BASIC OUTLINE OF SUGGEST-A-CROP WEB APPLICATION

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1.1. Purpose

The main purpose of our project is to make web-based application, with the help of providing information regarding crops, land management and geographical condition pertaining to the growth of crops to the **KISAAN HELP CENTERS and farmer itself(future scope)**. We will further explain the main utility of this web based system that we are trying to built, it's implementation, upgradation(at a later stage) and what it will eventually do. This document will also portray some of the specifications that we will be using to complete our project. The main idea behind this application is to promote it on a wide scale, such that at later stage the concept of localisation and upgradation can be added to it for the benift of the end user that is *farmer* itself.

1.2 ***Scope of Project***

This web-based application aims in providing information related to the farming practices to the farmer. This will include statistics such as land use patter over the years, crop rate in the market, soil profile, climatic condition of a region. This web-based application will provide enough information to the end user (initally KISAAN ASSISTANT of the Village) that will let him decide that what are his best suitable option. This web-based application aims in providing the maximum throughput with the data that is already available to us in raw form to the farmers or the one helping them. By increasing the productivity of the application itself this system will ensure that the information that is being processed and then transmitted is near to accurate in the real world scenario.

Apart from this this system will also have an upgradation function so that it can take inputs more than the current datasets that is being feeded into the main database for inital use. Moreover, we can also upgrade the database itself in long term if need arises. This web-based application will be responsive in nature and will use the algorithm to process the data and then give the result. Since the whole web-based application design will be on open-source platform, contibution in the area of betterment of the application won't be a big issue.

1.3 Basic Model of our web-based application

please refer to the diagram in the pdf [kisaan.pdf]

Our web-based application will be based on one to one interaction between the user and the system itself. The **admin** will look after the overall inconsistency that may arise with the passage of time in the database. Moreover all the scattered datasets containing information pertaining to the field of agriculture will be properly utilised and won't be limited to just files and facts in the archives of the goverment database. All those scattered datasets will be fetched on to our central database where the information will be processed according and as per users query the appropriate response will be given regarding end-users need. Moreover, the whole website will be responsive and will be easily accessible through mobile also. We can also add more feature as per more and more open data will be available for use by the goverment.

2.2 Functional Requirements Specification

This section will describe the FRS for our web-based application. Since our web-based application is based on one to one interaction between the user and the system itself. The user will be the query generator and response receiver.

Use case: **Query given by user to get respose from the system.**

Diagram:
please refer to the diagram [functional.pdf]

Brief Description
The user will give information regarding the place he/she is right now and few more whereabout related to the kind of crop option he/she wanted and also the parameters like profit margin and all.

Initial Step-By-Step Description
Before this use case can be initiated, the user has access to the query box and menu on our website.

1. The user will enter his location, moreover as per his/her ip location will also be automatically detected. In case of any discrepancy the user will be prompted to enter his/her location manually.
2. The system displays the choices to the user
3. The user will select the desired choices of crops and investement margin
4. The system presents the information to the reader.
5. The system will fetch result as per user query.

Information Generation Procedure

The information generation procedure generates the appropriate response and does the interpretation of the data as per user's requirement. A user submits his query as per information and help he wants. The system fetches the relative information based on user's query and using modern mapping and visualisation technique gives him the appropriate answer. So it's completely upto the user to accept the information or not, moreover the web-based application will also have a feedback form to look at the acceptancy rate of the information given by our application so that to get the better acceptancy rate, one can do more improvement in the application.

2.4 Non-Functional Requirements

The web-application will be on a server with high speed Internet capability. The physical machine to be used will be determined as per convinience. The web framework of the website will be entirely based on MYSQL, HTML5, JAVA-SCRIPT, PHP, JSP and JSON. The speed of the user connection will depend on the hardware used rather than characteristics of this system.

The admin of the whole web-server will look for any inconsistency that may creep into database system as more and more data-sets will be fetched into our online database. Moreover at a

later stage the admin can add more option in the web-application. Since the website will be responsive in nature, the user can also view the content on mobile.

3.0.Requirements Specification

3.1 External Interface Requirements

The only link to an external system is the link to the AGMARKET WEBSITE (maintained by NIC itself) The prices of the mandi is updated regularly with certain level of credibility. We believes that a naive user is much more likely to be an effective reviewer as well therefore the website will also contain a feedback response system. The AGMARKET WEBSITE will provide us recent details about the prices and rates of different stuffs in the mandi. Moreover, our database will directly fetch result from their website.

Detailed Non-Functional Requirements

3.2 Logical Structure of the Data

The logical data to be stored in the internal database of our web-server will be as follows

E-R DIAGRAM

Refer to the enclosed pdf [E_R DIAGRAM.PDF]

3.3.2 Security

The web server will be fully secured, with the highly parametrized security, moreover we are also working on the user experience part of it.

The web-application, if it is a go in one attempt will be demployed probably by 28th. However, we'll look into the betterment of it and debugging part of the website too.