Android Application For Smart Farming Services

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Abstract: Intelligent room is rising technology growing continuously now. It integrates of many new technologies via domestic networking for enhancing human's pleasant of residing, so there have many initiatives studying in numerous technologies to apply to the smart domestic gadget. Accordingly, this paper reviews diverse topics on wise room technology from surveying for smart domestic research projects. The topics is based on the definition of smart room and the info of clever room factors which includes wise room networks that can be classified into two principal sorts, which are wiring system and wireless system, clever room controllers that use for coping with machine, the home equipment or the clever devices and the demanding situations of smart home. This paper also gives many interesting tasks summarily, so it is able to be ideas for whoever wants to learn this technology. Agriculture is still the major occupation of majority of people in India. One major problem which farmers face is where and how to sell their crop in market. Farmers rarely get the price for their crop which they think.On the other hand the food industry also needs to keep track on where they will get crop or food according to their need. Digitization in this field of agriculture will bring a great economic change in country. One such are is the direct connection between farmers and the food industry. This will make sure that farmer grow what the food industry demand and it will greatly help farmers in getting good amount for their crops. Proposed system will be android application in which both farmer and food industry will enroll themselves and can communicate with each other. Industry can book food products from farmer in advance which will make the planning of food industry more successful in their pre-production phase. Farmer will know in advance for whom he is growing the crop and industry can also give their standards and demand quality food.

Keywords: : Farmer, Food Industry, Pre-Production Stage,Information and Communication

I. INTRODUCTION

Farming: India is an agricultural country, where most people depend on agriculture.Farmers have wide range of diversity to select suitable crop. Agricultural in India is not only here chief occupation, but a way of life.The farmers in India are poor and hence unable to give maximum input to their land to get the maximum output.Therefore there is need to introduce a change in our technology so that these technologies become labour intensive to provide employment to the large number of people already ingaged in agriculture.

Farming and Food Industry: The Indian food industry is poised for huge growth, increasing its contribution to world food trade every year. In India, the food sector has emerged as a high-growth and high-profit sector due to its immense potential for value addition, particularly within the food processing industry.Accounting for about 32 per cent of the country's total food market, The Government of India has been instrumental in the growth and development of the food processing industry. The government through the Ministry of Food Processing Industries (MoFPI) is making all efforts to encourage investments in the business. It has approved proposals for joint ventures (JV), foreign collaborations, industrial licenses, and 100 per cent export oriented units. The Indian food and grocery market is the world's sixth largest, with retail contributing 70 per cent of the sales. The Indian food processing industry accounts for 32 per cent of the country's total food market, one of the largest industries in India and is ranked fifth in terms of production, consumption, export and expected growth. It contributes around 8.80 and 8.39 per cent of Gross Value Added (GVA) in Manufacturing and Agriculture respectively, 13 per cent of India's exports and six per cent of total industrial investment. The Indian gourmet food market is currently valued at US$ 1.3 billion and is growing at a Compound Annual Growth Rate (CAGR) of 20 per cent. India's organic food market is expected to increase by three times by 2020#.The online food ordering business in India is in its nascent stage, but witnessing exponential growth. With online food delivery players like FoodPanda, Zomato, TinyOwl and Swiggy building scale through partnerships, the organised food business has a huge potential and a promising future. The online food delivery industry grew at 150 per cent year-on-year with an estimated Gross Merchandise Value (GMV) of US$ 300 million in 2016.

1.2 Motivation:

Farmer control measure population in india.Farmer do not get appropriate cost for then food item.food industry need to several their requirements which is time consuming so system which will join farmer & food industry is proposed in system

1.3 Problem Definition:

"To design and develop a system which will enable farmers to register and upload their crops details so that food industry can directly search crops or food according to their requirement and communicate with farmer."

1.4 Objectives And Scope:

Create a bridge through which farmer and food industry can directly communicate with each other.Reduce the time and efforts of food industry involve in searching food products suitable for their requirement.

Reduce the time and efforts of farmer involve in selling their yield in market. Provide appropriate cost to farmer's crop with direct communication with food industry.

III. SYSTEM ANALYSIS

3.1 PROPOSED SYSTEM:

Proposed system is a client server based architecture where the farmer and food industry are clients of the system. Both farmer and food industry will have android application for communication with each other. The system will consist of a centralized web server which will handle all the request and response of the systemstatistics the use of the Amplitude Modulation (AM) method.And X10 controllers ship signals over current AC wiring to receiver modules. Other technologies are HomePlug, Consumer Electronics Bus (CEBus), European Installation Bus, and so on.

IV. SYSTEM REQUREMENTS SPECIFICATION

4.1 Hardware Requirments:

Hardware	Specification
Processor	Intel Pentium 4 Onwards
Hard Disk	As per OS500MB of free Hard-disk space
RAM	512 MB

4.2 Software Requrements:

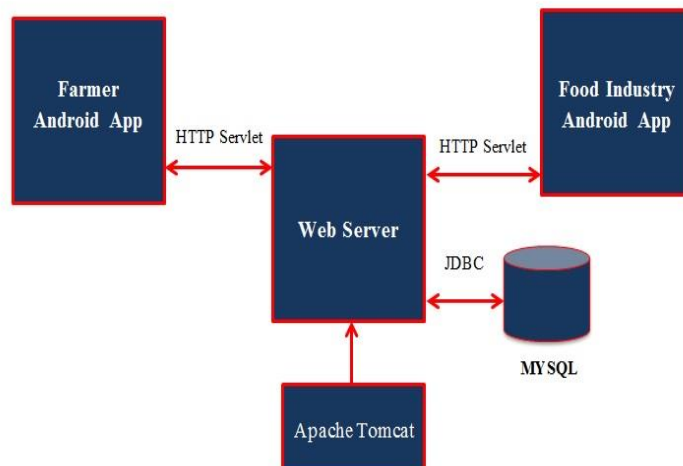| Software	Specification
Operating System	Windows XP ,Windows 7 etc.
Developing Tool	Net beans IDE, Android Studio
Database	MYSQL 5.0

V. SYSTEM DESIGN

5.1 Block Diagram

Figure 1 : Block Diagram of System

There are Three main Components in the System.
1) Farmer Android App
2) Food Industry Android App
3) Web Server

Farmer Android App:
The farmer android app will be designed using android studio editor. The front end of the app will be designed using android XML layouts. The logical code will be developed in java.The app will use java servlets mechanism for communication with server.Farmer app will consist of following features:
- Farmer Registration
- Login
- Upload food products
- Edit food products information
- Upload 7 12 utara for verification
- View food industry requirements
- Reply and accept to food industry requirement

Food Industry Android App:
The food industry android app will be designed using android studio editor. The front end of the app will be designed using android XML layouts. The logical code will be developed in java. The app will use java servlets mechanism for communication with server. App will consist of following features:
- Food Industry Registration
- Login
- Search Food products based on keywords
- View farmer and product details
- Send enquiry to farmer
- View Farmers reply to enquiry

Web Server:
Webs server will be developed using net beans ide. Server will use apache tomcat server to run. Web server will connect to database using JDBC connection and manage the entire database. There will be individual servlets for all the client and server handling mechanism. App will connect to server using the http servlets call via internet or wifi medium. Webs server will be responsible for handling all the request and response of the system and providing all the relevant data to client of system.
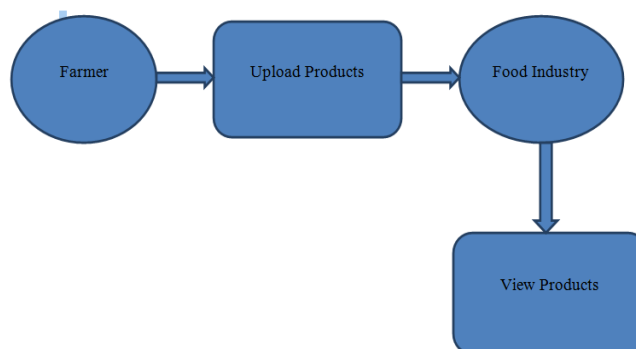
5.2 DFD Diagram

Figure 2-LEVEL 0 DFD

In level 0 DFD input is Farmer then farmer upload the products then food industry view the products as result.
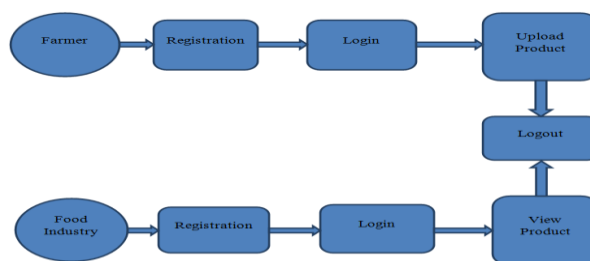
Figure 3-LEVEL 1- DFD

In level 1 DFD input is Farmer ,farmer complete the registration process then login app and upload its product description then loggout.Same process followed by Food Industry ,food industry complete the registration process then login app view the products of farmer response to farmer product if food industry needed then logout.

VI. IMPLIMENTATION DETAIL

6.1 Implementation Details:

6.1.1 Methodologies Used:

SHA-1 Password Security Algorithm: The Secure Hash Algorithm 1 (SHA-1) is a cryptographic computer security algorithm. It was created by the US National Security Agency in 1995, after the SHA-0 algorithm in 1993, and it is part of the Digital Signature Algorithm or the Digital Signature Standard (DSS). SHA-1 produces a 160-bit hash value or message digests from the inputted data (data that requires encryption), which resembles the hash value of the MD5 algorithm. It uses 80 rounds of cryptographic operations to encrypt and secure a data object. Some of the protocols that use SHA-1 include:

Transport Layer Security (TLS)

Secure Sockets Layer (SSL)

Pretty Good Privacy (PGP)

Secure Shell (SSH)

Secure/Multipurpose Internet Mail Extensions (S/MIME)

Internet Protocol Security (IPSec)

SHA-1 is commonly used in cryptographic applications and environments where the need for data integrity is high. It is also used to index hash functions and identify data corruption and checksum errors.

CONCLUSION AND FUTURE SCOPE

Conclusion:

Farmers and food industry are closely related to each other as both of them depend on each other's products. For farmer finding an appropriate food industry to sell their products and for food industry to find appropriate farmer which will provide quality food for their production is a very time consuming task. The proposed system architecture will greatly solve these problems as both can directly communicate and thus bring the agriculture and food industry sector under on roof..

Future Scope

1) In Future we will develop IoS Application for apple users.

2) We can add prediction & suggestion to food industry based on their requirements.

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