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Remote Work Monitoring and Work Submission System

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ABSTRACT

In this modern era of technology to enhance performance, many electronic organizations have started increasingly using electronic performance monitoring systems. Efficient surveillance is the use of real-time images of on-going construction sites. This paper-based on 'remote work monitoring and submission system'. In today's world monitoring and surveillance system plays a vital role to increase productivity and efficiency of employees; the main objective of the proposed system is to reduce the number of employees that required only for surveillance purpose, this will give the ability to monitor various work sites from one place using this system and also reduce the company's expenditure. The proposed system is made for employees of an electrical company, this system provides a platform to submit their work from the remote site to the server from which the supervisor of that particular organization can monitor actual work. This system is useful for collecting data from the owner of the company. By satisfaction of this gathered information/data owners can decide how much work and which type of work/jobs are requested in particular dates of the year, they can even make a good schedule by which they can use their manpower more effectively.

Keywords: Surveillance System, remote monitoring system, electro works.

1. INTRODUCTION

The remote work monitoring systems are designed to monitor ongoing work on actual designated worksite locations which helps in tracking work progress of that worksite it helps to monitor multiple worksite's location at a single point, by

collecting all this data at a place various strategy can build to make a robust working system for upcoming future works and it also help to build current strategies for all simultaneous running sites by which resources can easily manage efficiently. This remote work monitoring system can be extremely useful in various outdoor and indoor fields like civil construction work in which various building construction sites, road construction work can be remotely monitored, household electrical wire and appliances installation, wood carpentry, motor vehicle garage, etc. This remote work monitoring system is an automation of supervisor which is present at all working sites to keep track of ongoing work.

The process of work submission from the early days is done by using the traditional method of using pen and paper in which all data and records are manually updated by writing it on paper. Which is very inconvenient to write it every time. But this is the era of digital technology, in which everything digitizing day by day. Now this work submission can be done by clicking the images with a single touch of actual working sites and send it in real-time to a various remote location in few seconds which reduces the energy and resources which are going to exhausted

during the traditional way of work submission. This new way of work submission also helps to reduce time and money. Nowadays the whole world is connected by the internet every electronic mobile device is now connected with the help of the internet. Internet becomes a way of communication and sending data from one location to another location within a second with very negligible cost. Which is very helpful to develop work submission by using mobile and the internet in a fraction of a second. In today's world, every mobile device comes with a digital camera that helps to capture good quality images. This image can directly send through the internet in a very few seconds at various remote locations. The captured image will have information like location name and have details of whether or not or not the image is before or once work started.

The proposed system in which create an android application which is capable of managing employee from remote location. This system managing the process of scheduling much easier and computerized [1].

2. LITERATURE SURVEY

This era is of technology and there are many advancements done in the technology which makes the lifestyle of the human being so easy. Humans are heavily dependent on technology now a days. Technology reduces human effort more and more also decreases the use of resources. Human beings widely evolving with these technologies and created an ecosystem with the technology. Technology became a fundamental part of humans' life. Every single day of human started with the use technology and end with technology before going to bed. It now became the necessity of man.

The Internet makes an incredible evolution in this world because the internet connects every person which is located in a remote location. Internet becomes a way of communication and data sharing between each other. The internet is the largest and widely used technology. Now all businesses or many of the businesses are more dependent on the internet and other technology which is dependent on the internet. In this era of technology every single person has a smartphone and is surrounded by emerging technology.

Now a days every business is adopting this technology and internet to grow their business and make the most profit out of it. By doing this they also want to reduce more resources and files which is handwritten. Several files and paper are needed to keep this record. As the number of files and paper increases it becomes very difficult to handle and maintain it properly. To maintain these files and documents safe from insects and mice attacks chemical pest control has to be done every time. The proposed system managing huge amount of data effectively and efficiently for efficient results, storing the details of the work, etc.

3. THE PROPOSED SYSTEM

Android is being the most dominated platform in the world and most of the world especially people from a low-income group can afford at least one Android smartphone; taking the advantage of this scenario we decided to develop our application for the android platform as most of the worker for whom we are going to develop this application can afford android phones, if the company decided to provide android phones to their workers then this devices comes at very low cost as compare to other devices such as iPhone etc, hence choosing this platform will be very cost efficient. The flow diagram for the proposed system is shown in figure 1.

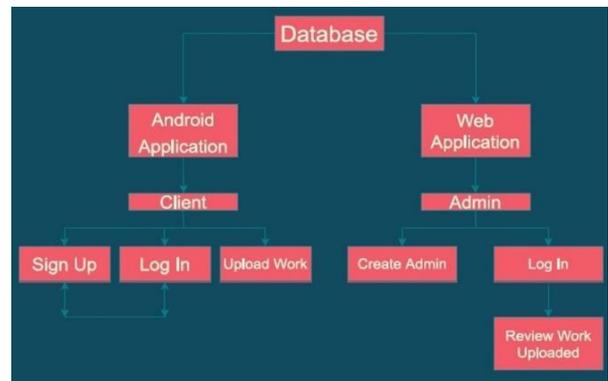


Figure 1: Flow diagram of work submission system

Android Studio is a development tool developed by Google for the development of the application for the Android operating system, this is an open-source platform that can be used by anyone in this world; this framework provides an entire set of tools to design the application as per customers demand and we choose Java as a development language, as we know java is most robust and flexible on other hand it is widely used by the developer to develop not only the android application but also to develop various type of web applications. The main advantage to use java is to maintain and frequently update the code.

4. MODULES

The proposed system contains two main modules as shown in Figure.1. The first one is a client-side android application and another is a web-based application for administration.

4.1 Client-Side Application

Android application has a simple UI firstly whenever a client opens the app the welcome screen appears on the screen followed by a Login screen the registered user can log in using their login credential and can heading to upload work screen, for the new user we also put option below the login button to go to the signup page in the case of the new user; the user can switch from the login screen to sign up screen and vice-versa and if the user is new then he/she can create a new account on sign up page using the details form provided user just need to give his full name, email address, a username and password to create a new account and once the account is created user can log in using his/her credential, using his created login credential and see and download the uploaded images for valuation.

4.2 Uploading Data

Now, Coming to the upload data Widget where actual work can be done this widget consists of a description box, an image view to display selected image, below this we create an open camera and open gallery button user has the freedom to choose the images from his gallery or click an instant image using camera and by hitting the Upload button created at the bottom of the page the given data is uploaded to the server then the uploaded images or work of the employee can be moderated from the admin side, we also created web side application where admin can log in using his created login credential and see and download the uploaded images for valuation.

4.3 Admin Side Module

We created a web-based application using HTML CSS and JavaScript for valuation of the work uploaded by the clients the uploaded images or work of the employee can be moderated from the admin side, the admin can log in using his created login credential and see and download the uploaded images for valuation.

4.4 Database and Connecting both applications to the database.

MySQL is a widely used database for both commercial use and learning purpose, MySQL database provides the functionality of RDMS to store maintain and retrieve data from the database effectively. For connecting the application to the database, we use PHP scripts to make it happen.

5. WORKING MODULES

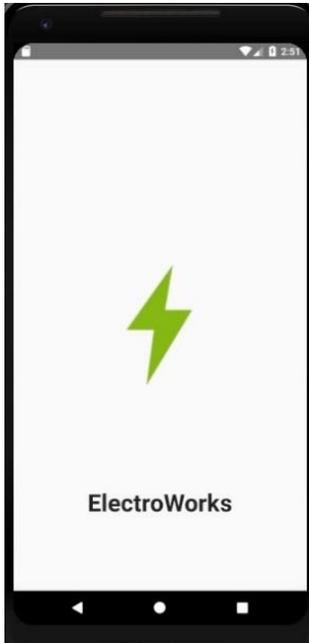


Figure 3: Welcome Screen

5.1 Welcome Screen

We create our welcome screen by using shared Preferences Class.

5.2 Sign Up Activity

This is a registration area for users, where anyone can register on this app registration details are saved in the database, Once the registration is done the user can log in using login credentials, and once the login is successful the app will lead you toward upload work activity.

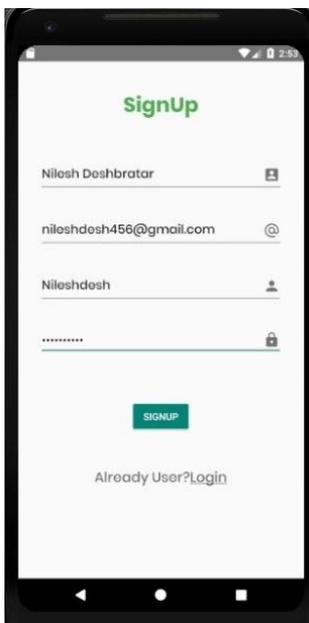


Figure 4: Sign Up Screen

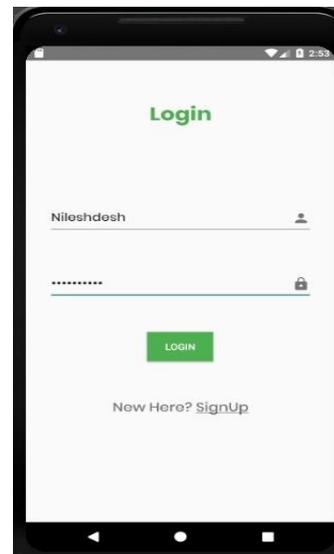


Figure 5: Login Page of Android App

5.3 Log In Activity

This is a login area for users, here registered users can log in using their created login credential on this app. Once the login is done using login credentials the app will lead you toward upload work activity.

5.4 Upload Work Data Screen

In this activity, the user can upload a picture by tapping either the camera button or gallery button. Selected or captured image will be displayed on image view and above image view, there is a description tab where the user describes the image, then we create an Upload data button on tapping this button the given data is stored in Database, there is a logout button to end the session.

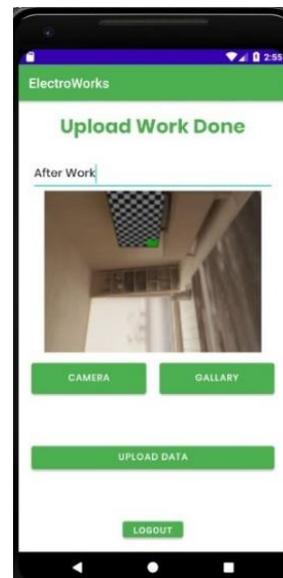


Figure 6: Upload Work Data Activity

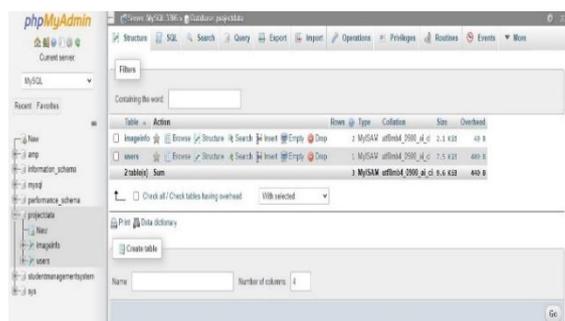


Figure 7: Database Structure

This is an actual database where client's data can be stored as well as admin can able to retrieve data from this database.

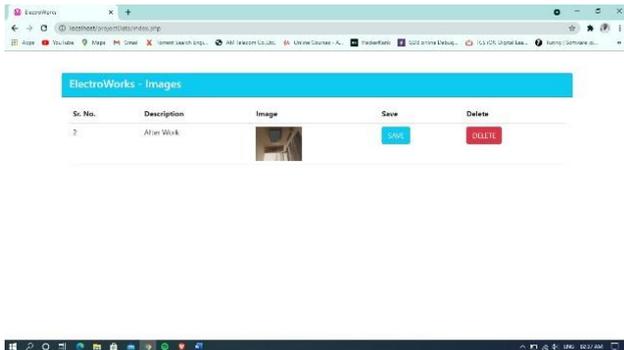


Figure 8: Web Portal (Admin View)

Here admin can view the data, Save the data to his computer and delete it using the delete button,

6. CONCLUSION

This paper gave all the information about the implementation of relative android and web technology in the system. To achieve

the key concept, mention above and make this system centralized hence the organization can monitor all its on-going worksites from a single system.

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