Development of Online Service Booking Mobile Application Using Android Studio

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ABSTRACT- This research is all about an application developed in order to make household services more manageable and easy like never before. We have developed an application for Online Service Booking native android application using android studio new version. This paper will also describe the working principle of this app. Admin panel of the application has been developed in PHP language with the help of Code Igniter framework a perfect tool to develop this kind of application. PHPMYADMIN has been used for the development of the database. Also we have used the hosting facility provided by 000webhost to deploy our code onto the server. Google firebase has been used for connecting our both the application as well as the admin panel all together. This application has many type of services. User can choose services according to their need and convenience. They can also select the date and time and the payment modes as per their preference.

KEYWORDS- Android Studio, Service Booking Application, ServiceBoy Application, Admin Panel, CodeIgniter.

I. INTRODUCTION

Due to Covid-19 Pandemic many poor service man has lost their jobs keeping that in mind we have developed an application that will be beneficial for both, the users and the service provider and we will charge a small amount from both the parties, so this will be the win-win situation for both the parties[1,2]. This application will help users to book different services as per their requirements for example: - Service Booking app is for to book appointment for various type of services like Plumbing, Cleaning, Painting, Home appliances, Lighting and Decoration, Car Service, Bike services, Electric Work, Carpentry Services, Mason Work, Spa Services, Gardening, Security Services, Taxi Services, Printer repair, Packers And Movers, Water proofing, Pop, PC/Laptop repair, CCTV Camera, Pest Control, AC Service and repair, Refrigerator Repair, Water Purifier / Ro Repair, Mobile / Tablet Repair, TV / LCD / LED / Plasma Repair, Air Cooler Repair, Geyser Water , Heater Repair, Microwave Repair, Washing Machine Repair, Solar repair, Many More other services. They just need to book the service and that can be done in less than five minutes. They can book the service according to their convenience. They can select the date of the service and time of the service that's all after that our service man will take care of all the services and need of the customers[3,4].

Features
- The User Interface is Easy To use.
- Registration and login can be archive with some normal clicks.
- Booking of the services is very much user friendly even a small child can book any service easily.
- Booking Details at a glance.
- Anytime customer support.

Table 1: Device configuration

	Android apps	Admin Panel
Devices	Smart Phones	Webpage
Software or Tools Used	Android Studio	CodeIgniter
Deploy	Play Store	000WEBHOST
Application Maintenance	Hard	Medium
Development Language	Java, Database concepts, OOPs concepts	HTML, CSS, JavaScript, PHP, SQLite

II. METHODOLOGY

The app which is discussed in this research paper is Service Booking App.

In the development of the app the following software/tools has been used:-

- 1:- Android Studio
- 2:- CodeIgniter
- 3:- PHPMYADMIN

Languages Used: - Java has been used for the development of both the apps and PHP has been used for the development of the admin panel.

SQLite has been used for the management of the database of the application.

The very first step for the development of the system is to download CodeIgniter, Xampp Server, and Android Studio for the development of Admin Panel, Database, and both the application respectively[5,6].

After Downloading the Software we need to setup our project for the apps for that we can follow the below mention steps.

Open Android Studio > new > new project.

After that we need to specify the app name and need to give a unique package name to our app. After that we need to configure our app with the Google firebase. In google firebase also we need to setup our project after successful setting up our project we got a unique json file that can be used to sync our app with the online server.

Now we need to setup the admin panel. For that we need to download the source file of the CodeIgniter for their official website and we need to download and setup the Xampp server onto our system once setup is complete than we need to start the apache server and SQLite after that we need to move our code of CodeIgniter into the htdocs folder and need to load the pages in the chrome browser. After successful setup we need to write our customized code for the admin panel. The various features are as follow:

- Dashboard: Task Pending, Task Done, Total Revenue,Task going on.
- Booking: Bookings details can be managed by the admin here.
- Categories: here categories can be added or deleted.
- App User Manage: we can manage our users here.
- Schedule: we can schedule the work time, holidays, half days with our convince.
- Offer: we can give attractive offers to our customers on festivals or on monthly basis.
- We can send any type of notification we want to the users.
- Page management: Here you can manage the pages of theapp.

Android Activity Lifecycle is controlled by 7 methods of Android App Activity class.

- **OnCreate:** Called when activity is firstcreated.
- **OnStart:** Called when activity is becoming visible to theuser.
- **OnResume:**Called when activity will start interacting with theuser.
- **OnPause:** Called when activity is not visible to the user.
- **OnStop:** Called when activity is no longer visible to theuser.
- **OnRestart:** Called after your activity is stopped, prior tostart.
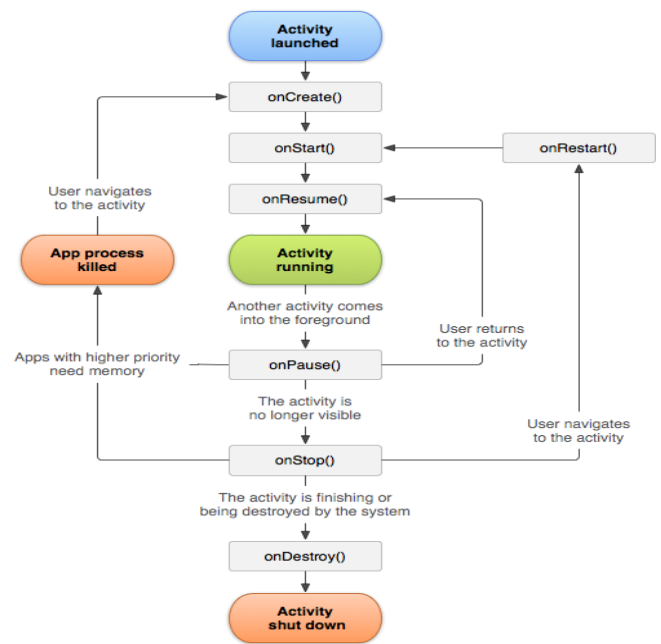- **OnDestroy:** Called before the activity isdestroyed.

Figure 1: Activity lifecycle

Intent is used as a message to move from one Activity to another in a proper way.

Figure 2: Android Intent to navigate from one activity to another

Figure 3: Process to build an Android app

III. DESIGN MODULES OF CAB APPLICATION USER SIDE SCREEN

A. Service Booking Application

This application consist of splash screen, registration screen, login screen, home screen with menu bar, slider page, payment gateways, categories, profile. Below are the details of the categories[7].

B. Splash Screen

The very first appearance of the app's screen is splash screen. It has some basic but important information like logo and name of the app. It generally last for 30 sec. Android Studio has the inbuilt splash screen option that can be used by anyone with the ease after this module we can specify some tasks according to our requirements.

C. Registration Screen

After the 30 sec of the splash screen we will move onto the registration page where the user need to fill out some details and get registered to our system. The user details include name, email address, phone number, address, and password. Once the registration is done successful then the user will automatically revert back to login screen.

D. Login Screen

After Successful registration the user will need to login using the registered email and password and if the user somehow forget the password then he/she can recover their password using the registered email.

E. Home Screen/ Menu Screen

On successful login the user will get directed to the home screen. Our home screen will consist of different elements from which user can choose according to the need like, slider page, categories, menu bar, profile, logo, username, app name, order history, about us, contact us. Our category option will serve the each and every service available in our app. After choosing the service the user need to select the time and date of service and then need to add his/her address.

F. Payment

After filling all the details, the user will head towards the payment gateway where they will different options to make the payments they can either choose to pay online or can also choose to pay cash on delivery. Online pay allows users to pay by using credit card, debit card, net banking, UPI etc.
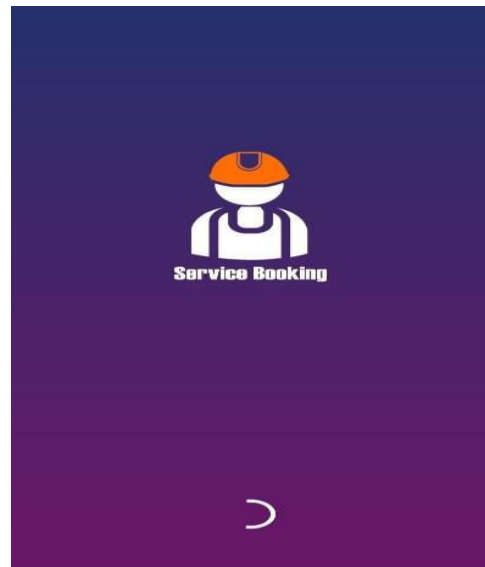Our application consists of majorly three pats USER, ADMIN, and SERVICEBOY:
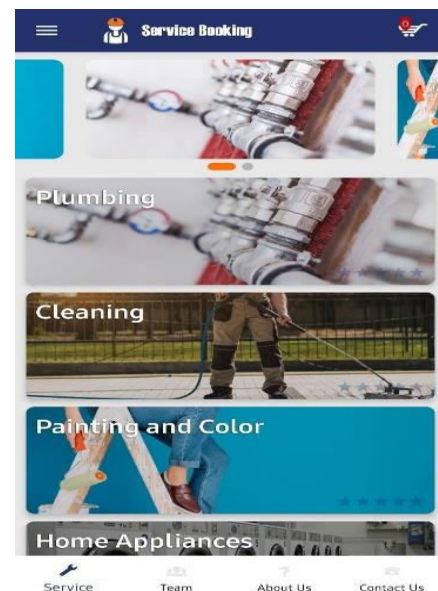

Figure 4: Splash Screen

Figure 5: Home Screen

G. Serviceman App

This app is made especially for the service man who can get the assignments and can do the following work assign to them and they can update the admin from the app only.

H. Login Screen

In the service man app there is no option for registration they will get their credentials from the admin because admin is the one who is going to add and remove service man from the system. So with the help of the credentials service man will be able to login into the app.

I. Home Screen (Serviceman App)

On home screen the service man can see all the details of about the assigned task and all the tasks that has been completed. And also they can see their overall earnings from the app only.
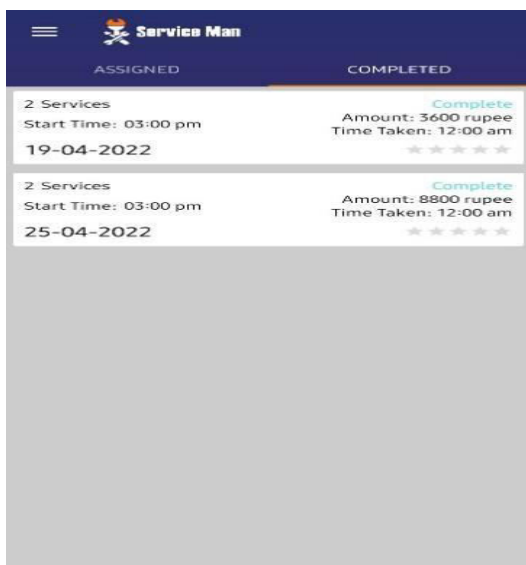
Figure 6: Serviceman Home Screen

Figure 7: Serviceman Task Screen

J. Admin Panel

Our admin panel is developed in PHP so it can be managing from a webpage. From the admin Panel the admin will be able to manage each and every activity of both the apps like categories, Banners, users, services men, payments, charges, addresses, working time, date assignment, offers, notifications, etc.
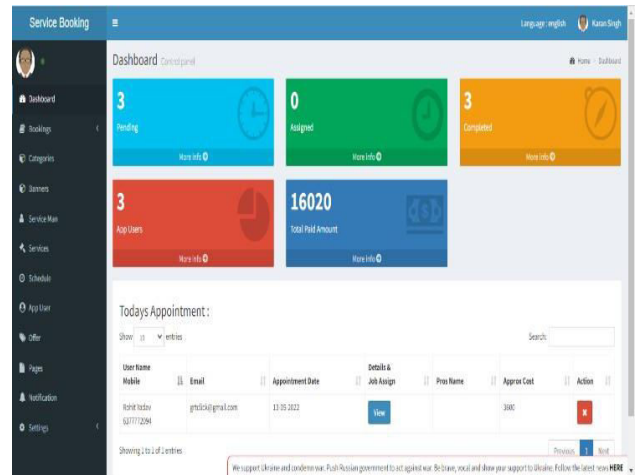

Figure 8: Admin Panel

IV. CONCLUSION

Our service booking app will enhance the house hold services experience and it will provide the services at a reasonable price so that anyone can afford it. And also it will provide jobs to many jobless people. It allows users to book any kind of services by just relaxing within their home they need not to make calls here and there for contacting the plumbers, painters, electricians etc.Not only booking is fun but also your work will get processed withintheallottedtimeperiodbyyou only. Theadminpanelofthe app is very user friendly so that the admin can manages each and every activity of the services and serviceman from a single screen on.

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