Farm Management Portal

Darshan G N

PG Student, Master of Computer Applications, RV College of Engineering, Karnataka, India

Abstract

The main idea of the project is to implement a secured software application for online sales which promotes sales of multiple crops, seeds, agricultural equipments etc. from different farmers and vendors. In addition to that the application support soil testing facilities to know about the soil fertility level and seasonal crops of that particular region. The farmers can login to the software application and promote the selling of their cultivated materials and buy other needed materials from some other farmers. The vendors/agent can login to the software application and upload their requirement, it can be either buying or selling of agricultural materials. Other users can raise a bid to the vendor requirement and fulfil their requirement. Normal users can as usual shop their crops and add to their cart.

Keywords: Agricultural products, upload items, view requirements

1. INTRODUCTION

Farmers lead their life by growing crops, vegetables, fruits etc. To sell their products, farmers are dependent on brokers. The brokers act as the middle parties between farmer and the vendors. But these brokers extort farmers, so farmer lose more money in the form of commission to the broker. In order to overcome this problem in this proposed application, the farmers can directly login and post the details of their stock, if the item is crop, then the farmer can upload the details of the crop like crop name, quantity of the crop, price of the crop per unit, area details like area name, pin code of the area. Farmer can also upload

The vendors can login to the portal and upload their requirement details such as, crop name, quantity required and price for that quantity of crop. These requirements are displayed in view requirements section of farmer's module. Vendor can check the status of their requirements by clicking on view requirements. The farmers can reply to that post and comment the bidding price. After particular time frame, the bid will be select with the max price and it will get updated to that person.

The Users can login to the portal and search their necessary materials based upon their nearby location and shop them from the farmers directly. When farmers upload their farm cultivated materials, place and pin code of that place to this portal, it will connect to the Google API and fetch the latitude and longitude for that

area. So that it will be helpful for both farmers and end users when they are searching for a nearby farm to buy the crops or agricultural equipment.

The Admin will collect the soil sample of every region/area and stores the results in the portal. Framers will collect the soil samples and provide it to the soil testing laboratories, they will estimate the nutrient levels and provide it to the farmers. They can enter the soil nutrient levels in the portal and find out the crop varieties which are suitable to be cultivated in that region/area.

Admin can view the details of farmers and provides the soil details and crop details. Admin page also contains of water details of a registered region/area. Admin can upload the crops details for those regions. Even the soil testing details are being uploaded by admin.

2. PROBLEM STATEMENT AND PROPOSED APPLICATION

Farmers lead their life by growing crops, vegetables, fruits etc. Farmers faces many problems. To sell the crops which they have grown, farmers mainly dependent on brokers. These brokers act as bridge between farmers and the vendors. The brokers extort the farmers in form of commission. This will reduce the profit of the farmer after selling their item.

In order to overcome this problem in this proposed application, the farmers can directly login and post the details of their stock, if the item is crop, then the farmer can upload the details of the crop like crop name, quantity of the crop, price of the crop per unit, area or place of cultivation of crop and pin code of the area. The vendors can only post their requirement and can buy the products.

3. MODULES DESCRIPTION

1) Farmer

The farmer module consists of farmer profile, upload requirements view requirements, soil details and logout options. After logging in farmer should complete their profile by filling the required details.

In upload requirement option farmer is provided with service type option in which there are two types, one is the crops section and another one is equipment section. Here farmer need to select the services i.e., vegetables or agricultural equipment. Then in item name section farmer need to enter item name, in price section the price of crop or agricultural equipment need to be filled, in unit place the type of unit in which farmer wants to sell like kg, gram, quintal, and piece. In area or place the place name of farm need to be entered and finally in pin code section the pin code of the farm area needs to be entered.   If the price

changes daily for the uploaded materials, then they have to login to the application and update the prices regularly.

In view details section, farmer can view the requirement details of other farmers or vendors and they can also bid an amount for that if they need that item. In soil detail upload section farmer can upload the details of their farm soil, like PH level, water content and mineral details.

2) User

The users can login to the software application and search their necessary materials based upon their nearby location and shop them from the farmers directly. When farmer's uploads their farm cultivated materials, place and pin code of that place to this software application it will connect to the Google API and fetch the latitude and longitude for that area. So that it will be helpful for both farmers and end users when they are searching for a nearby farm to buy the crops or agricultural materials.

3) Vendor Login

Authenticated vendors can access the portal after login. In this module, there is an option for upload requirements in that vendor can upload the details of their requirements like type of crop, quantity required and price for that quantity of crop. These requirements are displayed in view requirements section of

farmer's module. Vendor can check the status of requirements by clicking on item in view requirements. The farmers can reply to that post and comment the bidding price. After particular time frame, the bid will be select with the max price and it will get updated to that person in our portal. Other vendors can also participate in this bidding and provide a best bidding price to that vendor.

4) Soil Testing and Seasonal Crops

The Admin will enter the soil nutrients details of a region/area and stores the results in the database. Framers will collect the soil samples and provide it to the soil testing laboratories; they will estimate the nutrient levels and provide it to the farmers. They can enter the soil nutrient levels in the portal and find out the crop varieties which are suitable to be cultivated in that region/area.

5) Admin

Admin can view the details of the farmers, who are registered to the portal. Admin also has the details of areas. Admin can upload the details of crops, soil nutrients level of the areas and store the values in the database.
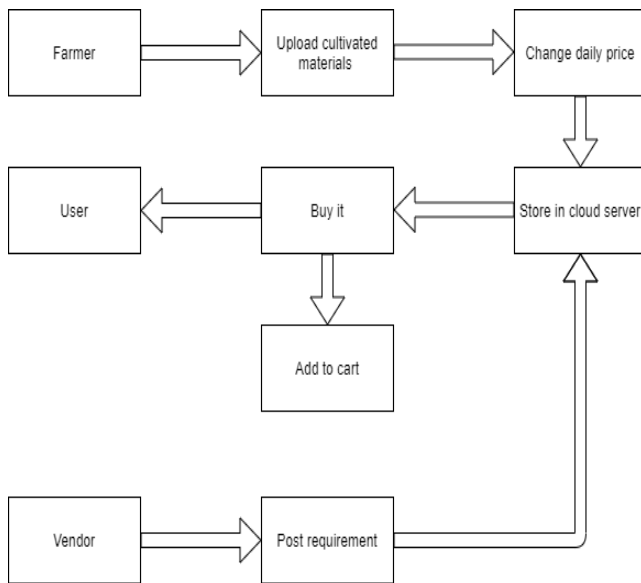
4. WORKING

Fig 1: Architecture Diagram

The architecture diagram for the Farm Management Portal is as shown in the above diagram. It has farmer login block, user login block and vendor login block. The farmer login block is connected to upload cultivated materials block. As the farmer get registered to the portal, he can upload the details of his crops or agricultural equipment in that section which is displayed in the portal which can be viewed by other farmers and vendors, and also farmer can change the price of the crop or material based on the market price on daily basis. These details are stored in the cloud server.

Based on these details, user can view the materials and if one wish to buy that product they can add that product to their cart and buy that product for the best price.

The vendor login block is connected to post requirement block in which vendor can

upload his requirements which will be displayed in the farmers page, and based on that information any farmer can reply and fulfil requirements of the vendor based on bid price and this information is also stored in the database.

5. CONCLUSION

This portal provides good advantage to both the vendors and the farmer to promote the products directly in front of the users. The user can purchase farm fresh vegetables with the help of this portal and they can even order bulk form. Even the famers can upload their farm equipments which they had used for cultivation, irrigation system, etc. and show case in this portal to sell or buy them by other farmers/users. So that other farmers will get more knowledge about the products and they will purchase and use it and get benefited. In future the method of authentication can be enhanced by using multifactor authentication schemes, etc.

6. REFERENCES

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