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Farmvil

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Abstract—

Android is a portable working framework dependent on an adjusted adaptation of the Linux piece and other open-source programming, planned basically for touchscreen.

It is created by Google and later the OHA (Open Handset Alliance). Java language is predominantly used to compose the android code despite the fact that different languages can be used.

The objective of android venture is to make a fruitful genuine item that improves the portable experience for end clients.

The app developed in the android are very efficient and are very user friendly which can be used in almost every field of society.

Therefore, they can also be used in solving modern day farming problems. Notwithstanding the enormous scope motorization of agribusiness in certain pieces of the nation, the majority of the rural activities in bigger parts are carried on by human hand utilizing basic and customary instruments and executes like wooden furrow, sickle, and so forth. Almost no utilization of machines is made in ploughing, sowing, irrigating and pruning, weeding, reaping sifting and moving the yields. This is uncommonly the situation with little and minor farmers. It brings about enormous wastage of human work and in low yields per capita workforce. Agricultural promoting still keeps on being in a terrible shape in rural India. Without sound showcasing offices, he ranchers need to rely on neighborhood merchants and mediators for the removal of their homestead produce which is sold at discard cost. So to give the information about these procedures, and about the new devices we will make an application. Also, from this application no one but individuals can purchase the cultivating items from the rancher straightforwardly so the job of center man will be done.

Keywords— Android, Agriculture Farming

Introduction

In India a high percentage of the population is dependent on agriculture but the quality of yield is very poor as most of the farmer are using the old techniques of farming as they do not have any knowledge about the modern techniques of farming. Due to that a large amount of yield is destroyed because of unseasonal rains, drought, floods and pest attack.

The Agriculture is one of the significant business the ordinarily influenced the humankind life. From the antiquated to the agrarian insurgency in India, cultivating is the way that human used to reap plants and burned-through them in their day-by-day life.

Farming has been improved by numerous advancements supporting trimming framework and high return yield innovation. Notwithstanding the farming.

upset time, there have been numerous advances that have impacts on agriculture Cultivating has been improved by numerous advances supporting trimming framework and high return reaping innovation. Notwithstanding the rural insurgency time, there have

been numerous advancements that have impacts on farming. Web has associated with individuals' day by day exercises.

It is estimated that more than 40% of food produced in **India** is **wasted** before it reaches the consumer because of the large number of people in our country are facing poverty.

In 2015, India's farm yield surpassed 270 million tons, which was well over the 230 million tons of food needed to take care of its populace that year.

As indicated by the United Nations' Food and Agriculture Organization (FAO), India is the biggest maker of milk and heartbeats on the planet, and the second biggest maker of rice, wheat, sugarcane, groundnut, products of the soil. The nation likewise has 46 assortments of soil, which encourages the creation and exportation of a different scope of harvests.

Regardless of these measurements, hunger stays a significant issue inside the nation.

In the 2018 Global Hunger Index—an overall report that tracks hunger on worldwide, territorial and public levels—India positioned 103rd among the absolute 119 nations. The country keeps on coming up short in taking care of its populace regardless of the plentiful horticultural riches. Specialists state the prime purpose for this divergence is down to the sheer wastage of agriculture food.

According to FAO, roughly US\$14 billion (more than ₹1 lakh crore) worth of food is squandered in India consistently.

Another major problem related to agriculture in India is use of poor technologies & techniques. eg. Effective con-duct of farming tasks relies on a crop rotation. If grains are developed on a plot of land its fertility is diminished somewhat. This can be reestablished if different harvests, for example, pulses are grown on a similar plot on a rotational premise. Most farmers in India are ignorant and don't un-derstand this significant point. Since they don't know about the requirement for crop pivot, they utilize a similar sort of yield and, thus, the land loses its ripeness significantly. Insufficient utilization of fertilizers like cow dung or vegetable waste and substance manures makes Indian agriculture These are just some few examples of using old and out dated techniques in our agriculture sector.

To overcome the problem of difficulty in getting to urgent data so as to make ideal choices in provincial territories, improvement of Mobile Application System utilizing the accessible assets furthermore, innovation would fill in as a choice help framework for the little ruminant ranchers at a reasonable expense.

Android is a mobile operating system developed by Google, based on a modified version of the Linux kernel and other open-source software and designed primarily for touch screen mobile devices such as smart phone and tablets.

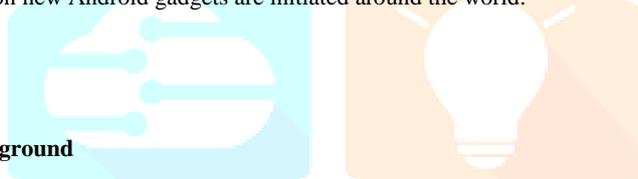
Android has been the smash hit OS worldwide on cell phones since 2011 and on tablets since 2013. As of May 2017, it has more than two billion months to month dynamic clients, the biggest introduced base of any working OS, and as of August 2020, the

Google Play Store highlights more than 3 million apps. The current stable version of android is Android 11, launched on September 8, 2020.

Since Android gadgets are typically battery-fueled, Android is intended to oversee cycles to keep power utilization at the very least. At the point when an application isn't being used the framework suspends its activity so that, while accessible for moderate use instead of shut, it doesn't use battery force or CPU assets.

Android deals with the application put away in memory consequently: when memory is low, the framework will start imperceptibly and naturally shutting dormant cycles, beginning with those that have been latent for the longest measure of time.

Android's source code is delivered by Google under an open-source permit, and its open nature has energized a huge network of engineers and lovers to utilize the open-source code as an establishment for network driven undertakings, which convey updates to more seasoned gadgets, add new highlights for cutting edge clients or carry Android to gadgets initially delivered with other working systems. These people group created delivers regularly bring new highlights and updates to gadgets quicker than through the official producer/transporter channels, with a tantamount level of value, offer proceeded with help for more established gadgets that at this point don't get official updates; or carry Android to gadgets that were authoritatively delivered running other working frameworks, for example, the HP Touchpad. Android applications are typically made in the Java language utilizing the Android Software Development Kit. When created, Android applications can be packaged effectively and sold out either through a store, for example, Google Play, Slide ME, Opera Mobile Store, Mobango, F-droid and the Amazon Appstore. Android powers a huge number of cell phones in excess of 190 nations around the globe. It's the biggest introduced base of any portable stage and developing quick. Consistently more than 1 million new Android gadgets are initiated around the world.



Background

Most of the time, these farmers are constrained, under financial conditions, to continue trouble offer of their produce. It is assessed that over 40% of food created in India is squandered before it arrives at the customer.

Indian agriculture is mainly dependent on labor, generally means cultivating, almost 60% of its populace is subject to cultivating and most farms are rainfed. Then again, American cultivating is capital serious, generally business cultivating under 3% of its populace is subject to cultivating and most farmers are inundated. The two nations offer endowments to their ranchers be that as it may, US appropriations are more than India's, subsequently the Doha round debate.

For various evident reasons, the movement and example of ongoing financial advancement in China and India welcome an efficient examination. It is continually fascinating to quantify and look at the advancement of these two extraordinary neighbors, including an enormous portion of the world's least fortunate individuals, both having as of late dispatched huge projects of extension and improvement following quite a while of unfamiliar control, disorder and stagnation. Far beyond that, the huge contrasts in the establishments and approaches, the two nations have decided to embrace for accomplishing extensively comparable economic objectives.

This is especially obvious regarding agribusiness. Although, in the two nations the significant accentuation is on quick industrialization due to the dominantly agrarian nature of the economies, the agriculture area gives the fundamental establishment to mechanical development with provisions of food, raw materials, and work force, with business sectors for modern merchandise and with unfamiliar trade procured through fares of essential items. In the two nations the movement of mechanical development is seriously obliged by the ideas of farming creation and reliance on horticulture as an immediate kind of revenue is additionally significant, even after so long of industrialization.

One should note here that the costs at which yield is esteemed being better for industry in China than in India, the general portion of current industry in national income is bigger in China. Both have generally been agriculture economies and well over portion of their billion or more individuals keep on relying upon land for their occupation. Given their enormous populaces and narratives of starvation, India and China likewise share comparable worries on

issues, for example, food security. Notwithstanding, while India's agriculture sector is developing by about 2.5 percent; China's has been consistently developing at somewhere in the range of 4 and 5 percent throughout the most recent 15 years. By 2005, China had truth be told as the world's third biggest food giver. China with lesser cultivable land creates twofold the food grains, at 415 million tons for every year contrasted and India's 208 million tons for each year. This article is an endeavor to make a relative investigation of cultivating in India, China and US.

These problems could be solved these problems providing the knowledge of modern trends in agricultural industries which will help them to increase their yield.

EXPERIMENTATION DETAILS AND PROPOSED



FEATURES:

This figure shows our work layout plan.

It is an Android based mobile application which will provide the information about the new modern techniques in the farming sector. It will provide the information about the diseases in the plants, and many more information related to the farming. In it the farmer will also able to sell its yield to the anyone directly just like amazon & flipkart.

It is designed to meet the requirement of the Indian farmer and it will have plenty of features:

- The application has simple to utilize Graphical User Interface (GUI) with the ability of making/altering/erasing portfolios that store the client inclinations of market costs.

Proposed features

The app has many several features like creating the portfolios of the users. It will inform the farmer about the modern techniques in the farming. It will also show the latest news related to agriculture. From this app the user will also able to buy the products directly from the farmer at a reasonable price. The farmer will be able to know about the latest technologies & techniques. They were also be able know the latest news related to farming



. Fig. shows the features of our app

RESULTS AND DISCUSSION

Gathering the information about the problem:

The main problem faced by the farmers is that they were not been able adapt the new technologies which are there in the market they basically practiced the old farming methods.

They also do not have any good idea about how the Farming practices are carried out in the other countries. As they are not very educated, they were not been able to take benefits of government schemes and subsidies. But if there is something which tells them about the new techniques and about the news related the farming, they may be able to get themselves updated. Technologies blasting in this Information Era, local and crossover based versatile applications programming is generally utilized in the improvement of portable application. Among these, Android based versatile application programming was chosen since android is one of the advanced.

cell working framework whose most applications are accessible uninhibitedly on an android market. Android is an operating system for mobile device and also, a platform to develop key application for the smartphone. Java programming language is utilized to create android application by utilizing Android SDK devices and API.

Mobile app. Developed

Identify the need of the farmer is an very important step. The data on recognized needs must be given to the farmers in an coordinated way, which can be effectively understood by them. he most recent specialized instruments can be successfully used to give all the data as per the person's need in a brief timeframe at less cost.

Structure of the mobile app

The app has a very simple user interface. At first there is a login page which will take your emailed & your password to login. There is also a sign up button which will take you to the sign-up page which will take your name, email address, username, password, phone no. It will store your credentials in the firebase. There is a forgot Password button which will take you to another Screen which will take your email id and it will send you an email from which you can change your password. There is also a forgot password button which will take the user to the page where it will take the user to the forget password page. From there the user can change their password if In case he has forgotten it by providing his email.

After you login into the app. you will be taken To the dashboard where there are several menus to the screen.

There are several menus like crops, agricultural, Soils, disease, tools. Crops will show the information About the different crops like rice, wheat, Pulses, etc. Soils will show the information About the different soil's types of crops suitable for it. Disease will show us the information of different diseases. Agriculture will show the the different agricultural activities. Tools will show the information about the different modern tools.

There are several options like about us which will Show us the information about the developers and Over there we have provided our email from there he can contact us.

There is a log out option which will log you out from the dashboard.

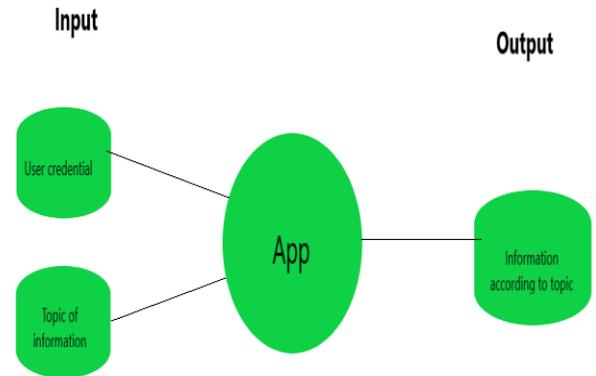


Fig shows the Architecture of our app

System Testing

The app was tested in several phones and it was developed in android version 4.0 jellybean. It was tested by several user. The user find that the app was working perfectly every aspect of the app was working fine. It was giving information related to farming easily. The speed of app to connect to the firebase depends the speed networks otherwise it can be used offline also.

The users were satisfied with the utility of the app. The farmers were more satisfied than the other users. The farmer felt that the app was very useful in giving them good information related to farming.

Easiness to learn, operate and navigate, the extension personnel perceived it as more satisfactory and farmers perceived it as less satisfaction. This was due to the fact that extension personnel know how to use a Mobile and the farmers were illiterate in term of computer knowledge and lacked skill in operating it.

The overall perception of the app was that most of the normal user & farmer was satisfactory. Thus, we could say that the app was a success. We would like to add some new operations in the app as per the user requirement.

S.no	Characteristics	Mean Perception Score		
		Extensive User (n=10)	Casual User (n=10)	Farmers (n=10)
I	Utility			
1	Usefulness	4.1	4.2	4.5
2	Saves Time	3.9	4.0	4.4
3	Suitable to get required information	3.6	4.3	4.2
4	Simple To operate	4.2	4.3	4.4
5	Easy to Learn	4.25	3.9	3.7
6	Advantages	4.1	4.3	3.98
7	Easy to navigate	4.5	4.4	4.1
	Sub-Total	4.09	4.2	4.18
II	Technical Component			
1	Layout	4.10	4.20	4.30
2	Readability	3.90	4.10	3.80
3	Background	4.20	4.10	4.30
4	Errors handling	3.80	3.70	4.30
5	Text	4.20	4.10	4.12
6	Content	3.80	4.10	4.30
	Subtotal	4.0	4.04	4.18
III	Information Component			
1	Message Relevancy	3.90	4.1	4.0
2	Message Clarity	4.10	4.3	3.7
3	Simple Language	4.1	3.9	3.8
4	Message Accuracy	3.71	4.1	4.2
	Subtotal	3.95	4.1	3.93
	Overall perception	4.1	4.11	4.10

Table Showing the Perception of the User

Conclusion

Today almost everybody can own a smartphone. So, my idea is to make an app which will give the knowledge to the farmer about the new techniques in farming, about the tools how to use them. The overall perception of the app ranged from satisfactory to more satisfactory. We want that our product should reach as many people as possible as they were able to use app for their help.

The technical component & message component of the app was the thing which satisfied the farmer the most. It can be used by anyone at anyplace and at any time. It was created to give the information to the farmer about the new technologies. It will help to break the barrier of the literacy barrier and deliver the information to the user. Android apps are very useful and can be used efficiently by any user as it is very user friendly.

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