Ministry/ Organization name : CDK Global

Problem Statement : Portal for Farmers to sell the produce at a better rate

Problem Code : RA27

Domain Bucket : Agriculture and Rural Development

Category : Software Development

Team Leader Name: Domendra Sahu

College Name – Government Engineering College Bilaspur (Chhattisgarh)

College Code: 007

Solution:

We are proposing an app-based solution, An app for the farmer connect to the buyer and the other various retailers. It will be a user-friendly app with Admin Panel for farmer and buyer working with SMS system.

Some salient features of the app are as follows:

For the benefit of Farmer:

- A platform to display Farmer's **products** and it's **pricing** range with ***real-time*** update.
- A complete e-commerce app with a ***payment*** gateway.
- The e-commerce app will contain the all types of grains and vegetables needed by buyer.
- An **analytical** section for measuring the **production** and **intake rat**e of crops and vegetables with **cost benefit analysis** which helps farmers with **real time market** report thereby providing them with ***better pricing*** information.
- A news feed for farmers in both ***English*** and ***Hindi*** language, to keep them informed about anything related ***farming***. It will be extracted from "*Google*" news *API*.
- A guide for growing ***healthy*** crops; consisting of all the crops.
- Sell the best rates of ***products***, ***contact*** and ***connect*** nearby retailers.
- An **inventory** section for the farmer to keep ***track of products***
- Booking/order sections to get notified through app and SMS about the product to the farmer.
- A contact section to get details of the nearest local university with contacts of experts. Experts will be notified through text message regarding farmer's query.

For the Buyer:

- A platform to compare and buy grains and vegetable products with better pricing range.
- Direct buying method for buyer from nearest available farmer it can reduce the interfere of brokers.
- An Package **tracking system** section for the buyer to keep **track of products** and for better quality.
- Easy return goods and product with decided terms and condition.

Technology Stack:

- Android application using JAVA and XML
- Android Studio - For android application
- Machine learning - Linear Regression to predict the weather conditions
- Python Django - For Server
- Accuweather /ClimaCell / Yahoo Weather APIs for getting weather details
- Ajax: Asynchronous Java Script and XML.   XML: Extension Markup Language.
- Web 2.0: RSS Feed 2.0.
- RAD 7.0: Development tool.
- For designing HTML,CSS,Java Script.
- Localization(first stage of development): 2 Languages - Hindi and English

Software Interface:
1. Front End Client
2. Web Server
3. Data Base Server
4. Back End

Hardware Interface:
1. Client Side:
2. Server Side

Use Cases:

- From searching for a farmer till buying the grains and vegetables, the entire process will be on a digital platform.
- The rates will be competitive, so the Buyers will have more options.
- Also, this will ensure that the buyers/ will not be cheated.
- Efficient use of Government Schemes.

Show Stopper:

- Weather Predictions and other auto-generated suggestions.
- Mobile network issue for server and communication
- Common languages like Hindi and English used (Local languages of farmers may also be included).
- All information regarding Government Schemes.