Workforce Management System
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Abstract:
In Today’s Era there are many companies who work on sales and marketing. In this company there are many people require for doing sales job but it was not possible for company to maintain track and analyze the daily activities and reports of their salesforce or their sales executive. For performing this task automatically we developed a system named as Workforce Management system. This system contains various modules such as tracking daily activities, generate sales report, analyze sales, etc. The main advantage of this system is it give proper result of processing data, it reduce the error scope. This is a mobile base tracking application which overcomes the battery problem of existing system. Every sales and marketing company use this application for getting better result.

Keywords: Android Application, Web Application.

I. INTRODUCTION

The sales executive works on their assigned work field. They follow up their costumers, closes the deal and submit reports at the end of the day to their sales manager. There are many people who are really loyal towards the work and they don’t waste a single minute, but in the worst case scenario Sales manager comes across the problem that they are not sure about their sales executive whether they are really working on the field or wasting the valuable time of the company and submitting the fake report at the end of the day convincing sales manager that they really worked hard, have follow ups to make but didn’t closed any deal. The sales manager doesn’t have any tool or technique to find out what he really did on the field. If the same things happen 3 to 4 times a month there is so much wastage of sales time of the company. Suppose there are 50 people working on the field then 50*4 that equals to 200 Man days of sales time wasted every month and 2400 Man days of sales time is wasted every year. Well this is the worst case scenario but there are many people who are really loyal to their work. With the help of “Work force management system”, sales manager can also check the field activity of the people who are unable to perform on the field. Those who are working hard but not getting the result and can be trained properly to get the proper results. The Work Force management system is also designed from the perspective of the sales executive so that they should not feel that they are being watched or tracked all the time and ended up with the conclusion that the Application is useless for them.

OBJECTIVE
The objective of this Application is to achieve better result while generating the sales report. Also the another objective of this application is to reduce the battery wastage as other application uses more battery while performing the task.

II. RELATED WORK:
Phones are our most personal devices we bring with us everywhere, but until now it’s been hard for apps to adjust their experience to a user’s continually changing environment and activity. We’ve heard from developer after developer that they're spending valuable engineering time to combine various signals like location and sensor data just to determine when the user has started or ended an activity like walking or driving. Even worse, when apps are independently and continuously checking for changes in user activity, battery life suffers. That's why today, we're excited to make the Activity Recognition Transition API available to all Android developers - a simple API that does all the processing for you and just tells you what you actually care about: when a user's activity has changed. Since November of last year, the Transition API has been working behind the scenes to power the “Driving Do-Not-Disturb” feature launched on the Pixel 2. While it might seem simple to turn on Do-Not-Disturb when car motion is detected by the phone's sensors, many tricky challenges arise in practice. How can we tell if stillness means the user parked their car and ended a drive or simply stopped at a traffic light and will continue on? Should we trust a spike in a non-driving activity or is it a momentary classification error? With the Transition API, all Android developers can now leverage the same sets of training data and algorithmic filtering used by Google to confidently detect these changes in user activity.

Figure 1.1. Automatic mileage tracking in QuickBooks Self-Employed.
“Life360” similarly implemented the Transition API in their app with significant improvements in activity detection latency and battery consumption: “With over 10 million active families, Life360 is the world’s largest mobile app for families. Our mission is to become the must-have Family Membership that gives families peace of mind anytime and anywhere. Today we do that through location sharing and 24/7 safety features like monitoring driving behavior of family members, so measuring activities accurately and with minimal battery drain is critical. To determine when a user has started or finished a drive, our app previously relied on a combination of geofences, the Fused Location Provider API and the Activity Recognition API, but there were many challenges with that approach including how to quickly detect the start of the drive without excessively draining battery and interpreting the granular and rapidly changing reading from the raw Activity Recognition API. But in testing the Transition API, we are seeing higher accuracy and reduced battery drain over our previous solution, more than meeting our needs,” says Dylan Keil from Life360.

Figure 1.2. Live location sharing in Life360

There are many Workforce management softwares available in markets but there are very less possibilities to get the software which uses the activity recognition transition API and which gives the full day activity of the sales person without draining the battery of the user’s device. Some of the popular Workforce Management Applications are as follows:

- Zoho People
- Zoho Workerly
- BambooHR
- Bitrix24

III. SYSTEM FLOW:

Software Requirement:

1. Android Studio:

It is the software which is used to create an Application for Smartphone’s or the Android phone. We can use this software to create the Android Application for all the devices.

2. PHP Strom:

PhpStorm is a commercial, cross-platform IDE for PHP, built by the Czech Republic-based company JetBrains. PhpStorm provides an editor for PHP, HTML and JavaScript with on-the-fly code analysis, error prevention and automated refactoring for PHP and JavaScript code.

3. XAMPP:

XAMPP is a free and open-source cross-platform web server solution stack package developed by Apache Friends, consisting mainly of the Apache HTTP Server, MariaDB database, and interpreters for scripts written in the PHP and Perl programming languages. XAMPP is regularly to the latest release of Apache, MariaDB, Php and Perl. It also come with a number of other modules including openSSL, phpMyAdmin, MediaWiki, joomla, Wordpress and more.

Data Flow Diagram:

Figure 1.3. Data Flow Diagram

Basic System Architecture

Figure 1.4: Basic System Architecture

Figure shows the working flow of the system. The employee or sales executive firstly sign up by felling valid data. If the data are not valid than the employee or sales executive will not able to signup. After successfully sign up the employee will go for login, if the login credentials are valid than user will go to the dashboard, if the login credentials are not valid than it will throw the error message “Invalid Credentials”. After successfully login this app will be automatically detect the employee or sales executive current location. According to the current location the sales executive will assign a task list. When sales executive click on a task for start it than the app will access sales executive current location and maintain it in the database. As soon as sales executive start moving from one position to another than the app detect the user current status i.e. if the user will stop at one location, or user will continuously moving etc. if the user is at one location than app dose not detect user location it will save user phone battery. As soon as user completed one task than user will fill the form and submit it to the database. The sales executive will follow the same process till he/she will finish the all assign task. If all task are submitted than sales executive will finish their one day work. After submitting all report by all employees the system will automatically generate the total sales report, the admin will track the employee record using this system. As all the task are perform by machine itself so there is no chance for getting more error. The error factor will be very less using this application.
Observation / Result:

![Login Screen](image1.jpg)

**Figure 1.5. Login Screen**

![Dashboard Screen](image2.jpg)

**Figure 1.6. Dashboard screen**

![Sales Shown by Graph](image3.jpg)

**Figure 1.7. Sales Shown by Graph**

![Employee Attendance Record](image4.jpg)

**Figure 1.8. Employee Attendance Record**

![Sales Record](image5.jpg)

**Figure 1.9. Sales Record**

IV. CONCLUSION

The Internet is capable of adjusting the human life. The aim of this project is very easy to use and get error free data. As all the calculation are perform by machine so it is less possibility to get the error message or wrong data and due to it we get more accuracy. In this application all the task and operation are perform by the machine so it is less time consuming. By using this application we save the user mobile battery.

V. REFERENCES

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