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TECH ASSIST CRM AN ANDROID SOLUTION FOR FIELD TECHNICIANS AND MANAGERS

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ABSTRACT

An innovative Android-based application called Tech Assist CRM was created to help executives and local technicians across a range of businesses operate more efficiently. The platform enhances performance, cooperation, and service delivery by fusing robust client relationship control (CRM) operations with mobile capabilities. Discipline provider management is essential in today's dynamic commercial enterprise scenario to guarantee operational quality, green customer support, and spark off. In order to handle these difficult circumstances, Tech Assist CRM offers a whole range of solutions designed specifically for discipline technicians and supervisors, enabling them to manage tasks, communicate clearly, and provide excellent service while at the gate.

Mobile Accessibility: Designed exclusively for Android devices, Tech Assist CRM provides field technicians with real-time access to customer information, service requests, and task assignments, enabling them to remain connected and productive from any place.

Task Management: The platform facilitates the scheduling and allocation of green projects by enabling managers to assign tasks according to technician availability, skill sets, and accessibility to supplier locations.

Customer Engagement: Tech Assist CRM's integrated CRM features enable technicians to examine customer information, opportunities, and service agreements, resulting in individualized service delivery and client satisfaction.

Keywords: User-Interface, API's, View Call list and Updation, Services, Status Updation.

INTRODUCTION

Tech Assist CRM is an innovative Android-based solution aimed at revolutionizing field service management for technicians and managers across various industries. The platform combines robust customer relationship management (CRM) functionalities with mobile capabilities to optimize operational efficiency, enhance communication, and improve service delivery.

An Android app for technicians and management is called Jeeves CRM. The Jeeves CRM application area provides all the typical CRM functionality needed for distribution, assembly, and management companies that need a 360-degree view of their interactions with customers, potential customers, trading partners, and other voting public. Technicians may easily utilise the Jeeves CRM Application. By entering their user ID and password, technicians can quickly log in to the programme. This will cause the page to redirect to the punch-in-page next page. The punch-in page is the one that a

technician sees when they log in for the first time of the day. The punch-in page is used to track the technician's whereabouts and attendance. Clicking on the photo will take you to the page with the list of calls.

They can view the list of calls allotted to his ID in the list-of-calls. He has individual client detail visibility. The call is his to accept or decline. The call page will not change if they accept, but the accept and reject choices will no longer be available. The website will reroute to the same page if the technician clicks the refuse button, but the specific call data is not displayed in the rundown. The row page can be sent to the update page after it has been clicked. The technician may check client details, product descriptions, and call history here. The technician can view their updated call history in the interaction log.

SCOPE OF PROJECT

Tech Assist CRM android solution is designed to update the customer status. The process begins when a technician opens an application in mobile and login with user Id and password. It is accessible by every technician, who is working in the Jeeves and wants to see the default of customer and want to update the status. In this system the technician can login themselves and can view the list of calls whatever allotted to them, and go to customer home for repair the things or installation and uninstallation, after that they take feedback from the customer and update the status whatever happen in customer home. This is tool and application is very helpful for employee and customer for good result. This system provides customer detail and technician can search customer address easily by the help of Google map and helps them to update status easily. The status updation process can be used as a final result of customer work by the particular person

- Technician
- Management

LITERATURE SURVEY

Tech Assist CRM solution it can process the function which will be the updating the status and providing the service to the customer. In the Tech Assist CRM which can be the process are see allotted customer calls, customer details and the updation process in that we have two user technician and management. The Tech Assist CRM solution region gives all the standard CRM usefulness ordinarily required by assembling, wholesale and administration organizations that require a 360-dgree perspective of their communications with clients, imminent purchasers, exchanging accomplices, and different voting public.

For businesses with scattered workforces and service activities, field service management (FSM) systems are essential to improving overall service delivery, customer happiness, and operational efficiency. This review of the literature looks at recent studies and business trends pertaining to mobile CRM programs designed for managers and field technicians

The Android application Jeeves CRM was created with Android Studio and is written in Java. Since almost everyone has a smartphone these days, technicians can install this programme on a phone with ease. Technicians can utilise this programme by logging in with their user ID and password. Since each technician has a unique ID, the business may allocate a call to that ID. This Android application's primary objective is to be time-consuming and user-friendly. where the assigned client call is visible to the technician. It is within the reach of any technician. When a technician logs in to this system, the application records their location and attendance along with the technician's date and time of visit. Fuel charges are covered by the company for the technician. thus it is Because technicians can easily view previous call statuses in the interaction log,

they can also easily modify the status. For example, if the status is part-pending, they can change it to call completed or anything else that is going on after providing the parts and repairmen. There is a warranty extension option in this application that will prolong the product warranty. Because there are only two options in the feedback field—satisfied and unsatisfied—management can quickly ascertain the level of service provided by the technician to the client. Technicians can get feedback from customers in the form of satisfaction or dissatisfaction. Technicians record any additional requirements that clients may have in the activity remark section. If the client is unavailable at home on a specific day.

Existing system

Because the current system is a web application rather than an Android application, technicians can only utilise the online application, which can take a lot of time. The technician finds it difficult to look up the customer's address. The technician couldn't access the online application when he arrived at the customer's residence due to a server outage. Certain information, such as the product's barcode, is entered by hand.

Drawbacks:

- Much time consuming
- Barcode reading is complicated
- Error prone
- Finding customer address is difficult

Proposed System

By taking into consideration all of the shortcomings of the current system to provide a permanent solution, the anticipated system is more cost-effective and healthier than the current one.

Accelerating the update process is the main goal of the new system. The envisioned system also has the peculiarity of being user-friendly. To make the system more user-friendly, the client decision list square measure is shown on the decision list page. The main benefit of the proposed approach is manpower savings because fewer people will be needed to read the fine print of different clients. Every record is placed into the database after being verified to be accurate and comprehensive. Another essential component of the proposed system is that client addresses may be found using a Google map instead of having to be manually entered, and barcodes can be browsed mechanically.

USE CASE DIAGRAM

A use case outline, in its most basic form, shows clients how they can interact with the framework to identify a use case. This kind of graph is usually used to display the different client types that are available for a certain system along with the ways that they communicate with it. In essence, there is a connection between the use case graph and the printed use case, and this connection is often made using multiple charts. It may go deeply into every possibility; the utilisation case outline can assist us in providing a higher level of framework viewpoint. As was previously said, the structure's system is shown in the diagram. It provides an enhanced and visually appealing depiction of the framework's capabilities.

• It continuously arranges and ranks the utilisation case chart according to the on-screen character's point of view.

• The use-case should start with the highest possible level of clarity. Further examples can then be determined and refined at that time.

• Use-case graphs are designed with the purpose of emphasising "what" and "how" in mind.

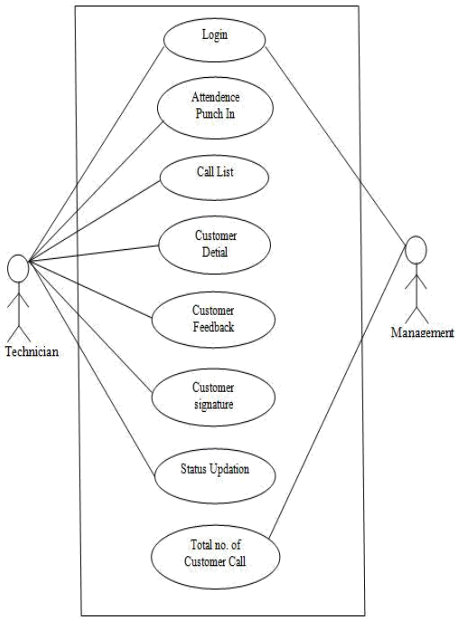

Fig 1: Use Case Diagram

SEQUENCE DIAGRAM

A sequence diagram, sometimes referred to as an interactions diagram, shows the sequence in which processes interact with one another. The arrangement of item interactions within a time sequence is depicted in a sequence diagram. In order to assess the situation's level of practicality, it displays the objects and categories that are present as well as the message system that is used to communicate between them. Sequence diagrams are usually used in the logical interpretation of explicit systems that are not yet constructed, in conjunction with the implementation of use cases. Sequence diagrams are sometimes known as event diagrams. In a sequence diagram, the message is represented by horizontal arrows and changes as the processes create a succession of events, which are depicted by parallel vertical lines for entirely distinct processes.

Sequence diagrams are mostly used for analysis and style intention, and they provide a very visual representation of the flow of reasoning. They may be used to document and validate your reasoning. The most popular UML artefact for dynamic modelling, which primarily focuses on characterising your system's behaviour, is a sequence diagram. Activity representation, communication representation, and interaction summary representation are the three main components of different dynamic modelling methodologies used in systems. Sequence diagrams are displayed with physical information models and category diagrams

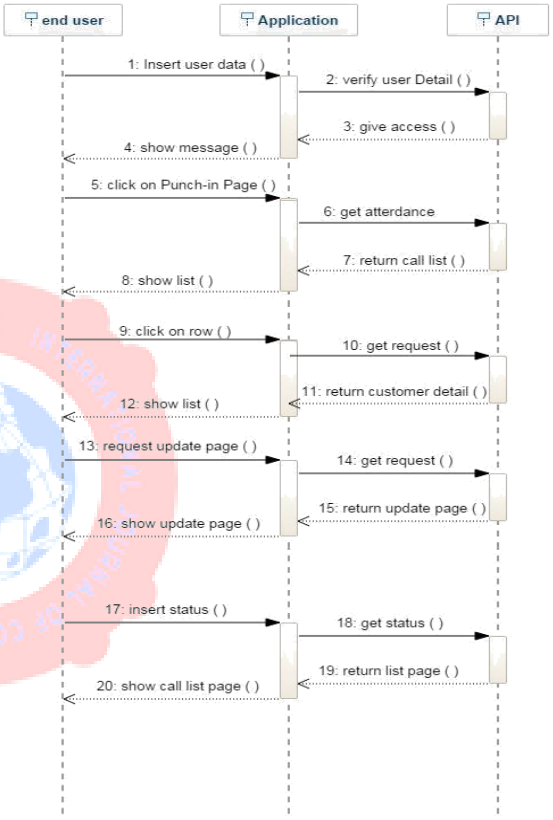

Fig 2: Sequence Diagram

IMPLEMENTATION

The Jeeves CRM programme is capable of handling the task of updating the customer's status and delivering services. We may view allocated customer calls, client data, and the updating process in the Jeeves CRM, which has two user technicians and management. The Jeeves CRM application area provides all the typical CRM functionality needed by assembly, wholesale, and management companies that need a 360-degree view of their interactions

with customers, potential customers, trading partners, and other voting public.

Login Page : Technicians may easily utilise the Jeeves CRM Application. By just inputting their user ID and password, technicians may quickly log in to the programme. This will cause the page to redirect to the punch-in-page page.

Punch-In-Page : When a technician logs in for the first time of the day, it is known as the punch-in page. The technician's location and attendance are recorded via the punch-in page. After clicking on the image, a page will display that will direct you to the page with the list of calls.

List-Of-Calls : They can view the list of calls allotted to his ID in the list-of-calls. He has individual client detail visibility. The call is his to accept or decline. The call page will not change if they accept, but the accept and reject choices will no longer be available. The technician will be sent to the same page if they pick the refuse button, but the specific call detail will not be displayed in the list.

Customer Detail Page : The page that follows after clicking on the row is the client detail page. Here, the technician can review call history, product descriptions, and client information. The interaction log contains the technician's updated call history. An additional advantage of this application is that the manufacturer offers the option to prolong the warranty for a fee; however, this can only be accessed when a technician installs a new device. The prior product firm did not offer this service.

Update page : The engineer will be sent to the update page by pressing the update button. Engineers may access call data, such as the case ID and current call status, on the call update page. Dependent on the available state, the status dropdown is a dependable dropdown. This will be the status that appears in the dropdown menu based on the call flow protocol. With this option, technicians can add details to the Activity Remarks and change the call status.

RESULTS

After implementing the proposed system the results obtained are as follows

Fig 3:Login Page

Fig 4:Punch-In-Page

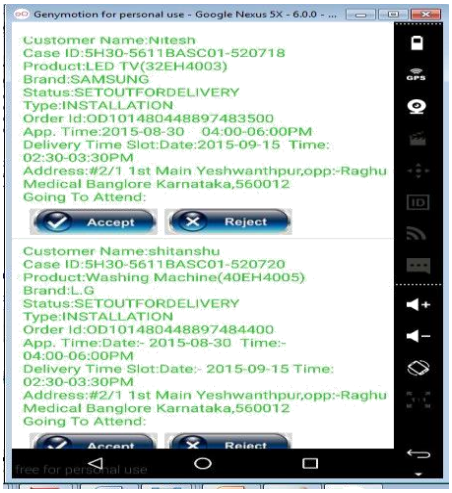

Fig 5:List-Of-Calls

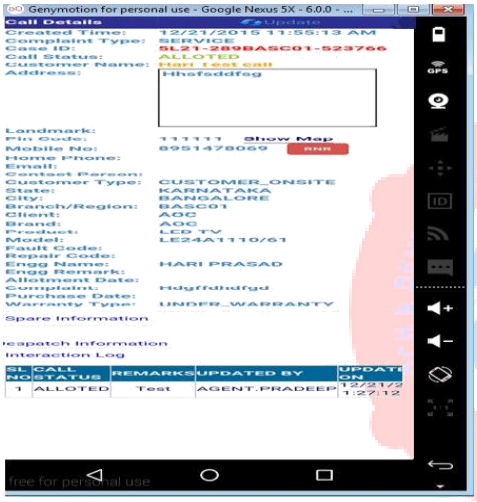

Fig 6:Customer Detail Page

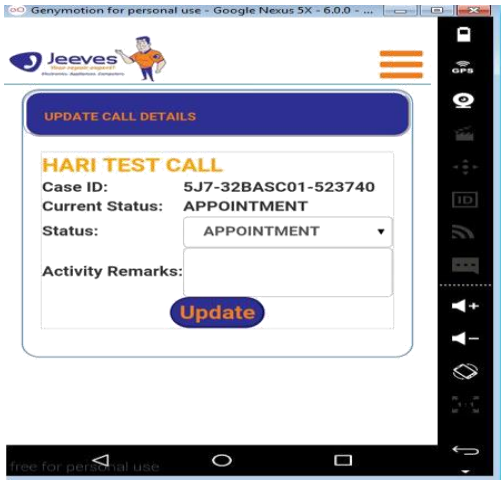

Fig 7:Update page

CONCLUSION

The Tech Assist CRM project represents a significant advancement in the field performance management market by providing a comprehensive Android solution tailored to the needs of field technicians and managers. Modern mobile technology is used by this application to enhance service quality overall, increase efficiency, and facilitate communication. Tech Assist CRM's capabilities, which include real-time workflow, effective project management, data transfer control, and straightforward connection, offer a strong basis for managing field operations and address key pain points. The Tech Assist CRM's creation and execution proved the project's viability in a number of ways, including its operational, functional, and technological aspects. Field personnel will find it easy to use and adapt the program because it was created with user-centered design concepts. A smooth and effective development process was also made possible by the use of contemporary development tools and processes, which produced a dependable and high quality product.

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