

**STAFF PAYROLL USING IMAGE CAPTURE
AND GPS LOCATION (SPICG)**

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**Bachelor of Computer Science (Computer Systems
& Networking) with Honours**

UNIVERSITI MALAYSIA PAHANG



SUPERVISOR'S DECLARATION

I hereby declare that I have read this project and in my opinion this project is sufficient in terms of scope and quality for the award of the degree of Bachelor of Computer Science (Computer Systems & Networking) with Honours.

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STUDENT'S DECLARATION

I hereby declare that the work in this thesis is based on my original work except for quotations and citations which have been duly acknowledged. I also declare that it has not been previously or concurrently submitted for any other degree at Universiti Malaysia Pahang or any other institutions.

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(SPICG)

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ABSTRAK

Penggunaan teknologi telah menjadi suatu perkara umum dalam sektor perniagaan pada masa kini. Tetapi, masih terdapat organisasi yang menggunakan sistem manual untuk merekodkan kehadiran dan transaksi mereka. Gaji staff juga direkodkan menggunakan kertas. Proses manual ini mengambil masa yang lama dan juga akan menyumbang kepada data yang tidak tepat. Oleh itu, projek ini mencadangkan aplikasi mudah alih yang akan menangkap imej dan mencatat lokasi GPS untuk merekodkan kehadiran staff. Aplikasi ini dinamakan sebagai Staff payroll with Image capture and GPS location (SPICG). Aplikasi ini akan mengesahkan kehadiran staff menggunakan imej dan merekodkan kehadiran staff dengan mengesan posisi GPS mereka. Berdasarkan kehadiran mereka, majikan boleh mengira gaji staff. Selain itu, aplikasi ini juga boleh merekodkan transaksi yang dilakukan di dalam organisasi tersebut. Oleh itu, aplikasi ini dapat membantu organisasi untuk mengelakkan kesilapan dan penipuan dalam kehadiran staff serta menjimatkan masa untuk segala transaksi.

ABSTRACT

The usage of technology as business solution is becoming very common which we can see that many organization nowadays make use of technology in their organization. However, there are few organization, especially whom with small budget still using manual paper system to keep track their staff attendance. Unfortunately, the staffs' salary are calculated based on the handwritten paper record. Due to the reasons that manual system is time consuming and always inaccurate, this project proposed a mobile application attendance with image capture and GPS location named as Staff payroll with Image capture and GPS location (SPICG). This mobile application will authenticate the attendance using image capture and record the staffs' attendance by locating their position using GPS location. Based on the attendance, the employer will calculate the staff's payroll. In addition, this project also providing a feature for them to fill in the organization's sales. Thus, this application can help organization to eliminate the error and prevent fraud attendance by the staffs while improving the processing time.

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CHAPTER 1

INTRODUCTION

1.1 Introduction

The impact of technology on the business can be seen as it's provides a wide range of tools for entrepreneurs to guide companies through the start-up and growth stages. In this century, it's almost seems like impossible to run a business without technology. However, some small organization still hesitate to get the help of technology instead still applying the manual system. The hesitation might be due to lack of exposure toward the latest technology updates or problems on budget. Therefore, they decided to use manual paper system to keep track their staff attendance while the staffs' salary are calculated based on those handwritten paper record. Manual calculation for the payment management cannot be accurate all the time and this will delay the payment of salary. Furthermore, by using the paper record there is a high possible of fake staff attendance. This indirectly leads to staff's job satisfaction that can affect the business as well.

This project proposed a mobile application attendance with image capture and gps location named as Staff Payroll using Image capture and GPS location (SPICG) designed especially for the organization with small budget. SPICG will help the small organization to manage the salary allocation and monitoring the staff attendance by using Image capture and GPS location. By using SPICG, the staff payroll will be efficiently managed while the image capture and GPS location is created to authenticate the staff login. The image capture can ensure the correct person login into the system whereas GPS location is helping to verify the staff login with exact location. This mobile application will be helpful for the employer to check and allocate salary for the staff instead of using manual calculation.

Once staff login into SPICG, a page that ask them to capture image and trace staff location will be displayed. The information will then be saved into a database to automatically calculate their salary for the current month. SPICG will play a major and vital role to keep the attendance records neatly. The employer will have primary control over the application where they can register staff, and manage their salary.

Finally, this mobile application will be a good solution for the organization whom using manual system to calculate their staffs' salary. This application will convert the manual information into computerized data which is easy to be managed. This can be a stepping stone for the small organization business to look for more technology usage and learn how to utilize it to improve business as well.

1.2 Problem statement

First, time consume is the main factor that lead to this solution. Employer might take a long time to calculate staff salary. It's also increased the need for manual labour which is prone to human errors and slow the speed of performing attendance task easily. This might be a reason why the staff's salary credited late into the account.

The next problem is manual attendance and manual payroll system. By using the manual system, employer faces difficulty in managing a lot of problem such as high possible of paper missing, lost data and etc. In order to record all the staff's payroll management, more papers are needed to write all payroll details. This makes it more difficult to manage the attendance and also contribute to waste of natural resources.

Another problem facing by the employer with using the manual system is fake attendance of staff. When the employer going out station for business purposes, the owner wouldn't know what happens in the shop. So that, the staff may use this chance to take illegal leave as not going to the shop but put the attendances by help of another staff. This may lead insufficient staffs at the shop and it may impact the shop with customer loss.

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