A Project Report on

**Bhartiya Kisan Portal**

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**Problem Definition :**

A web application that is dedicated to farmers from where they can get various crop related information. They can sell their crop product online to the related person. A discussion forum will be provided to the farmers where they can discussion about the crop related problems through text,photos, audios or videos. They can use filters to see their concerned discussions.

The users can connect to the farmers and can buy grains at a reasonable price, but above the price set by the government. This will eradicate the problems of huge margin of profit taken by middleman.

The information about both end will be updated in centralized database and will be accessible to concerned users through APIs which is secured. There will be four databases

1- For farmers (Seller)

2- For Consumers (Buyer)

3- For discussions on various crop issues

4- For recommendations to the farmers after analysis of weather pattern in that areas

**Motivation for project work :**

• Food is the basic necessity of human civilization, despite of it we see an alarming rate of increase of farmers’ suicidal cases. After analyzing the cases we find that there are two main case of this problem-

1. Climatic Changes

2. Huge Margin of profit taken by middleman.

We are trying to eliminate these two problems by building an e-commerce platform so that the farmer can get the platform and can sell their crops at market price, and they can use weather pattern to get prediction.

• The idea has potential to turn into a start-up as there is no such website available in the present date.

**Solution Approach:**

The website will be divided into three parts-

1- Farmer Panel

2- Consumer Panel

3- Admin Panel

Farmer Panel

The Home Page of the website will have a button to take the user to farmer's panel. In farmer panel there will be a login-sign up form, so that the farmer can register themselves on the website. To remove the unwanted user there will be an OTP verification of the user's mobile.

The farmer after login will be redirected to the page where they can add their crop for sale. Their they can show how much quantity of crops they want to sell and will have to add a photo of the same.

Their will a recommendation system to help farmer, so that they can know which crops are in demand and what price they can get by selling them.

We can extend the recommendation system by showing which crops to grow in their location by analyzing the weather data of last 50 years.

Consumer Panel

In Home page there will be a pop-up form for user registration and login. The OTP verification will be done to make sure that the user is authentic.

The user will be having a sliding bar which will show the farmers within certain range which are willing to sell their crops. The user will certainly get the crop slightly cheaper than from the shop as they are buying it directly from the farmer. In this way farmer and user both will benefit from the situation. If the quantity is above the given limit, the transportation cost will not be charged from user, else it will have to pay minimum delivery charge.

User can give the rating to the farmers, and that will be used in recommendation system for them to deliver best client.

A payment gateway will be provided to ease the user in making payment.

Admin Panel

Admin Panel will be provided to give admin absolute control over the website. He can add, remove any farmers, or users. In graphical map form he will be shown the daily flow of crops from farmers to user. He can contact the farmers, if they are not able to sell, and will help him to increase it.

He will handle the complaint from each side.

**Planning for the Application:**

Rest API will be created for database related queries.

A secured payment gateway will be implemented with the help of various online caseless portals like Paytm, Net-banking, etc.

Recommendations will be shown by accessing the location of farmers. Micro services architecture will be used to connect different functionalities of the web application.

**Discussion Forum Module:**

This module will be used to connect fellow formers and it has following features-

* Can send message to member
* Can post any queries
* Can view previous queries by applying filters
* Can answer/edit their posted queries
* Admin can edit/delete/add members

**Sign-Up Module:**

In the Sing-Up module we will take data from users at front-end to create an account for the user, using this details user we will able to login using this credential-

* Username – String (2 – 60 characters)
* Password – String (2 – 60 characters)
* Name – String (2 – 80 characters)
* Shipping Address - String (5 – 200 characters)
* Email - String (5 – 200 characters)
* Phone - String (10 – 15 characters)

**Login Module:**

In the login module we will take some data from user for authentication at front-end and using axios data will be send to back end for authentication, some of the data we will take are given below-

* Username
* Password
* Captcha

**Backend API:**

A webserver implemented on node.js leveraging the Express.js running for the back-end API, will handle the following requests sent by the axios-

* get – will handle for any get request to the back end
* Post – will handle for data received data at back end
* Put – will receive data and make modification
* Delete – will delete any record for received data

**Front-end Page Routing:**

In the front-end using react pages will be routed according to the match route for the following pages-

Components will be mounted according to match route-

* About Component
* Contact Component
* Login Component
* Sign-Up Component
* Product Component
* Nav-Bar Component

**References:**

1. Times of India
2. Educative.io
3. Geeksforgeeks.com
4. https://enaam.com