FarmEasy

A demonstrative website for the benefit of Indian Farmers

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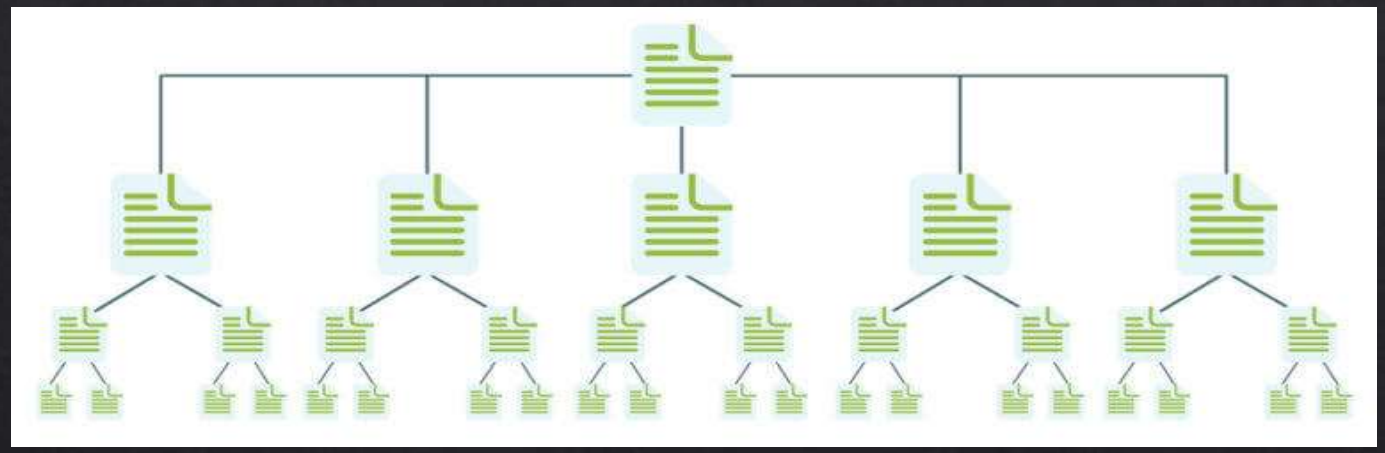
Background of the Project

It is a well known fact that many of our farmers are poor. One of the many reasons for this is that they do not get the best price for their crop. And a reason for that is the presence of middlemen who take crops from farmers at low prices and sell them at high prices. Thus a farmer never gets a good price.

In this view, a website could be designed that acts as a platform for the farmers to directly sell crops to consumers and thus get the best price. This is exactly what we decided to do. Our website, called FarmEasy, is a demonstration of this idea.

Design of the website

The website uses Flat website architecture. A diagram is given below to understand what it means.



A flat website design is the one in which all webpages can be accessed within a single page(usually the home page).

Design of the website

- The website has been designed using html, CSS and javascript.
- Our website has an interactive homepage which serves as the main introductory and essential page which offers useful features.
- A Farmer registration form has been provided in the homepage where he enters his personal details as well as the crops which he wishes to sell.
- Besides this, the homepage also has several useful links for farmers.
- Useful photos of modern agriculture have been included.
- Videos of modern agriculture have also been included. These features help farmers to not only get themselves registered but also gain useful knowledge about agriculture.
- A search bar is provided where all the registered information can be searched easily.

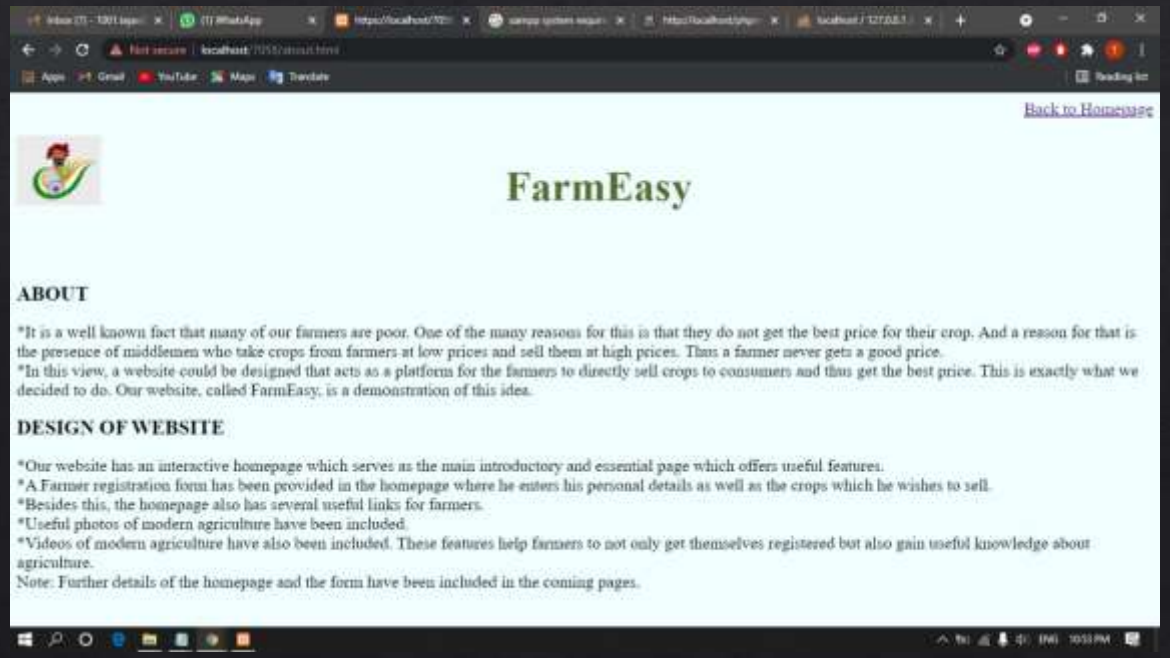
Note: Further details of the homepage and the form have been included in the coming pages.

Home page

- It is the first and introductory page of our web site .
- The first opening of our website shows the home page
- It has been developed by using html and css.
- It provides whole overview of our project.
- It also gives useful information about modern agriculture.
- The home page contains useful features such as home, videos, products, about and contacts
- The home page also contains some modern agriculture images that shows how we can improve the agriculture.
- The home page also contains useful links that provide information about agriculture.
- It also contains latest news about agriculture

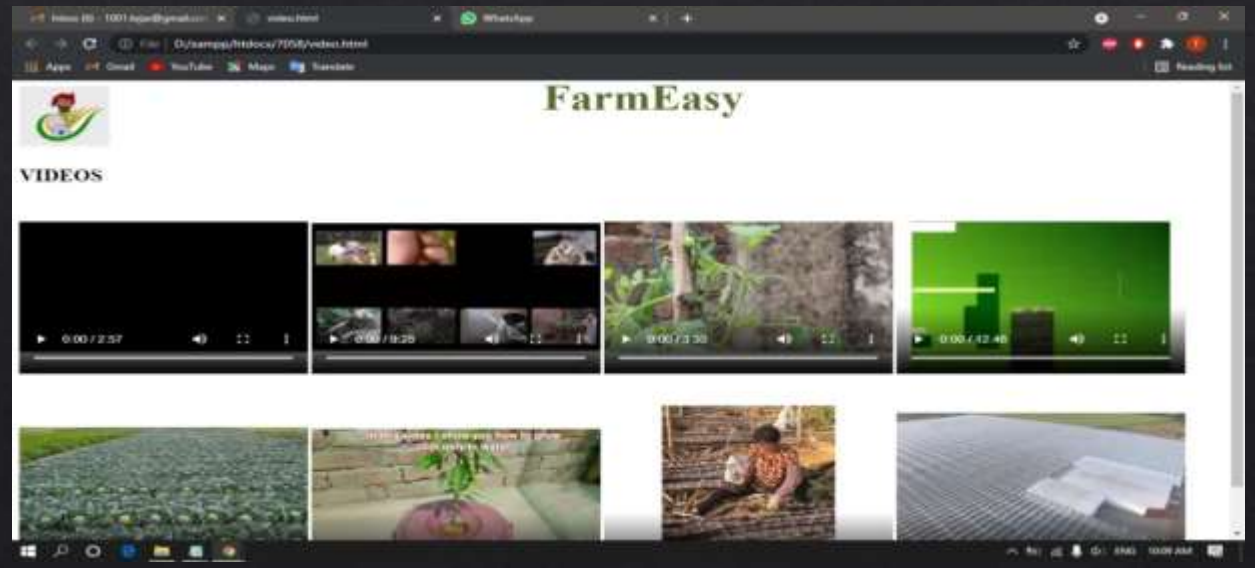
About webpage

- It’s part our website that provide information about website .
- this webpage design using various tags from html and css .
- The examples for these tag are <p>,
,<h1>,<style>, and <img>.



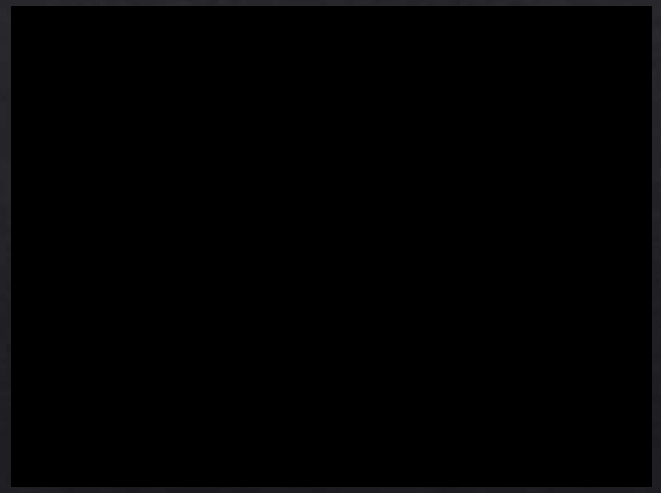
Videos webpage

- The videos webpage contain some awesome videos about modern agriculture.
- Videos tells how we can improve our farming by adapting various techniques.
- The videos webpage is designed by using tags from the html and css. Such as <h1>, <video>,<source src>, <img> and others.



Videos homepage(contd.)

- In some videos also teach the plantation by various methods such as hydrophonics method ,plant aeriation method etc.



Contacts webpage

- Contacts web page contains contact of this website's designers.
- It also contains useful contacts of farmers.
- Contact webpage is designed using various tags such<h>, <p>,<img>, ,<style> tag along with various attributes like position ,margin, float, width, height

Latest News

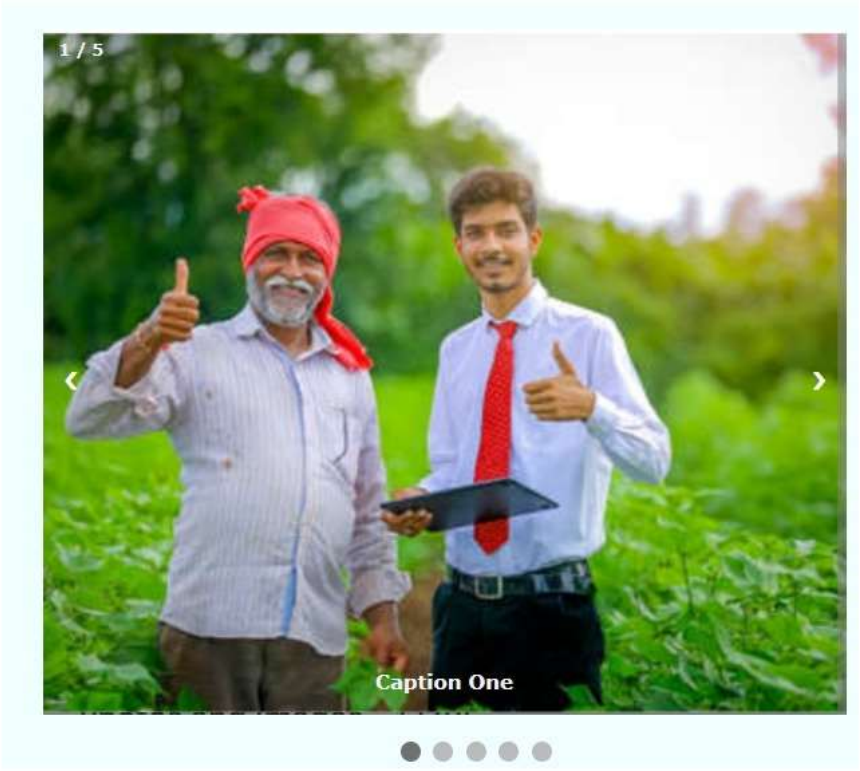
- Latest news contains useful news related to modern agriculture.
- Latest news also contains recent developments regarding agricultural tech and farming techniques.
- It has been developed by using various tags such as <href>, <p>, ,<style> along with various attributes like padding, box shadow, cursor, font, background etc.

Latest News(contd.)

Scrolling images

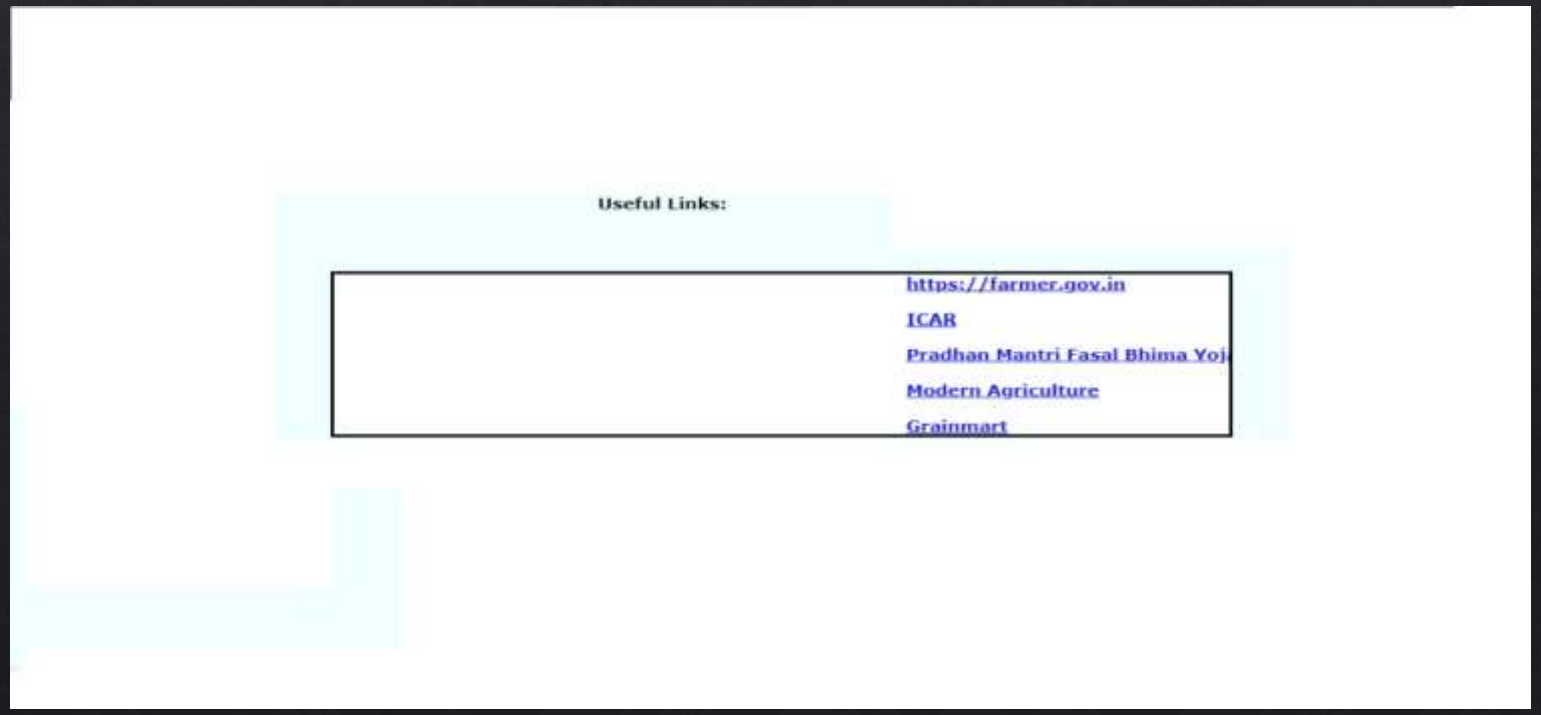
- The homepage contains scrolling images in the center.
- The scrolling images describe modern agriculture.
- It has been developed by using various tags such as , <p>, ,<style>, <meta>, <img> along with various attributes like transition, display, border radius, font weight etc .

Scrolling images(contd.)



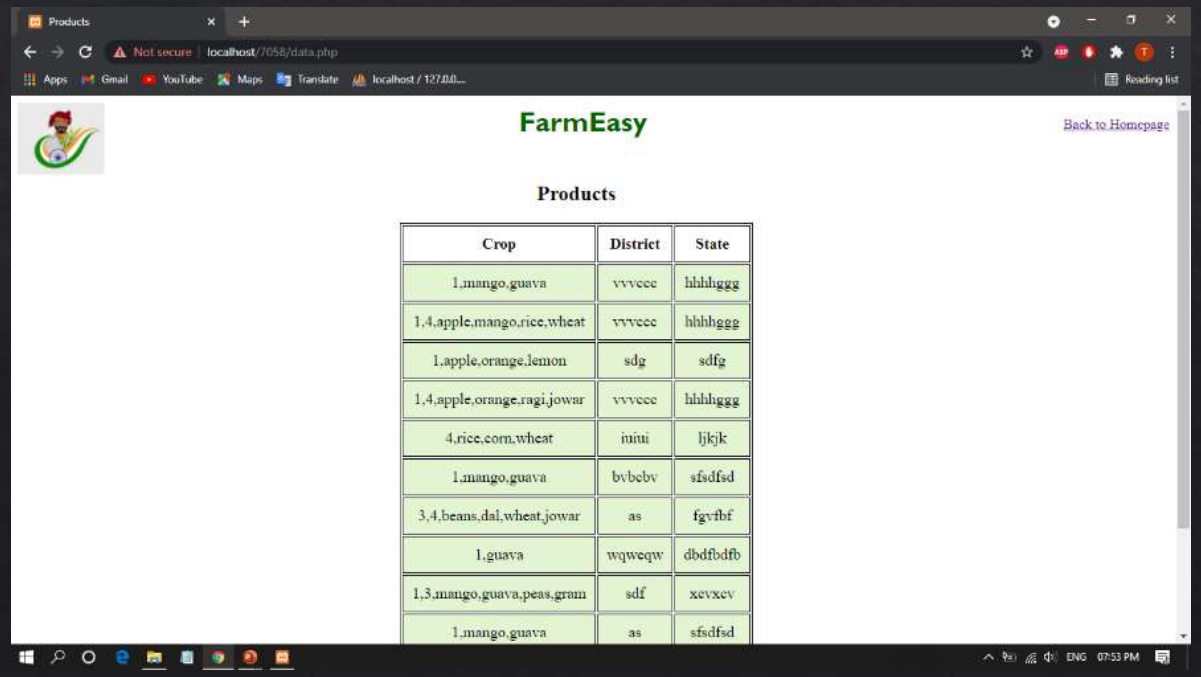
Useful links

- The useful link are given below in the home page .
- By clicking on the links, various useful webpages will be opened.
- It has been primarily designed using marquee tag.



Products

- This is a useful webpage which allows us to look at all the crops given by the farmers, along with the district and the state from which the crop has been given.
- This webpage makes special use of php for fetching data from database, along with tags like table tag and css.



Crop	District	State
1,mango,guava	vvvccc	hhhhggg
1,4,apple,mango,rice,wheat	vvvccc	hhhhggg
1,apple,orange,lemon	sdg	sdfg
1,4,apple,orange,ragi,jowar	vvvccc	hhhhggg
4,rice,corn,wheat	iuiui	ljkjk
1,mango,guava	bvbcbv	sfsdfsd
3,4,beans,dal,wheat,jowar	as	fgvfbf
1,guava	wqweqw	dbdfbdfb
1,3,mango,guava,peas,gram	sdf	xcvxcv
1,mango,guava	as	sfsdfsd

Home page (contd.)

- The home page acts as platform through which the farmer registration form can be accessed.
- All web page including home page have a logo as well as a heading at the top.
- The home page also contains a clock and date in top right corner.
- The home page also contains a search bar which allows us to search for records entered in the database through any search item.

Home page (contd.)

Farmer Registration Form

- The purpose of this form is to register the farmer as a user of the website and store his crop details along with his personal details in a database.
- It is an easy to use form which guides the farmer to complete the form in a proper way.
- For achieving the objective of entering sensible data from the farmer, client side validation has been included.
- This ensures that only valid data is stored.
- The form uses javascript, html and php.

Input

- The form accepts the following fields as input:

- First Name -Last Name

- Gender -City/Village/Town

- State -District

- Phone No. -Aadhar No.

- Crop

- The first name, last name, state, district and city/village/town fields are text fields.
- The gender field is a radio button so that user can enter only one choice: male or female.
- The phone no and the Aadhar no. fields are tel(telephone) fields.
- The crop field is a checkbox field. Checkbox has been intentionally chosen so that user can enter multiple inputs.

Input(contd.)

- The crop field is made as a checkbox field in order to ensure the farmer does not enter an invalid crop name.
- The crop field is divided into two parts: Type of crops and corresponding crops.
- The four crop types are fruits, vegetables, pulses and grains.
- The corresponding crops are as follows:

1. Fruits: Apple, Mango, Orange, Guava, Lemon
2. Vegetables: Cucumber, Tomato, Spinach, Radish, Brinjal
3. Pulses: Gram, Dal, Nuts, Peas, Beans
4. Grain: Rice, Wheat, Corn, Ragi, Jowar

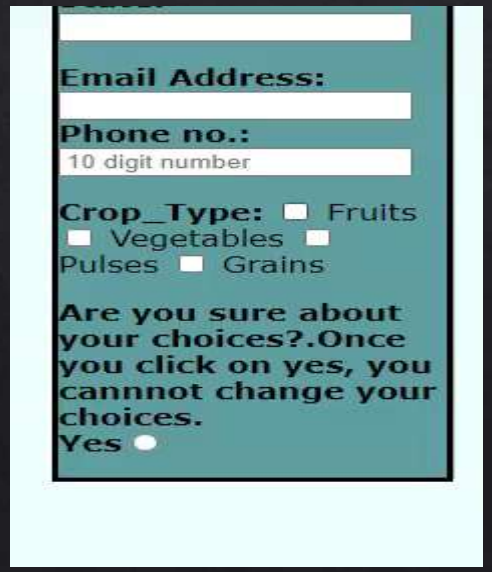
Client Side Validation

- This is done using javascript. It is the process of forcing the user to enter valid data.
- Before submission of details, user has to click on yes button(radio button at the bottom) to confirm the details that he has entered. In case he has left any input field empty or has not given valid data, the webpage prompts him to enter valid data.
- The program first checks if all the fields have been entered. Then it checks if the data entered is valid.
- For instance, none of the fields(except email field) cannot have special characters. First Name, Last Name, State cannot have a number. The telephone field cannot have letters and it must have ten digits.
- The Aadhar field cannot have letters and it must have 12 digits.
- The length of a text field must not be less than 2 and greater than 40.
- All these conditions are checked by the program and thus ensures that the user cannot enter invalid data.

Interesting Features

- When the user proceeds to enter crop details, he can see that when he clicks on any of the crop type(mentioned earlier), the corresponding crops, which were not visible, become visible.

(click on image and then play Video)

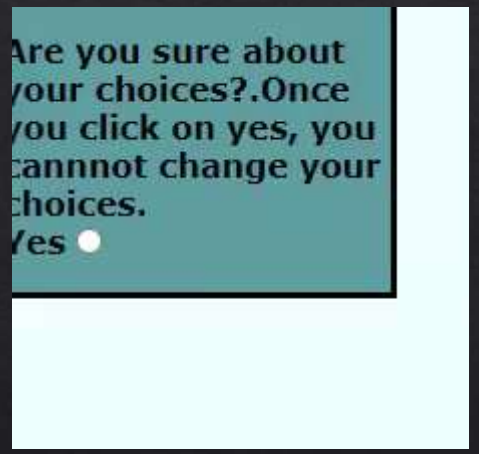


Interesting Features(contd.)

- Suppose the user has entered all the data properly. If he clicks on the ‘yes’ radio button, he will find that he cannot modify the entered data.

Interesting Features(contd.)

- After clicking on yes, the user finds that a button appears below. On clicking that button, the submit button appears.



Interesting Features(contd.)

- These interesting features ensure that the program runs smoothly. There are a lot of background tasks that occur. One of them is the input of data to a hidden data input field(the purpose of this field will be discussed later). If the data is not locked, then we cannot enter data into the hidden input field properly. Secondly, the submission should not occur before data is fed into the hidden field. For that purpose the “I am not a robot” button(a standard captcha technique) is present, which ensures that the submit button appears only after it has been clicked. On click, the data is fed into the hidden field.

Storage in database

- When the user clicks submit, he is directed to another page where he can see his entered data along with a message that these details have been stored successfully.
- The program establishes a connection to a Mysql database present in phpMyAdmin server. Then the entered details are inserted into a table of the database. (Refer video in the next page)

formeasy form

Not secure | localhost/7058/shivaraj.php

Apps Gmail YouTube Maps Translate

Pause 00:00:00 Select Area Audio Record Pointer

Reading list

FARMEASY

HOME VIDEOS PRODUCTS ABOUT CONTACT US

03:49:41PM

FarmEasy

Farmer Registration Form

First Name:

zxcz

Last Name:

dfdfg

Gender: Male Female

City/Village/Town:

asdasd

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Storage in database

- As we saw in the video the details which we had entered had been successfully stored in the database. An interesting thing that could be seen was that the crop field was 1,orange,lemon
- This is the data of the hidden input field. The field was used so that the checkbox data could be entered in the above format. Here 1 suggests that user entered the fruits crop type. Similarly, there is 2-vegetables,3-pulses, 4- grains. First the crop types followed by the crops are shown. Thus the objective of storing valid data from farmers has been achieved.

What to do with the data?

- The personal details should not be shown. However the crop details have to be shown to the consumer in an appealing fashion. The website must adjust to all devices. Furthermore the prices have to be shown with prior discussion with farmers. Then it should lead to a payment gateway and successful purchase. Also, since this is an online platform, there should be a home delivery service. The procurement of crops from farmers and their distribution is involved. Thus the website is aimed at only demonstrating the use of software for productive purpose.
- The cost of maintaining a website is considerable and requires some revenue. Thus a small tax could be imposed which is a very small percentage of the profit. Thus the farmer gets most of the income. Also, this tax should be slab based(like in income tax) where a high earning person pays more tax than less earning person.

Data Analysis

- Another method to optimize revenue is to pay more attention to high profit areas and less attention to low profit areas(where participation is less). Of course no farmer will be neglected, but the entire operation will be optimized so that no one is left behind and at the same time, losses are reduced and more revenue is generated.
- How to identify low profit areas and high profit areas? How to adopt a strategy based on data? Data analysis is an answer to this question.
- A very simple python notebook file has been prepared to demonstrate data analysis on the data stored in the database.

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- Designed to promote disciplined approach to data management. Freewares' such as Apache, Mysql and php are used, making the project cost nil.
- Captured data of farmers and their crop details act as Valuable resources for Government and Customers.
- Search Facility *(Case insensitive)* is provided based on all the fields like Name, Gender, City/Village/Town, District, State, phone, Aadharno, crop etc.
- Tabulated data is displayed on successful search.
- Unsuccessful search is also displayed with a message.
- Date component is added as part of Home page design.

Register

FARMEASY

- *Search based on* morphemes

Search: shre

submit

Search results are:

First Name	Last Name	Gender	City	District	State	Phone	Aadhar	Crop
Shreyas	Kaundinya	Male	Bangalore	Bangalore	Karnataka	9108623245	234511112222	Ragi,Tomato
Shreyas	Hegde	Male	Bangalore	Bangalore	Karnataka	7345423245	122225677890	Tomato

Register

FARMEASY

- *Search based on complete* words

Search: Hegde

submit

Search results are:

First Name	Last Name	Gender	City	District	State	Phone	Aadhar	Crop
Tejas	Hegde	Male	Shirasi	Uttara Kannada	Karnataka	7323423245	123445677890	Potato,Tomato
Shreyas	Hegde	Male	Bangalore	Bangalore	Karnataka	7345423245	122225677890	Tomato

FARMEASY

- *Search based on Phone number*

Search: 910

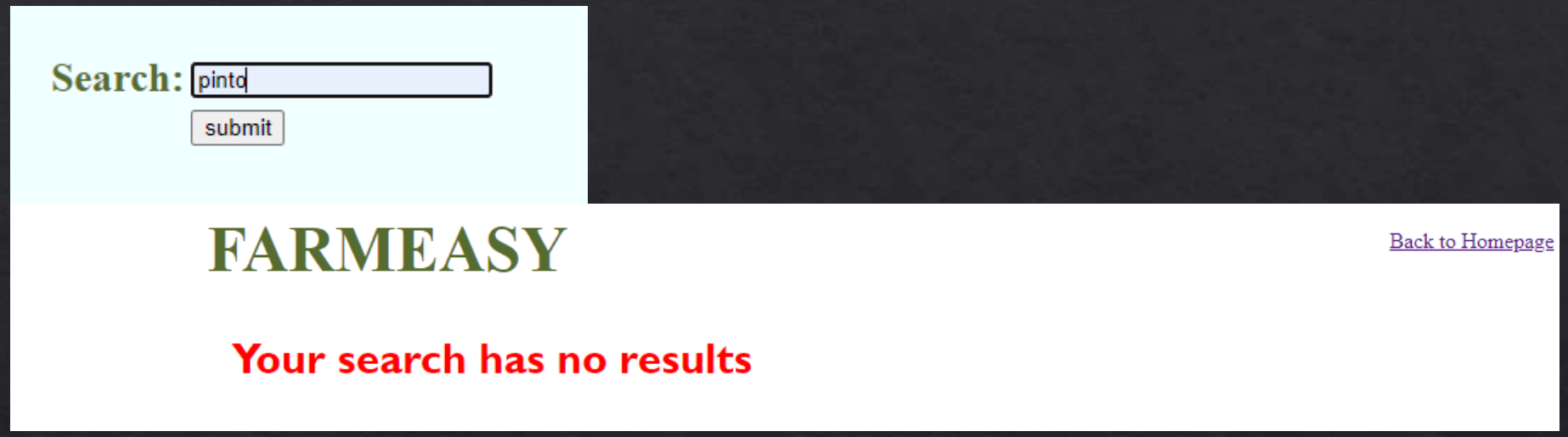
submit

Search results are:

First Name	Last Name	Gender	City	District	State	Phone	Aadhar	Crop
Shivraj	Koli	Male	Jevargi	Gulbarga	Karnataka	9108223345	105678445667	jowar,wheat
Harini	Biligiri	Female	Gorur	Hassan	Karnataka	9108518179	111122223333	Mango,Orange
Shreyas	Kaundinya	Male	Bangalore	Bangalore	Karnataka	9108623245	234511112222	Ragi,Tomato

FARMEASY

- *Unsuccessful search*



- *Date Component*

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- The search facilitates decision making such as a)which crop is favourable in which area b) Reason for certain crop failure is certain area. etc.,
- It also helps in obtaining particular pattern such as a)No of Male and Female farmers engaged in farming b) Percentage of farmers in different areas etc.,
- This gives way to data analytics for retrieving useful information, informing conclusions and supporting decisions.

Thank You