalities which are convenient for rural people to use in their day to day life.

Through the app, rural people can easily make expenses record, can make a conscious choice of which crop to grow, can be warned about unfavourable weather conditions and can easily buy/sell commodities as well as services.

# Services Provided by the app

1. **Season Record Management.**
2. **Connecting service providers and consumers ( Farming Products).**
3. **Latest information on major crops of India.**
4. **Weather forecast and notify unfavourable weather conditions based on farmers' current location.**
5. **Farming related videos.**

# Why we are working on it?

- ❖ There is lack of awareness and education among farmers who own small land and due to that they are not able to make its efficient use and have to face various problems.
- ❖ Small farmers are struggling a lot during this period, they have a lot of debt on their head, and many farmers committing suicides were also reported in different parts of the country.
- ❖ Our aim is to make villagers daily life easy and reduce their gap of awareness by providing an appropriate solution to their big problems by helping them efficiently utilise the resources available to them, to boost their overall profit.

# Motivation behind choosing the project

As we know that India is a country where majority of population earns by farming. But many farmers lack the correct knowledge about the right crop to grow according to the weather condition, kind of soil , area of plantation, quantity of seeds per unit area, when and how much fertilizer to add,etc.

When we visited a village during one of our academic course, we interacted with farmers. During that interaction we came to know following points.

- They are using old traditional method of farming.
- They are not utilizing their small fields properly.

- They are using chemical fertilizers instead of natural fertilizers.
- They are not keeping reliable records of their income and expenditure.
- They just predict about weather which many time goes wrong.
- They are not growing different type of crops on their field that might give better profits.
- They sell their crops to shopkeeper(third party), because of that they do not get proper amount of their crops.

From that visit we got idea to build this app.

# Analysis

The present day farmers are reluctant in using technology in their daily life, put aside they will even try to access technological solutions provided in different sites or apps. We intend to provide them all at one place.

Data collection: According to our field trip visits, we learned that majority of villager are willing to use such e-based solutions if they are easily accessible to them. Our project fulfills their condition.



# Analysis (contd...)

Stakeholders: Our projects' main aim are the farmers, but general villagers will also find use in the app.

Apps' abstract features: The app will have clear instructions for each service provided. It can be used anytime from anywhere. The app will be self sustainable as we will code all functionalities of our predefined aim. Although updates (if needed) can be made.

Impact: This will open the path for the farmers to use scientifically approved tech in farming. This is turn will open opportunities for the government to create and implement better farmer related policies.



# THE FUNCTIONALITIES



# Season Record Management

## ❖ Problem Description:

Farmers do not have lasting, reliable records of their income and expenditure, they do not analyse the profit they have made from a particular crop/season, they do not analyze that where they have spent more money which can be reduced.

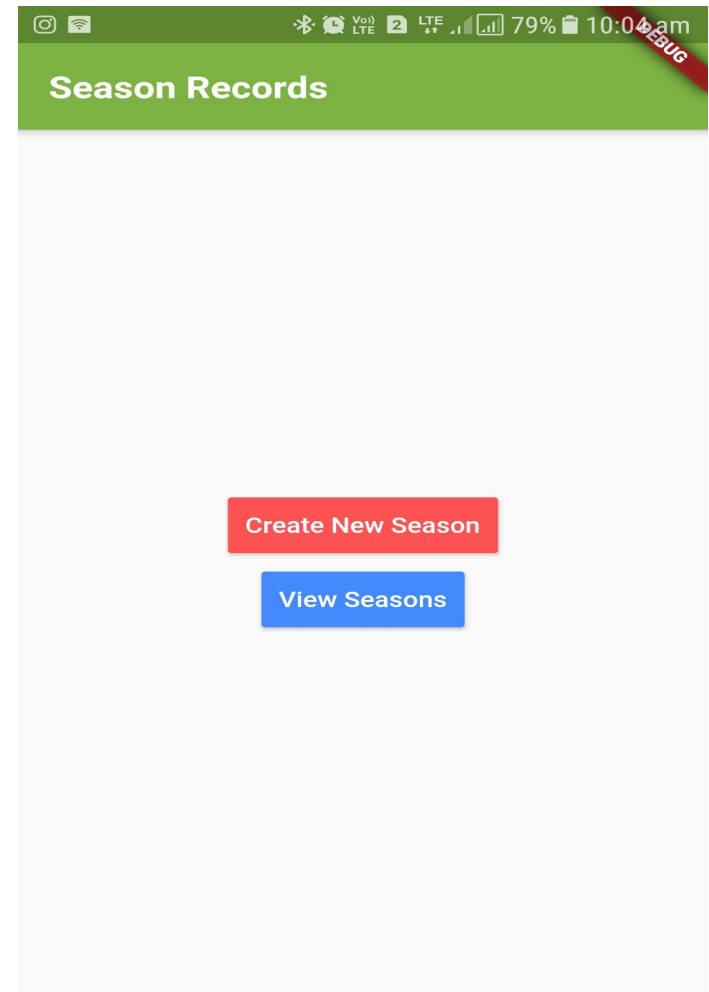
- ❖ We would like to thanks farmers of village Ramgadh who gave the problem idea. During interaction with them, they told us about the problem they are facing in keeping the record of income and expenditure.

# **Features of the Season Record Management**

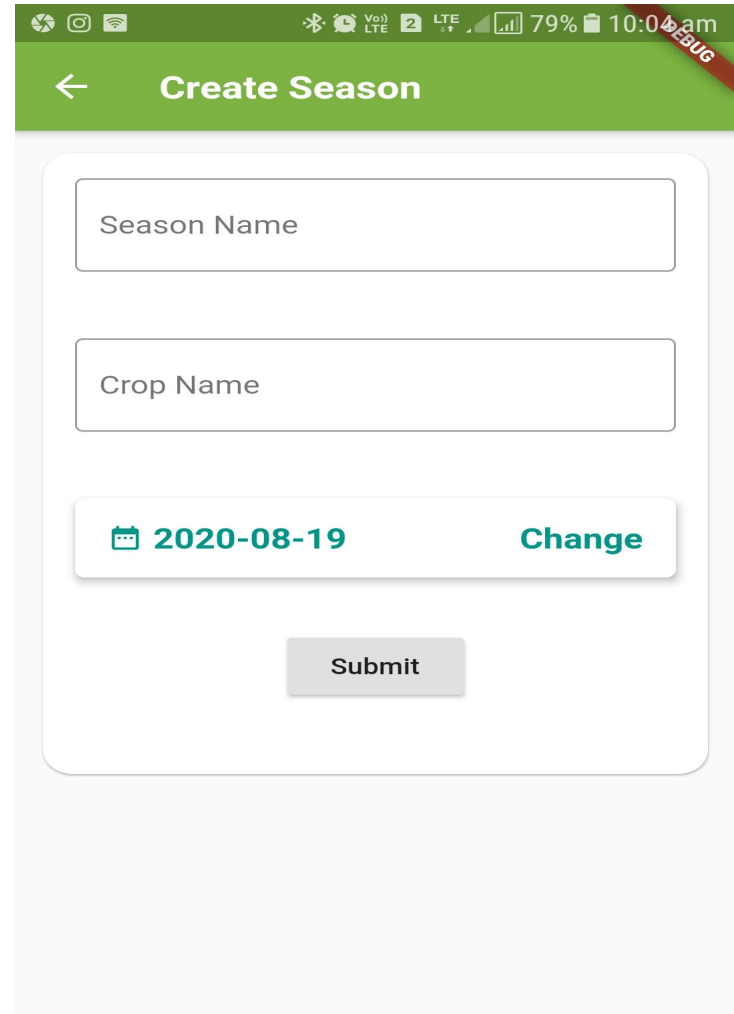
- Users will record their expenditure done/income earned for every crop grown in a season.
- They will get to know money earned from a particular crop for any season, anytime they want.
- They can get knowledge from records about which crop gives more profit in a particular seasons.
- They can also have knowledge of where they have spent unnecessary money.

# **How to use Season Record Management functionality**

- On first page there are two buttons, one for creating new seasons and other for viewing previous seasons.



- After clicking on the create new seasons, user will name the season and crop for which they are going to maintain expenditure-income record, they have to give the starting date of the seasons.
- After that user can enter their daily expenditure and income.



The screenshot shows a mobile application interface with a green header bar. The header contains a back arrow icon on the left and the text "Create Season" in the center. On the far right of the header, there is a red "DEBUG" banner. Below the header, the main content area is white and contains three input fields: "Season Name", "Crop Name", and a date field. The date field displays "2020-08-19" with a calendar icon on the left and a "Change" link on the right. At the bottom of the form is a grey "Submit" button. The top of the screen shows a status bar with various icons and the time "10:00 am".

Season Name

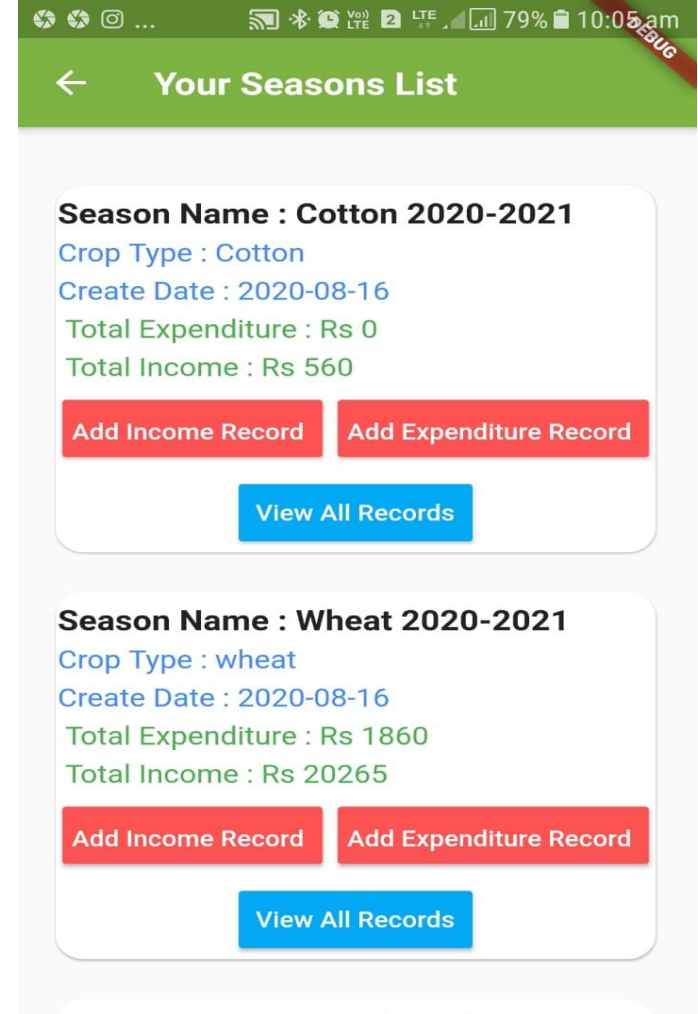
Crop Name

2020-08-19 Change

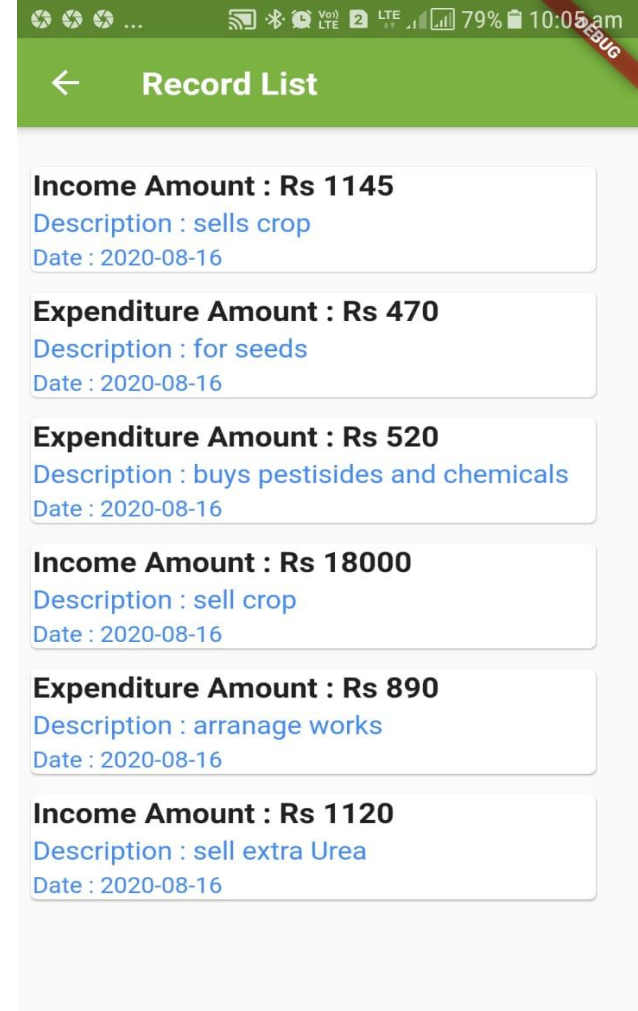
Submit



- In view seasons there is a list of seasons previously created by user.
- User will be able to add expenditure - income for a particular season by clicking on red buttons.



- User will be able to see record of expenditure-income of a particular season by clicking on blue button.
- User can see expenditure-income made on any date for any seasons created by them.



# Farming products

## ❖ Problem Description

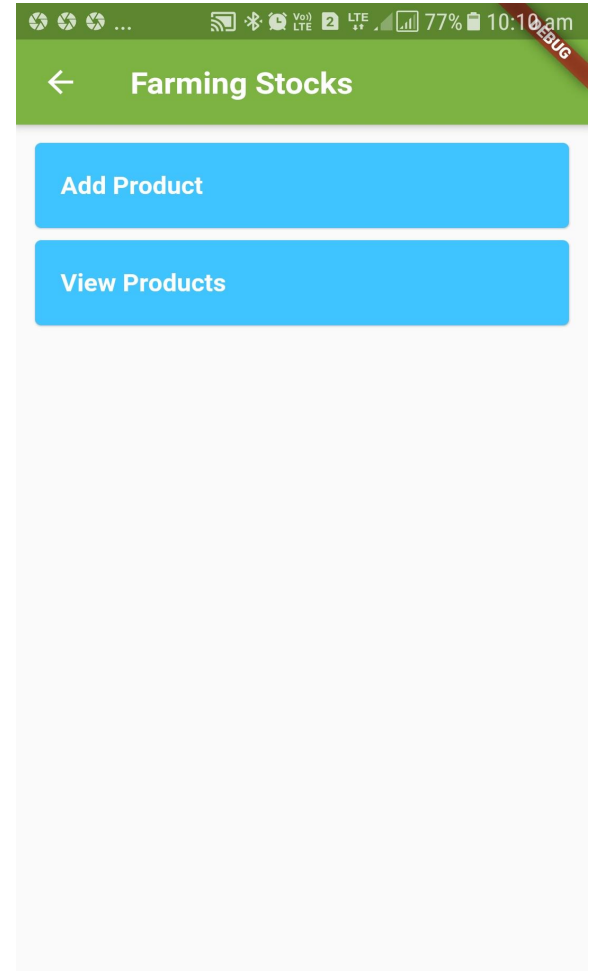
- Farmers have to go to market to buy products, sometimes they give extra money for some product.
- They have to go to market to sell their crops, which are mostly far from their homes.
- Via this functionality, they can get/sell products and services from their respective house.

# **Features of Farming Products**

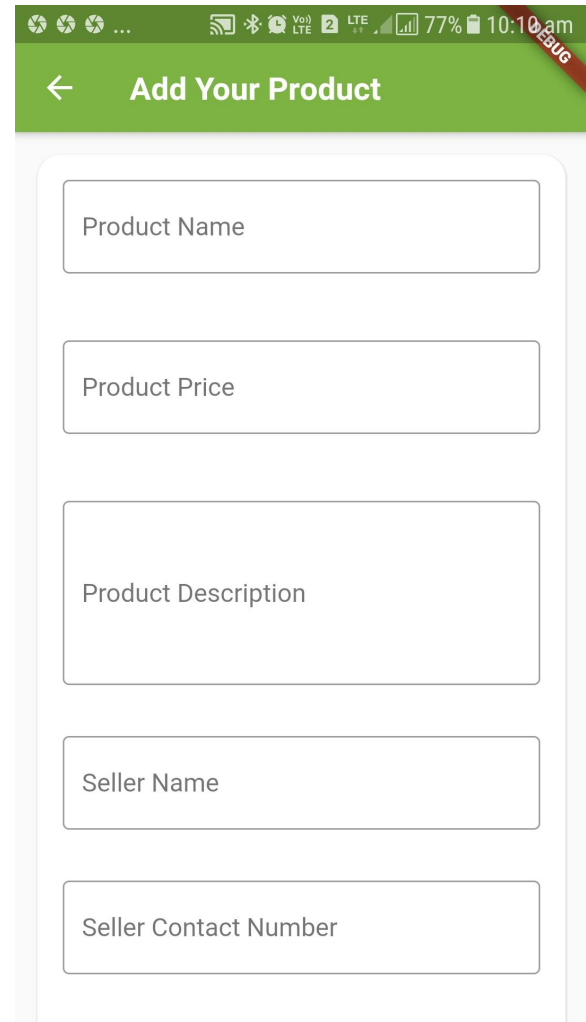
- Every user will be able to buy and sell products.
- Buyer can get product at minimum price then can get.
- Seller will be benefited because they do not have to own a shop for selling a product.
- This will help farmers in selling their crop at a a good price, they do not need to go to shops to sell their products, they can directly sell to people by which they do not have to give commission to third person.

# **How to use Farming Products functionality**

- On first page there will be two buttons, one for selling product and one for buying product.
- For selling product user to click on "Add Product" button, and for buying product user have to click on "view Product" button.



- After clicking on “Add Product” for selling product, User have to enter Product Name, price,Description and their name and contact number.After that their product will be added for sale.



The screenshot shows a mobile application interface with a green header bar. The header bar contains a back arrow icon on the left and the text "Add Your Product" in white. Below the header, there is a white rounded rectangle containing five input fields stacked vertically. The first field is labeled "Product Name", the second "Product Price", the third "Product Description", the fourth "Seller Name", and the fifth "Seller Contact Number". The status bar at the top of the screen shows various icons including signal strength, VoLTE, LTE, battery level at 77%, and the time 10:10 am. A red diagonal banner with the word "BUG" is visible in the top right corner of the app screen.

Product Name

Product Price

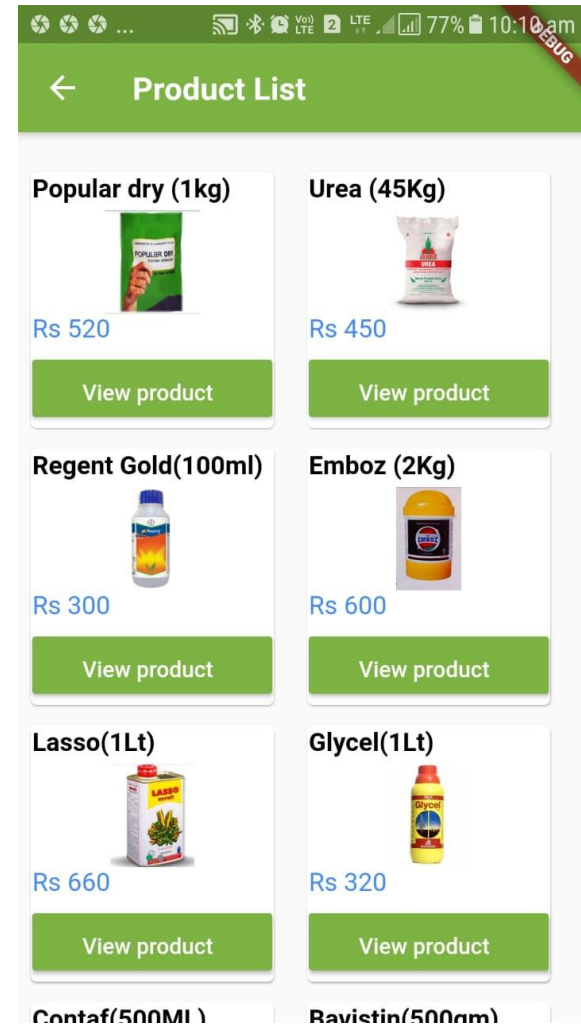
Product Description

Seller Name

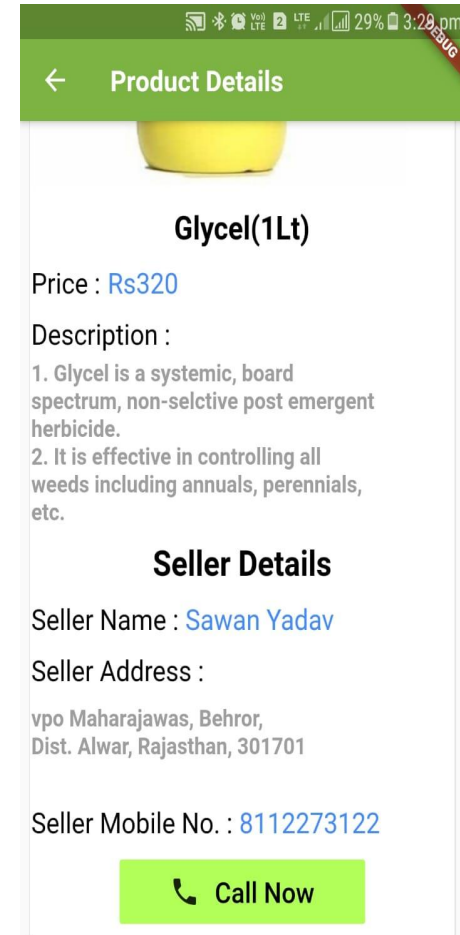
Seller Contact Number



- After clicking on “View Product” button , they will directed to view products available for sale.
- In this page user will able to see name and price of products.



- After clicking on view product for any particular product they will be able to see full details about that product, like price, name, description and seller details and contact number. There will also be a button to call seller.
- If user have to buy the product then they will connect with the seller.



# Crop Query Management

## **Problem Description:**

- Most of farmers are growing the crop what others are growing without knowing that which crop will be suitable for their land, because of that they do not get best out of their field.
- They are not utilizing their field properly, they are not fully utilizing modern techniques of farming.

## ❖ **Problem Motivation**

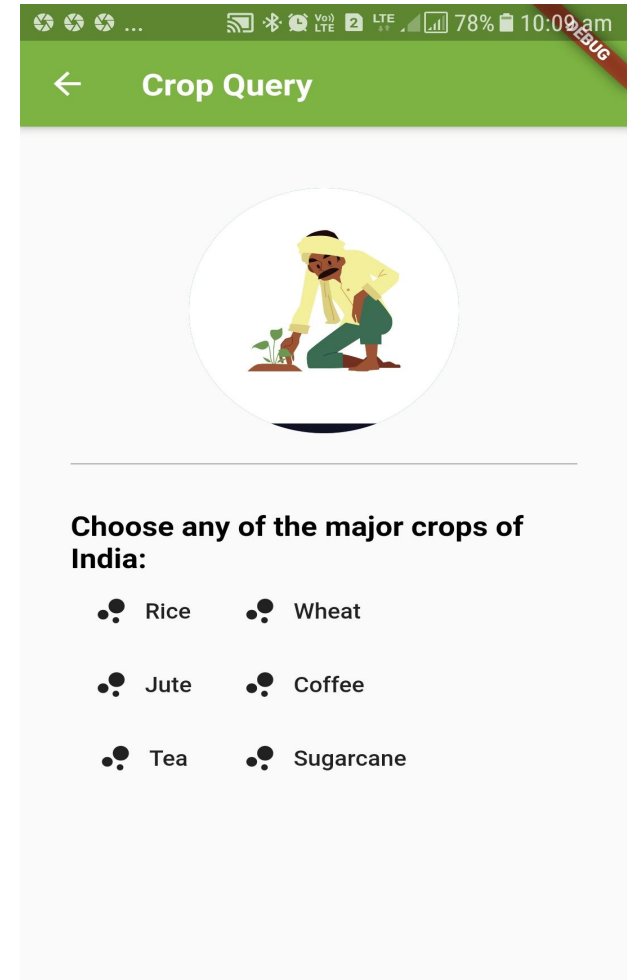
- During our interaction with farmers of village Ramgadh, we came to know that they are using traditional and old method of farming, they are not utilizing the modern techniques of farming.
- From that interaction with farmers, we got this idea to build a query system where we can prepare the details of modern techniques that can be used, better seeds quality, better fertilizers, and better procedure that can give more yield to farmers.

# **Features of Crop query Management**

- We collected details of major crops that are grown in india.
- For every crop, we have created a document that contain there requirements that in which regions they are mainly grown, the procedure to plant the crop, etc.
- We read many blogs of experts in that crop and have compiled the details which can give more yield to farmers.
- We have also written the names of high quality seeds, fertilizers and their amount that should be used, and when to use.

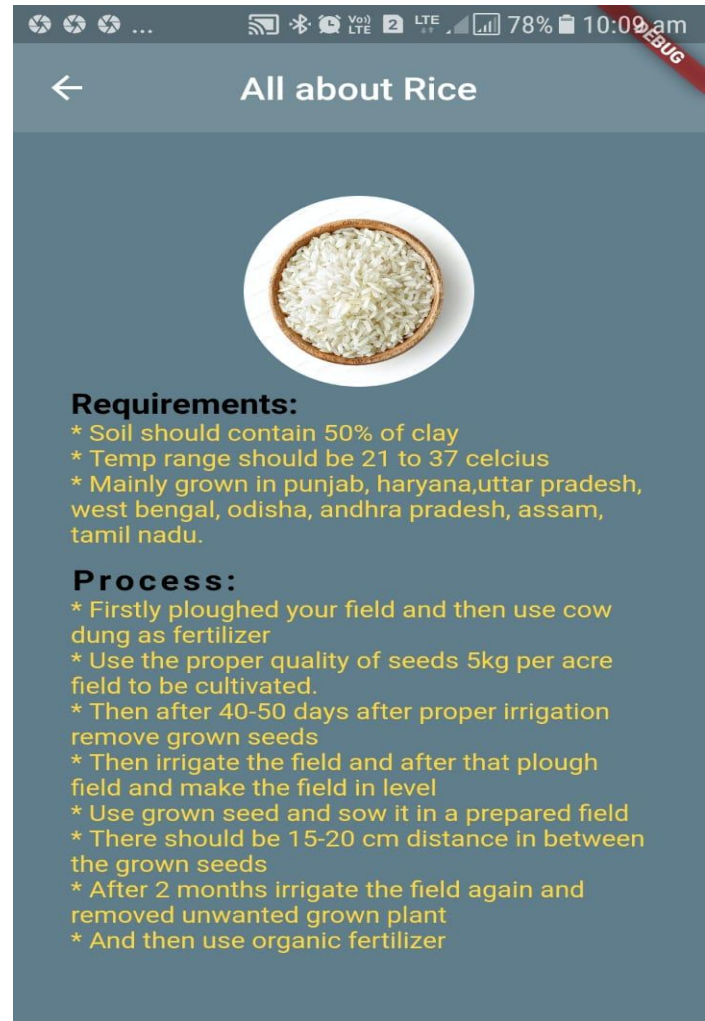
# How to use Crop Query functionality

- On first page of crop query , user will find name of major crops grown in india.
- By clicking on any crop's name they will be directed to page which contains information of that crop.

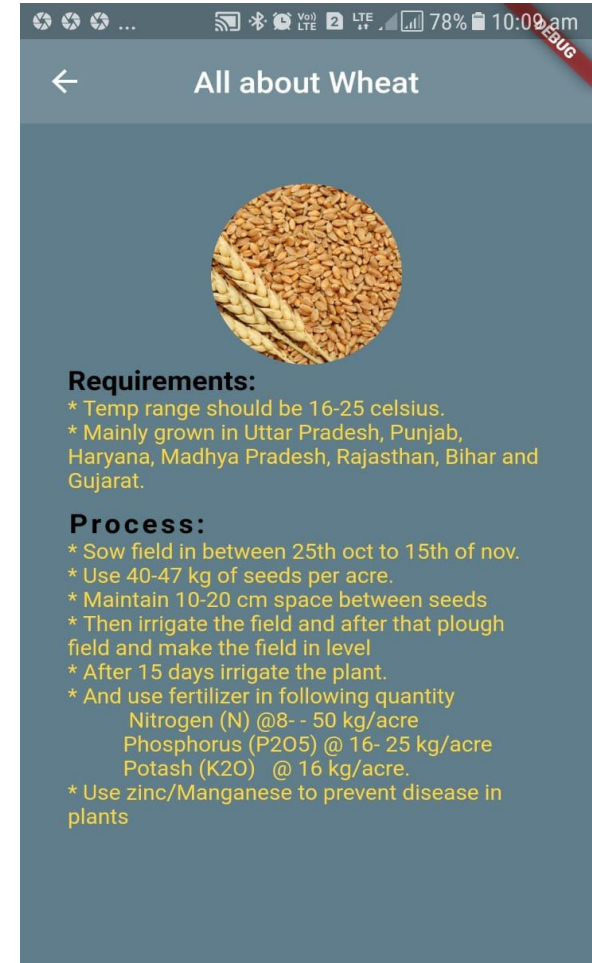




- For example if user clicks on 'Rice' then they will be directed to a page that contains information about rice.
- They will find the requirements of rice crop and the process to plant.
- In requirement we have written soil quality needed, temperature needed, favorable growth regions and other requirements.



- In process we have given every detail for growing that crop like how much seeds and which fertilizers should be used for that particular crop.
- We have given details about, when and how for much time, the field should be irrigated.



# Weather Forecast

## ❖ Problem Description:

Sometimes there are unwanted natural problem like heavy rainfall, storm which can adversely affect the crop growth.

## ❖ Problem Motivation:

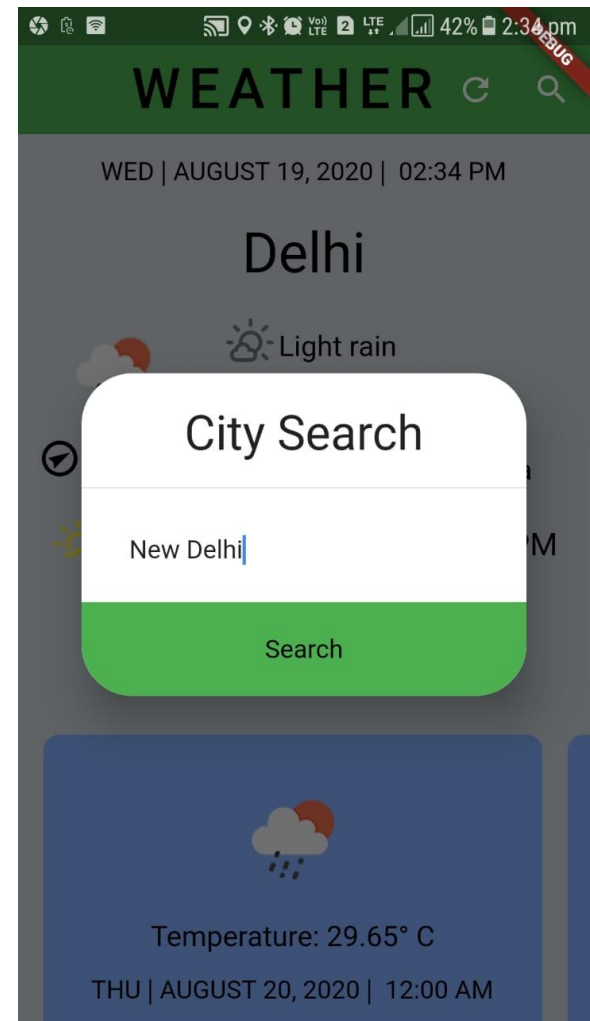
When we were researching about the crops, then we got to know that some crops need special care, like for some of them the field should not have excess water in it , and planting crop with heavy rain predicted in next two days will not be a good idea.We got idea to add for this functionality because of this commonly occurring scenario.

# **Features of Weather Forecast**

- There will be forecast for upcoming 5 days for any region.
- User can check forecast of their region and can prepare safety measures to protect crops.
- Users will be also notified about some future heavy rainfall and storm.

# **How to use Weather Forecast functionality**

- The app will detect users' current location and show current weather and 5-day forecast on the app.
- User can view weather conditions for any city he want, by using the search box.



# Farming Videos

## ❖ Problem Description:

Because of lack of knowledge farmers are not using best ways of farming, example: they are not using natural fertilizers instead of that they are using toxic chemical fertilizers.

## ❖ Problem Motivation:

We would like to thank Dr.Puneet Sir for giving us this idea to add educational farming videos.

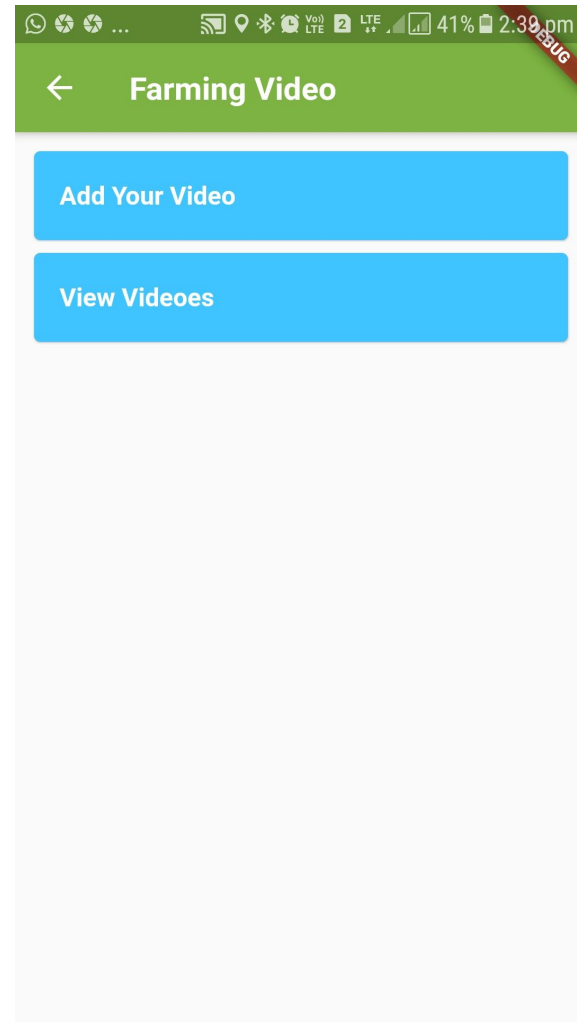


# **Features of Farming Videos**

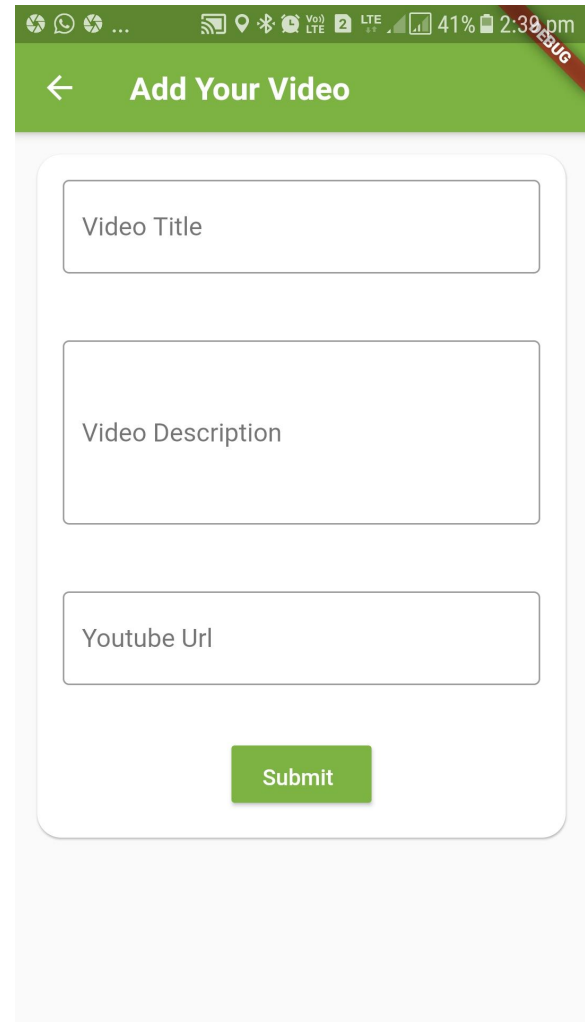
- There will be some videos that have been already added by us.
- User can also add videos from their side.
- Videos uploaded by us are mainly on following topics.
  - ★ Some successful farmers success story.
  - ★ How to properly grow a crop, vegetables, plants.
  - ★ How to use small land to make big profit in less investment.
  - ★ How to make natural fertilizers.
  - ★ How to do farming related work easily and quickly.

# **How to use Farming Videos functionality**

- On first page there will be two buttons one for adding videos and one for viewing.



- After clicking on “Add Video “ button user will be directed to fill the video title, description and youtube url of the videos.



The screenshot shows a mobile application interface with a green header bar. The header bar contains a back arrow icon on the left and the text "Add Your Video" in the center. Below the header, there is a white rounded rectangle containing three text input fields. The first field is labeled "Video Title", the second is labeled "Video Description", and the third is labeled "Youtube Url". Below these fields is a green button with the text "Submit". The status bar at the top of the screen shows various icons including a camera, gallery, and network status, along with the time "2:39 pm" and battery level "41%".

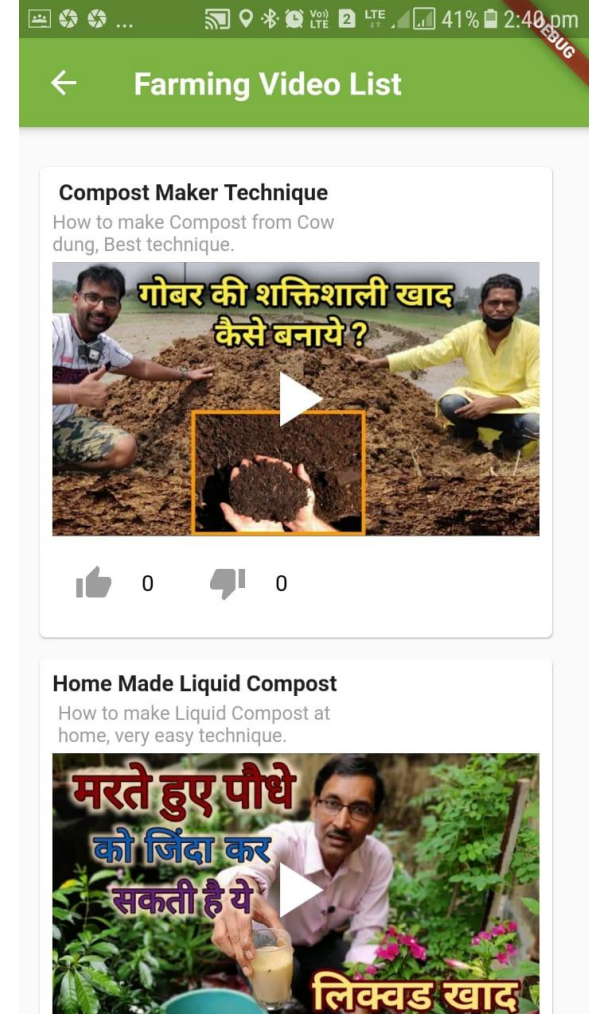
Video Title

Video Description

Youtube Url

Submit

- After clicking on “View Videos” button user will be directed to video list where they can view many videos, and also they can like or dislike the video.



# IN THE END...

We hope this app provides an easy and better way for our hard working farmers (and villagers as a whole), to use and manage their resources efficiently and make their daily life easier.

**Thank you**