Temasek Polytechnic

School of Informatics and IT

**Diploma in Information Technology (IT)**

Terms of Reference

**Project Particulars**

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| **Tutor** | Ms. Serena Tai |
| **Class** | P01 |
| **Project Title** | Hotel Management System |

**Project Team’s Particulars**

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| --- | --- |
| **Matric Number** | **Student Name** |
| **1706416C** | **Vincent Tang Jian Wei** |
| **1701380F** | **Ong Zhixuan** |
| **1704749I** | **Ikhwan Haziq Bin Sinwan** |
| **1707184F** | **Aloysius Wee** |

**1. Introduction***.*

Our clients are a couple that manages a hotel that is currently not doing well despite being in a prosperous location. The purpose of this project is to improve the system of how the hotel runs in order to give it an edge over the hotel’s competitors to boost profits and build up a reputation. Currently, the hotel’s management system is not innovative and does not separate it from its other competitors which has already built up a reputation. Our team believes that with a new innovative system the hotel will be able to win customers over through its’ ease of use.

Our team have decided to create a straightforward mobile application for hotels to check in and check out by just using smartphones as this will provide the hotel staffs and clients to use easily. This mobile application will be an advance technology compared to other hotels as the customers don’t have to walk in to the counter and do their hotel room check in and check out. The mobile application will provides different types of room/ suite booking as well, the customers can search and book through this application as well. Once the customers as check in, the customer will receive a notification regarding the room is ready and they can just use their smartphones or maybe smartwatch to unlock the guest rooms. Our team also decided to make a mobile request for the customers to ask for any request like room service or they can request anything from amenities like towels and toiletries to services like housekeeping and luggage assistance, anytime.

By using this mobile application for this hotel will be beneficial for the staff and customers in the hotel as every request and services will be done by using this application. It will make the hotel services easier and the customers can also request through this application faster and easier.

**2. Objectives of the Project**

The objective of this project is to create a more self sufficient check in and check out system in order to boost the hotel’s revenue through lessening the need for employees and improving on the guest’s ease of access. The system has to improve on the guest’s experiences when staying at the hotel. There needs to be an mobile application that can interact with the hotel’s services and the mobile application is not supposed to be a hassle to be installed into the guest’s mobile devices(eg. Large File Size) .

The project will aim to reduce the amount of manpower needed to manage the hotel’s services, job positions such as the receptionist will have their amount of task needed to be performed reduced for a higher work productivity of the receptionist’s other job tasks.

Another aim of this project is to replace the commonly found key card system which has several inconveniences(eg, requiring keycard for power). With an NFC system that is integrated on into the application , guests are able to use their personal mobile devices with the app installed to open/close the hotel room doors.

Another objective is to partner up with various taxi companies in order for their services to be integrated into the application allowing for guests to use to application in order to book taxi services benefiting both the hotel and taxi companies due to the growing market of private hire taxis.

**3. Scope of the Project**

The key features of the software system are

1. mobile based app which can be small enough to install on both android and apple ios,
2. being able to unlock hotel room via the application so that it will be faster than using a physical key to access the room,
3. ability to easily check in and out of hotel with a well designed and easily to understand interface/layout,
4. Easy access to customer service which includes room services
5. integrated ability to book taxi to arrive at the hotel using the application.

**4. Distribution of Workload**

Determine which members of the team will be responsible for what areas of project work. Individual’s responsibilities should be clearly spelt out.

**Project**

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| --- | --- |
| **Project Objectives/Deliverables** | **Members** |
| Terms of Reference (TOR) | Done by all |
| Project Plan |
| Software Requirement Specifications (SRS) |
| Software Design Specifications (SDS) |
| Software Coding |
| Software Testing |
| Deployment |

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| --- | --- |
| **Objectives/Deliverables** | **Members** |
| Scope of the project and Constraints | Vincent Tang |
| Objective of the project & Resources | Zhi xuan |
| Introduction | Haziq |
| Product positioning in the Market in the Market/Company & Approach and Methodology of the project | Aloysius Wee |

**5. Constraints**

Unable to meet on some days where some members of the group are busy, some members might need to focus more on their other subjects submission, some members having a part time job. A time limit of 9 weeks to complete this mobile app with a budget of $400,000. Need to hire people to maintain the application and add more features in the future.

**6. Resources**

List the hardware and software resources that your project will need.

Hardware:

Computer with an installed operating system - Used for writing codes.

Mobile phone - Used for testing of the product.

Software

A coding platform ( Visual studio , Android studio )

Near field communication (NFC) - Usage of NFC is to be used at the room doors to grant access to NFC enabled mobile devices for identification and check in.

A database- Database will contain guest’s information as well as unique NFC tags in order to be used in our system.

Cloud based storage

**7. Product Positioning in the Market/Company**

Describe how your product differentiates itself from similar products in the market. Describe any interesting or unique features that your product has.

We’ll be focusing on improving the guest experience as it’s always a top priority in the hotel industry. As currently almost every hotel is still using customer service to check in. Our product is different as we uses simple, foolproof user interface for customer to seamless check in to their room.

By download and installing our application, customer will be able to access their room just with the phone, furthermore just by using the application customer could easily use instant message to housekeeping, front desk or room service with a single touch.

All these feature could be on spar with Marriott hotel application however our application have a unique feature that is allow customer to order room service through the application.

**8. Approach and Methodology of the Project**

Describe the development model your team will be adopting for the project. Describe any potential risks or problems your team might have adopting the development model and what you can do to overcome them.

Our team will be adopting iterative model. In iterative development the code is designed, developed and tested in repeated cycle. With this method allow for more flexibility in case need for changes. We’ll be assessing the highest risk of this project such as which older version of Android or iOS system should we support to as to allows programmer to make changes for the version.

First we’ll need to establish the goal of the business for the system, identify all entities that will work with the system. Secondly, we’ll develop an understanding of our problem domain and architecture framework, develop project plan and identify the risks. Thirdly we’ll incrementally put in the architecture with code from analysis, design, implementation and testing of requirements. Lastly, the system will be ready for production operation environment.