



AUTOMATION OF SHUTTLE SERVICES WITH A MOBILE APPLICATION

Introduction

This transport booking System is a mobile application that allows employees to book shuttle services, online. This system is established for all the office users after gaining access from the administrator. Shuttle Service (SS) System provides car and van as vehicles, a facility to make a request and make amendments later on if required. Users can install this application directly on their mobile phone. The use of this application overcomes limitations of manually recording data. The manual system deals with maintenance of records of each passenger who had reserved a transport for a destination. It also includes maintenance of information like schedule and details of each vehicle. However, since the current reservation system is conducted manually and separately at each project branch, contact must be made by each branch's lead consultant to the company for each employee's enquiry in order to get the latest update on request, destination and time; as well as to avoid duplicate requesting or over-capacity bookings. There is also a physical limit to the requests as each branch only operates during certain hours and requesting can only be made by email. The fluctuation of employee during certain periods of time that causes a bottleneck in the check-in process because of the inability of the lead consultant to multitask and the lack of overview or report of the on-going business; making it difficult for the company to judge past/current performance or plan future improvements. Not only these limitations but also the company is facing other issues such as human errors as well (e.g. requesting wrong time or destination, wrong employee data, etc.). Looking at these problems and limitations, it is clear that both the company and the employees require an integrated SS system that is more efficient in information update and booking handling and also easy to use.

To solve the above problems, and further maintaining records and generation of transport details, the SS system was developed. This system has three modules for the employee. First module helps the employee to enquire the availability of transport in a particular destination at particular time, the second module allows requesting and with the third module, amendments to a reserved request can be made. There are two module for administer. First module is gaining access for the employee. Second one, generates an Excel sheet for the recording data.

Methodology

Description of the system

The system requires very low system resources and the system will work in almost all configurations (Android, iOS, Windows). It has got following features:

- It will ensure data accuracy.
- Records will be efficiently maintained by a Data Base Management System (DBMS).
- Employee can request easily.
- Employee can also amend their request easily.
- Administer can easily manage recorded details.

User Activities

The most common activities carried out by employee are listed below.

- The employee can sign up registration with the system
- The registered employee can login to the system
- The employee can check for the available route service
- The user can request destination and time
- The user can also amend destination and time

Administrator Activities

- The administrator will verify all the registered employee, and allow them to login to the system
- The administrator can check requested details of the employees
- The administrator can generate report as well

Finding/Results

There are sixty-seven employees working on MIT outsourcing project, who are not allowed to book transport services using company transport booking system. Since they use manual system to overcome this obstacle, every employee has to send an email daily, to book their transport service and all the sixty-seven emails are handled by one person. As the final process, request time and destination are added to an Excel sheet one by one to be sent to the transport service company.

Both admin user and transport service company can check the transport requests and they can add these requests to the Excel sheet.

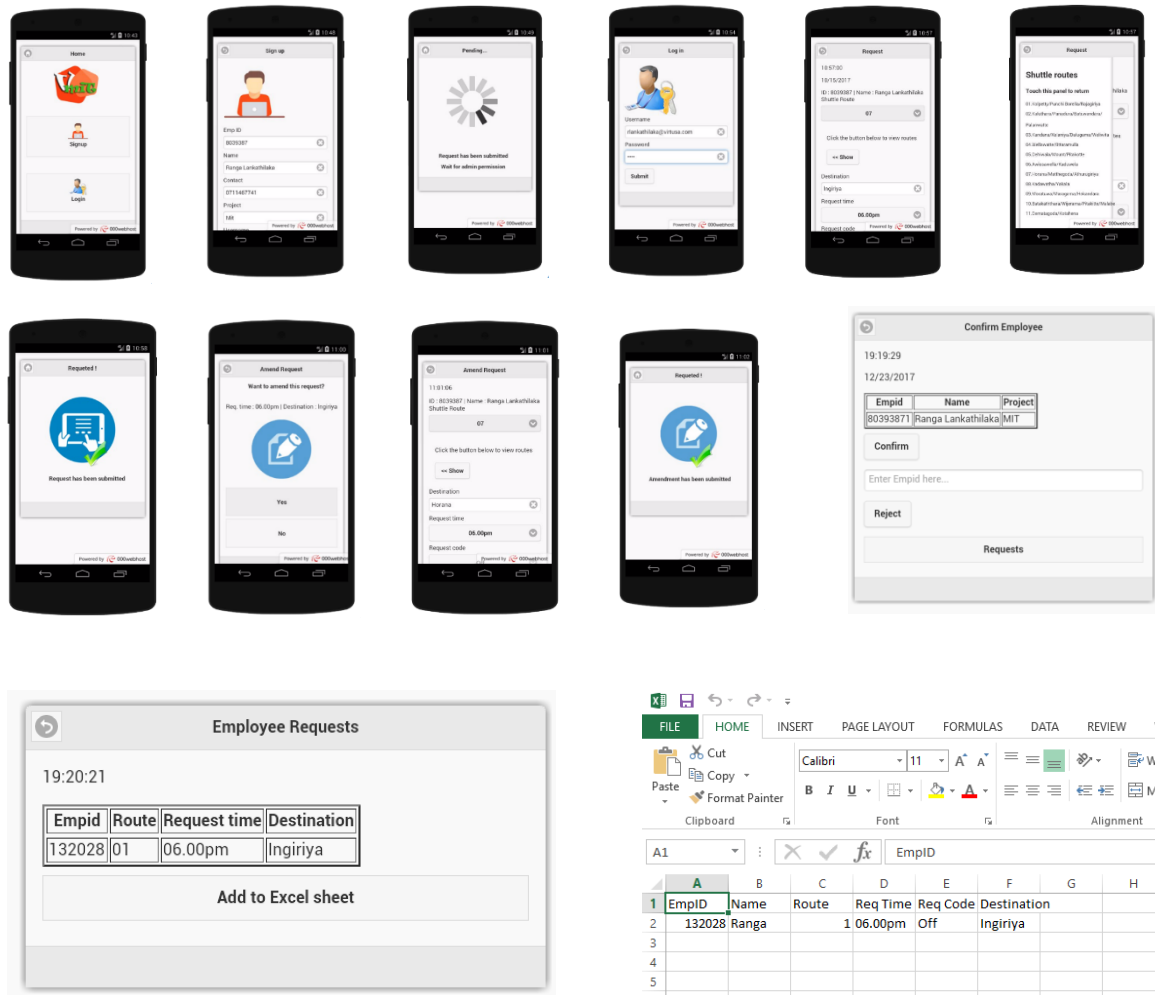


Figure 1: Screen shots of the system

Conclusion and recommendation

This mobile application overcomes obstacles of manual transport booking process. Nowadays every work is required to be done in an easy way to efficiently use time and effort. This mobile application is upgrading booking limitation existing in manual process. This manual process which consumed lot of man power, is reduced to administer role using this application. This application can run on every mobile operating systems currently available in the market which was supported by the use of jQuery as the language.

Keywords: Shuttle Service System, Mobile Application, DBMS

References

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