**Project Proposal**

1. **Project name:** Krishak (Bhartiya Kisan Portal)
2. **Department and University Name:** Computer Science and Engineering, Madan Mohan Malaviya University of Technology, Gorakhpur U.P. 273010.
3. **Keywords:** Farmer, Krishak, E-commerce, Crop
4. **Introduction**

Nowadays there is an alarming increase in the suicide rate among Indian farmers. If we took a close eye on the above problem, there are two main issues. First is the crop failure due to climate change, pests and lack of advance farming method. The second is the absence of marketing facility to sell crop yields. A farmer depends on middleman for selling their produce who took most of the profits. According to a survey 85% wheat sold by farmers in their village itself in Uttar Pradesh.

Our final year project Krishak is a web application that is dedicated to the farmers to overcome the above two problems. It will help farmers to get knowledge of the latest farming methods, technology and will provide solutions to the problem faced by them through fellow farmers. It will also provide weather reports to minimize their loss due to climate change. Our project will provide an integrated platform to know the tentative price of their crop and will connect farmer to end-user by eliminating the role of middleman. Overall, it will help the farmers to increase their profit by getting reasonable price of their crop and minimizing the loss.

1. **Objective:**

The main objective of Krishak is to provide an online integrated platform for farmers-

* To find the relevant price for their crops by connecting them with the end-user directly.
* To provide a cashless system for selling and buying of crops through the payment gateway and connect them to the digital India program.
* To provide weather forecasting reports to minimize crop loss due to weather.
* To provide a discussion forum to share and know the cure of various plant diseases and methodology for crop sowing/ harvesting/ technology from fellow farmers.
* To provide high-quality crop yields to consumers at a reasonable price.

1. **Practical Utility**

The Krishak portal requires only mobile phone and internet to access its services. In the modern scenario, everyone owns a mobile phone and Government of India is also connecting villages through Digital India, which aims to connect all the 6,25,000 villages by December 2018. So there is no constraint in use of portal. As the Krishak portal will provide a lot of services to increase the revenue of farmers by providing them maximum benefit. Thus, it will definitely prove to be a boon for Indian farmers.

1. **Methodology**

We are using MVC (Model-View-Controller) architecture to build the project. Figure 1 shows the architecture of Krishak. Technologies are being selected to make project scalable and maintainable after going through the latest developments

Client Program

(View)

Rest API

(Controller)

Request

Response

Response

DBMS

(Model)

Fig. 1. The architecture of Krishak

* **DBMS:** Database management system used for the LabourHire is PostgreSQL. It is an advanced SQL database server, which is available on a wide range of platforms. It has an enviable reputation for performance, stability, and a wide range of advanced features.
* **Rest API:** The rest services of the system will be written in Django. The main purpose of writing rest services for the system is that a variety of applications and websites can be developed using the same rest services.
* **User-interface:** User interface will consist of a website for computers as well as mobile browsers. This will increase the reach on the system.

The Krishak web application will be divided into three parts-

* Farmer Panel
* Consumer Panel
* Admin Panel

Farmer panel will include the features of registering them with the platform, recommendation system to update them about the weather report, discussion forum, crops in demand and their selling price as well as a platform to sell their crops.

Consumer panel will include the features of registration of consumers, showing them about the crops and their process as well as various filtering options for select the crops to be purchased.

Admin panel to manage the farmers and consumers on Krishak platform. It will also help to control the unauthorized activity on portal.

1. **Block Diagrams**

Following figure-1 represents the application architecture, figure-2 represents various use cases of the Krishak portal by different users. Figure-3 shows the object-relational mapping of the proposed system.

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Fig. 1 - Application Architecture

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Fig. 2- Use Case Diagram

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Fig. 3- Object Relation Mapping

1. **Is the project related to any regional problem?**

**Yes**

The project solves the major problem of poverty prevailing among farmers. The project aims at providing a fair price to farmers. The farmers are unaware of the solution to problems like crop diseases, fog, seeds, etc. so connecting them with fellow farmers will help them know about the ways to get rid of it by following the advance method of agriculture.

1. **Commercial application/ utility if any & scope of future work**

Although access to the platform will be free to farmers, a small amount of money can be charged from the end-user on the transaction made. Other sources of revenue will be from the advertisement shown on the application.

1. **Result and Conclusion**

Krishak Portal will surely set a milestone in reshaping agriculture as a lucrative opportunity for farmers. It provides a platform for farmers to connect with end-user directly to sell their products eliminating the role of middleman. It also gives them information about the advanced method of farming provided on the platform and connects them with fellow farmers. Overall it will help the farmers to get out of poverty by connecting them with present-day technology. The result is yet to come as the application is in development phase.