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E-Farmification

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Abstract: *"Agriculture has engulfed the Indian economy," Mahatma Gandhi said, sixty years ago. In our day to day life, we are going to eat, and that our survival is based primarily on the bread-and-butter, which is food. Even though we are surrounded by science and innovative technology, everyone is still unaware of the benefits of this technology and its applications. This is a project that will help you and will be admitted to the awareness of the users, a lot of farmers will be able to use it, and it will be ready for you to use this application, the advantages and benefits. The e-agriculture portal, which will serve as a way for farmers to sell their products across the country, with information on how to gain access to this site. The system will help the farmers in all aspects of the market prices of the various products, the total revenue and the revenue for the sold goods, the new methods with the use of e-learning. They will be easily accessible to all necessary information in relation to the markets, and the variety of products that may be produced with the help of an SMS-based system provided by the system.*

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I. INTRODUCTION

A detailed study of this topic has been led us to an end where we have got a numerous problem ascertained are mentioned.Farmers want to move out from an old tradition of bargaining to the exercise of preferences. Farmers too need a pellucid market where the selling opinion becomes matter of unilateral choice rather than give and take between two parties. The people in mandi exploit farmers by giving them prejudice rates even for their standard produce. Farmers are not literate to the mark so that they can access internet and website. If we literate few farmers then a system (laptop or personal computer or android mobile) is essential. Agencies spotted in the market that confer agriculture information via SMS and Call are IFFCO Kissan Sanchar Limited (IKSL) and Routers Marker Light (RML).

1.1 EXISTING SYSTEM:

E-FARMING: An emerging market field in the agricultural informatics, agricultural development and entrepreneurship carfax, being referred to agro services, technology prevalence, and acquaintance delivered or enhanced with aid of the Internet and related techniques. Peculiarly, it embraces the conceptualization, creation, advancement, evaluation and utility of new door-ways to utilize present information and communication technologies (ICTs). E-Farming walk away techniques approach, to promote the unification of technology with multimedia, intellect and culture, with the goal of enhancing communication and educating processes in between various sectors in agriculture i.e. local, regional and worldwide.

In current scenario, there is not a single system available with all required solutions of the time. SinceMarch, COVID-19 lockdown has been imposed in various nations including our country India, due to which contactless delivery is dire need. Hike in prices of potatoes and other produce of farmers being anunexplained mystery for costumers whereas farmers get low prices for the same.

This menace can be scratched out from our country by removing a chain of middlemen present in between. Lack of concrete system provided for farmers by government, they haggle in between black-red cards of employees and so called mandi-men.

1.2 PROPOSED SYSTEM:

We are initiated to develop e-farming portal that fulfill all needs of the farmer and give the required output/solution. We have multiple slices on portal like login for farmer/people to use it on their style. As per requirement of our application who will using the application via mobile phone i.e. an android phone. Our main goal is to help the farmers who are in trouble and give them a user friendly application.

1.3 FEATURES OF THE SYSTEM:

We are providing a hassle-free solution which helps in various ways:

- Linking Farmer to the Customer via application.

- Chatting option for Farmer and Customer.
- Providing knowledge to the farmers by the means of government schemes availableto them.
- Multiple language option for ease of understanding.
- Review and comment section.
- Notifications to the farmer and customer from server system side.

II. GENERAL ARCHITECTURE:

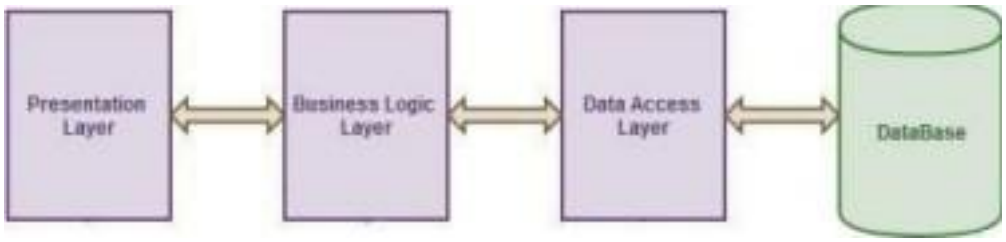

Figure 2.1 Workflow Diagram

III. METHODOLOGY:

Javascript is a small script, or j-i-t(just in time) compiled programming language with first-class features. At a time when it was best known as the scripting language for web sites. Just as in an asynchronous instagram-managed environment, the gallery, or Node.js it is designed for the production of precision parts. In the following, "hey bunny," for example, many connections can be handled. On each link, and the call

up of the work, however, if there is no work to be done, Node will does.js you will be sleeping. Manufacturer of a minimal and flexible Nodes.js framework for a web application, which provides a wide range of features for web and mobile applications. The flexible development of web-based applications, on the basis of the cluster nodes. MongoDB is a free and open-source document database, which is the host of the NoSQL databases. It is written in C++. The creation and development of a highly scalable and performance-oriented databases, it requires a deep understanding of the MongoDB database to the concept.

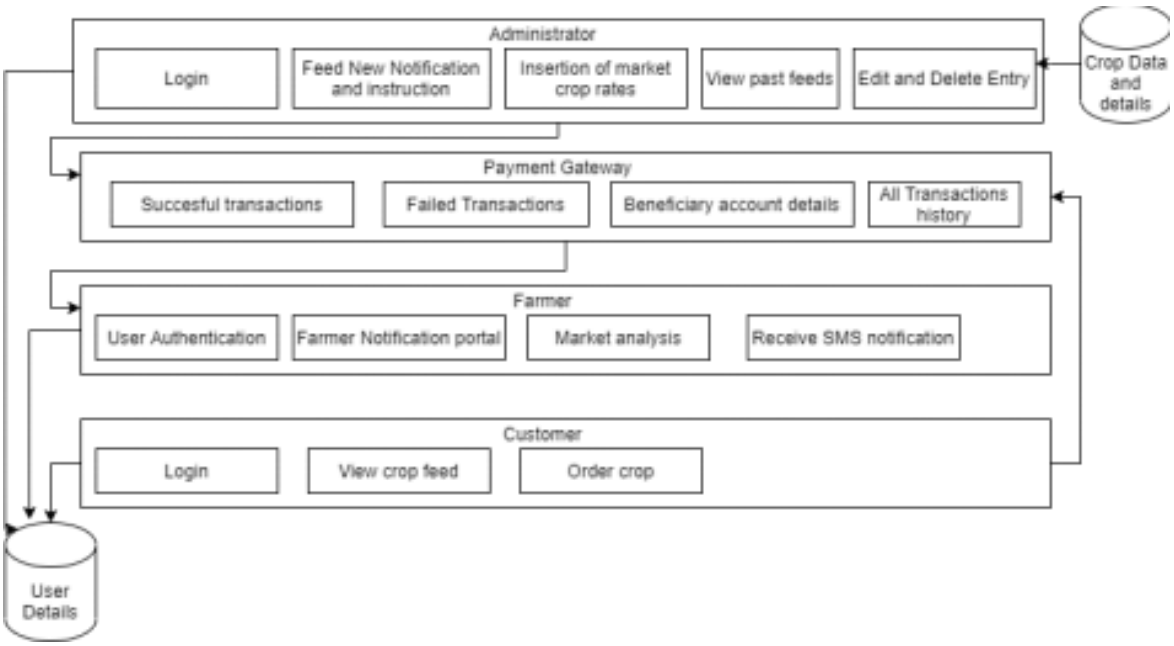

Figure 3.1 Overall System Architecture Of The System

IV. IMPLEMENTATION:

The system will have separate User-name and Password section on the portal, according to the username and password the information regarding user will be stored i.e. Farmer/Administrator/Customer.

Farmer: Farmers can sign up if they are new, log-in to their residing accounts with help of login credential which will provide them the control to utilize the services provided by the system. Authorized farmers can vend their product and can view his fund. The Farmer can check their account also.

Administrator: Monitor transactions and manage user accounts. Maintain the website and make it eye catching and user-friendly. It provides username and authorities accordingly to the user needs.
Customer: Customer accounts are maintained by separate login and sign-up. He/She can view all feeds uploaded by farmer and can place orders for farmer produce of their interest. They will be notified by means of SMS notification if they had searched for a product previously not available on site due to insufficient figures of stock when stock will become available on portal.
Node Mailer: We have used a node mailer for mailing customers about the availability of items which will enable users to find their need. A short pseudo-code is entitled below:

Steps in the pseudo code:
1. Initialize NodeMailer to require('NodeMailer').
2. Initialize Transporter to create Transport({ service: 'gmail', auth:user:'useremail@gmail.com', pass:'userpassword'
3. Initialize MailOptions to
from: 'useremail@gmail.com', to: 'userfriend@yahoo.com',subject: 'email sent using node.js'', text: 'easily sent!!'
4. Send mail by using send.mail(MailOptions, function(bug, info){
5. if (bug)
Do write(bug print);
6. else do write('email sent: ' + info.response);

Regular Expression: A regular expression is defined as an object that helps to find/identify a pattern of characters. They are very useful in pattern-matching and "replacing-and-searching" functions on text.

Syntax: /pattern/modifiers;

For automation we used help of these steps written over here:
1. We require to import selenium from webdriver.
2. Now from webdriver.support import expected conditions as Ec.
3. Similarly import webdriver.wait.
4. We require to import keys from webdriver.
5. Last we import from selenium.webdriver.common.by import By import time.
6. Replace the mentioned path with the actual path of your drive in your computer 7. Setting driver to webdriver.Chrome('C/download/driver') driver.get("whatsapp.com/")
8. Set wait to WebDriverWait(driver, 600)
9. Now, Replace 'xxx' by your friends name
10. Target is "xxx"
11. Now replace the mentioned string with personalized string.Str is "python is sending this message!!!"
x_argument is span[contains(@title, target)]
group_name is equal to wait.until-Ec.presence_of_element_located-By.x_path, x_argumentgroup_name.click

x_path set to '//div@dir="auto"@class="input"@data-tab="1"' box will set equal to
wait.until(Ec.presence_of_element_located((By.XPATH, xpath)))
Loop z i to 100
Box dot send_keys(str + Keys.ENTER)
Set time to 2

V. RESULT ANALYSIS:

We are examining Quality of Services of various different activities that are performed at different stages of execution and observed that information initialized from various authorised organisations are reliable and efficient or not. Suppose that the data taken is reliable and productive than QoS's value provided are are based on assumptions and exist to have an ideal environment, but to have ideal conditions in real life it's not possible to have them all the time so the result will be different between ideal condition evaluation and real life evaluation.

VI. CONCLUSION BASED ON DATA:

The tables mentioned below are created for the performance analysis of our website.
Here, p1,p2,p3… p6 are the user's requests that are raised by them against a particular query. The below mentioned table consists of the instances of several requests raised by the users, Response time is the total time taken by the website to fulfill,respond or terminate the request, accuracy (no. of accurate results and accessibility.

Request	Response Time	No. of accurate result	Accessibility
p1	**0.6s**	**40**	**0.1**
p2	**0.4s**	**44**	**0.07**
p3	**0.06s**	**36**	**0.18**
p4	**0.14s**	**24**	**0.02**
p5	**1.2s**	**32**	**0.06**

Table 5.1.1 Based on data

Here, we will make a constrained set of data and calculate the difference of shown values and desired or actual values and then will observe the value of difference whether it is maximum or minimum. The smaller the value of the difference the imperfect are the shown values on the other hand if the value of difference is minimum then the shown values are feasible .

To calculate the value we will take the table 5.1.1 into consideration

p1={0.6, 40, 0.1}
p2={0.4, 44, 0.07}
p3={0.06, 36, 0.18}
p4={0.14, 24, 0.02}
p5={1.2, 32, 0.06}

Formulas to be used:

$Fa\_pj = \sum ij, q \neq 0$ (1)
$Fa\_pj = \sum lj, k \neq 0$ (2)

Fa_pn :{Fa_pnj, 1<j<m}: Fa_qnj is nth shown value 'Aj'of attribute. The two-time average formula is used to calculate the Global Quality of Service value of the services offered by our website. The method includes random sampling of q(q<n) of the mentioned n values(q<=n); the 1st QoS value Fa_p1 can be calculated using the below method as shown. Sampling of data is done k times to get k sampling values and then the global QoS values can be calculated using the formula (2).

For p1, QoS calculated from Formula no.1
$Fa\_pj = \sum$

ij,

$q \neq 0$
if q=2, thenFa_p1=
½(.1+40)
=20.05

Sample values=3

for k1, q=2, value of p1 = {.6, 40} = ½ (.6+40) Formula [1]
= 20.3
for k2, q=2, value of p1 = {20, .05} = ½ (40+.1) Formula [1]
= 20.05
for k3, q=2, value of p1 = {.3, .05} = ½ (.6+.1) Formula [1]
= 0 .35

Similarly, we can calculate the rest of the values,

Request	k1	k2	k3
p1	20.3	20.05	0.35
p2	22.2	22.035	0.235

p3	18.03	18.09	0.12
p4	12.07	12.01	0.08
p5	16.6	16.03	0.63

Result Interpretation:

The calculations done in order to find out the quality of service are found very appreciable. It means the QoS of our system is very effective and feasible to use. More the value limiting towards zero, more the site will become effective and giving hassle free query response without haggling for results after firing any specific query or transaction. Our system is better to use and can withstand against the performance metric figures.

VII. Conclusion:

An e-farming portal to approach the agricultural information from the Internet global repository and the local repository. The proposed portal is capable of overcoming the digital and language restrain of the Indian farmers by utilizing the multiple modes of interaction techniques. We can conclude that the proposed portal is vastly usable, exercisable in the desired context. In the current scenario, the e-farming portal is limited to access the agrarian information in Indian language context. Yet, it can be extended toward the agrarian context of any nation in the world, which will irradiate that the approach is generic.

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