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Automated Food Product Status Tracking Mobile Application

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ABSTRACT: Food is one of the biggest sector where number of products have been introduced by the various manufacturers. Before selling them they have to be graded by respective agencies. All this process of grading and submission of product was managed by hard copy resource. This paper suggests a mobile application for the same purpose.

KEYWORDS: Mobile Application, Tracking, Grading, Dynamic Access of the Data.

I. INTRODUCTION

In this age of technological advancements everybody would want to have their hands on comfort and improve their efficiency. Looking at the productivity rate, it increases rapidly when technology meets human efforts, together they go hand in hand and increase the productivity. Earlier technologies by researchers and computer scientists proposed a system where excel sheets were the mediumto maintain various details of food cereals and vegetable item and their test result, where all theprocedures were done by humans. As the no. of different food items came into picture it became although more difficult to manage.

Additionally Mobile Application is an application Software which is designed to run on mobile devices like smartphones and tablets. These application requires less resources as compared to traditional desktop applications and can be accessed on the go. They store data in their inbuilt database or on the server hosted remotely. Mobile application can be developed both for Android and iOS. The mobile Application developed here is for Mobile devices with android operating system with API level 20 and above.

II. RELATED WORK

In [1] various development approaches have been discussed which is used for this paper. [2] Describes the techniques for application development on Android OS. The author in [9] shows code conversion methodologies needed to run essential applications on different OS name Android and iOS. [11] Defines the way how mobile application interact with the web servers which is an essential feature used in this paper.

III. PROPOSED WORK

Here an application is developed for android devices. The application is developed using android studio. The minimum API level is 20 or android KitKat version 4.4.4. The application developed consist of two section manufacturer and admin. As soon as the app launches the information related to grading agencies.

After that on toggling the navigation drawer two options are displayed regarding admin login and manufacturer login. On clicking the admin login the login displayed. As soon as logging in three options are displayed regarding the admin login. First option is Viewing Details which displays the details of all products from all the manufacturers.

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Second option is Result Assignment which allots the results of the testing done on the food products. Third option is Status option which displays the status of all the products whether they have failed, passed or pending.

There are options for adding a new manufacturer. If it doesn't exist on the database a new one can be added. After adding the manufacturer is navigated to manufacture login page. On entering the details. The manufacture has two options to Add the products and Show details. Adding of the Product is done to so that the product can be registered and sent for testing. And second option is View Details which displays the status of the product belonging to the respective manufacturer.

IV. SYSTEM FLOW

The system architecture for the mobile application gives a complete detailed view of the functionality provided to both the manufacturer and admin.

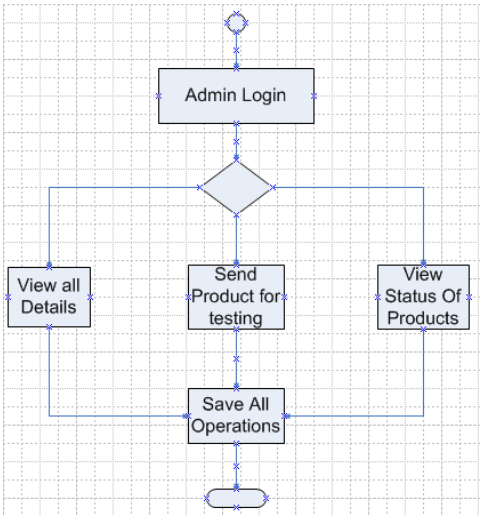

Fig 1. Admin Flow

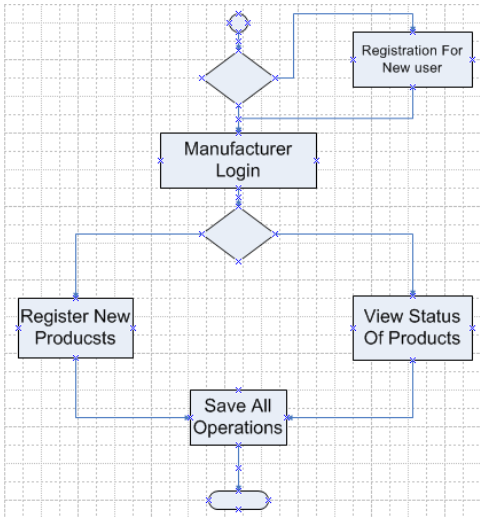

Fig 2. Manufacturer Flow

V. SIMULATION RESULTS

We have implemented the system as a mobile application in real time using a mobile device that runs the application and server that stores the databases. Also for simulation on the system on desktop we have android studio where the application is developed. We have also used xamp as a web server solution. The application runs on virtual emulator and performs same as the real time environment. The Fig no.3 is the first page of the app. It is used for the administrator for logging in. Fig no.4 is the screen that appears after the administrator logs in. There the administrator can perform the required functionalities. Fig no.5 is used for the registration of the new manufacturer on the system where he can register his products. Fig no.6 is used for all the registered manufacturers to log on the system. In Fig no.7 after the manufacturer logs in the system he can perform the described functionalities.

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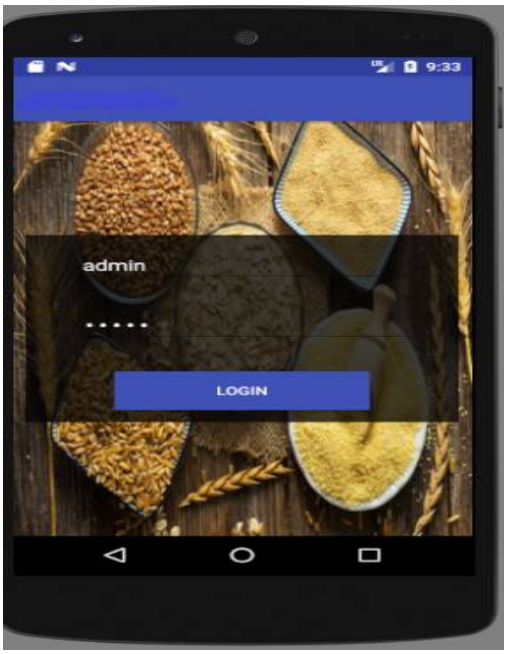

Fig.3.Admin Login

Fig. 4. Admin Functionalities

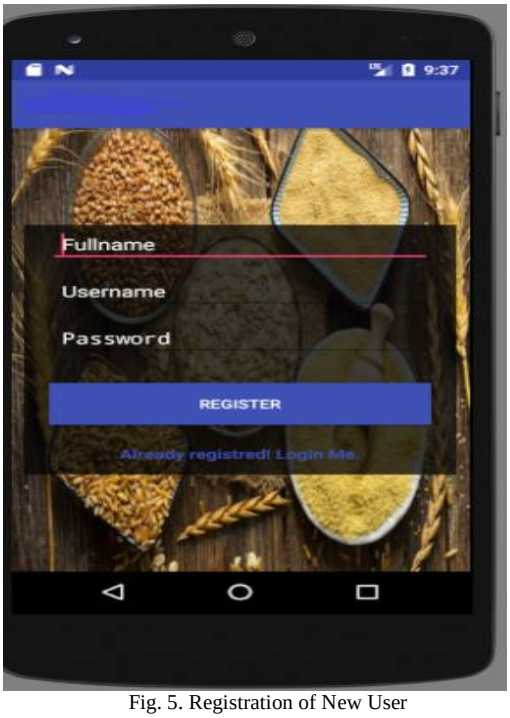

Fig. 5. Registration of New User

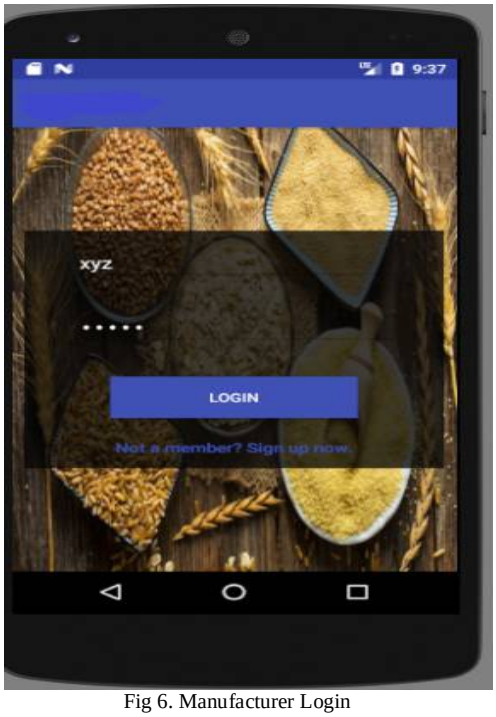

Fig 6. Manufacturer Login

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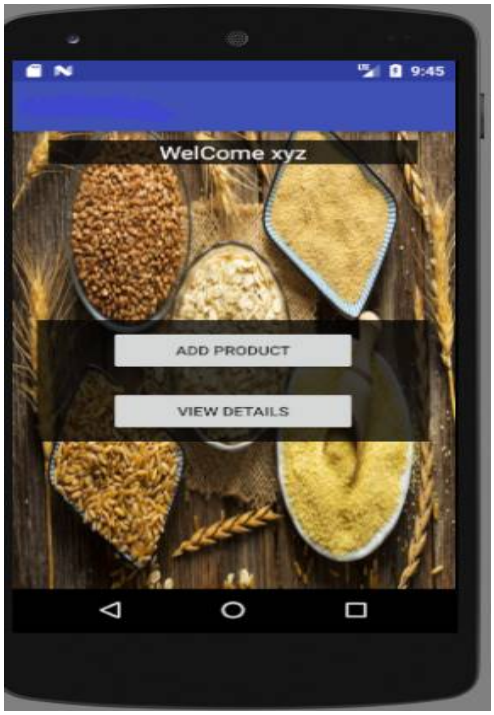

Fig 7. Manufacturer Functionalities

VI. CONCLUSION AND FUTURE WORK

The above given implementation of the system can be very useful for keeping track of the food products. This can help in better management of the products. Also the system can be implemented for other fields of manufacturing as well with little tweaks and changes. The system can prove useful in terms of substituting the hard copy process.

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