Temasek Polytechnic

School of Informatics and IT

**Diploma in Information Technology (IT)**

Terms of Reference

**Project Particulars**

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| **Tutor** | Qi Yutao |
| **Class** | P01 |
| **Project Title** | Delonix Regia Hotel Management System |

**Project Team’s Particulars**

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| **Matric Number** | **Student Name** |
| **1604869F** | **Gauransh Mathur** |
| **1605712G** | **Wallace Toh** |
| **1602807H** | **Bryan Leong** |
| **1601534I** | **Shynzi Tang** |

**1. Introduction**

*Give a short introduction to the project. You may include information such as the purpose of the project, any relevant background information, the users and usage of the system, brief description of problems faced thereby leading to the need for this system, etc.*

This project aims to create a hotel management system for Delonix Regia. Delonix Regia is a hotel managed by Mr. And Mrs. Wang, a middle-aged couple, and it hasn't been performing profitably even though the hotel has a good location.

The business is not performing profitably because it does not have a system to manage it. The system which we are planning and developing for this project will allow the business to be automated. It will let customers book a room through the internet. Make payment online, appear at the hotel, show proof of booking, and done. No hassle. For customers who do not know how to make booking online, they can also book in person. This time, the staff is able to check-in the customer with our system quickly with the process automated. The system will be able to display all the rooms which are booked and available immediately without the hassle of going through it in paper.

The purpose of this hotel management system is to improve the hotel business through planning and the use of technology. This system will consist of 4 separate systems: Property Management System, Front Desk System, Room System, and Online Payment System. Each system is dedicated to a specific job. The Property Management System collects data of the customers which the hotel would be able to use for future reference. The Front Desk System manages bookings of rooms for the hotel. The Room System that logs monetary transactions. The Payment System to manage all payments. A more detailed description of all the systems will be included in the later part of this report.

**2. Objectives of the Project**

Describe the objectives that you want to achieve through this project. Objectives may be both technical and non-technical.

The objective of this project is to create an efficient hotel management system that will automate processes, saving time and effort, and also bringing convenience to the customers. These processes include but not limited to: booking of rooms, recording customer information, payment transaction, and room availability information.

The system should be easy enough to use even for non tech-savvy customers and bug-free.

**3. Scope of the Project**

Describe the key features of the software system you are developing. This description does not need to be detailed; it can simply be a few sentences that give a general explanation of the feature.

**Our system will consist of:**

**Property Management System –** Our property management system will have **profile management**, meaning that each customer has a specific and individual profile, that will record their purchase history, transaction history, and room booking history. It will also have Staff profiles to show which staff authorized which room booking, and also used for clocking in their hours. It will also have **accommodation management** where the room bookings are monitored, which profile stayed in this room, and how long did they stay. A few more features is that it will have **housekeeping management**, meaning that the maintenance, house keeping or cleaning of each room is monitored. Which contractor, cleaning entered the room, at what timing, and what was the purpose of entering. It will also have **multi property function** which allows control over different sites and branches at one go. Lastly, it will have multi-language support, and will consist of not just English, but German, Chinese, French, Malay, and Tamil.

**Front Desk System –** Our Front Desk System will have a function where users can input **multiple room bookings** at once. One more thing is that it will also have a **rate management function** this will maximize revenue during peak seasons. Like Christmas etc. We will also introduce a **mobile application** so the staff and admins can receive reports on the tablets/phones. Meaning that maybe the amount of people that checked-in on this specific date etc. In all of our buildings, we will also introduce a **self-check in kiosk**.

**Room System –** Our Room system will consist of, a **complete audit trail** for every financial transaction, a system where it is compliant for **payment cards** to be used, **rate options** for the customer, daily, weekly or monthly. And finally **guest history** for the staff and admins to view.

**Online Payment System –** Our Payment system will include and function with both samsung and apple pay. Of course it will allow you just like PayPal, to conventionally use a payPal account. But our system has a few more options.

**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.

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| **Objectives/Deliverables** | **Members** |
| Development process, back-end for the website and the front desk system, managing and creating the servers for the database and to actual server created for the hotel  Distribution of workload and Approach and methodology of project | Gauransh |
| Front-end system for the website and the front desk system, a part in creating the room system for hotel and also making the payment system tracker for the rooms that is provided.  Constraints and Resources | Bryan |
| Aesthetic component for all the systems that are going to be created and also a part in creating the room system for the hotel.  Scope and Product positioning (Part 3 & 7) | Shynzi |
| Payment system tracker for each room, connecting all the applications to the server to create a network, a part in creating a better UI for the website.  Introduction and Objectives of project. | Wallace |

**5. Constraints**

List any constraints that you expect to face e.g. lab opening hours, different timetable schedules, etc.

I will expect some the management to have some problem in checking the booking of rooms at some points of time due to mix ups on the various different numbers, thus this will result in conflict between the front desk and the upcoming visitors, thus this will result in lower efficiency in the hotel, due to self check in kiosks, some guests might also check in to same rooms at the same time and this will also result in some complications. I am also afraid that the system might not be reliable and if there's no backup data then the previous reservations will thus be deleted.

**6. Resources**

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

Hardware

* Computers
* Mobile Phones
* Broadbands
* Storage Devices- USB

Software

* Photoshop
* Visual Studio
* HIS epitome Enterprise Solutions

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

A few products in the market are things like

**OPERA Property Management System by Oracle**

A few functions of this Property Management system is profile, accommodation, housekeeping, multi site, multi language management. Similar to ours... But Oracle doesn't constantly update their software, so meaning their software is a bit outdated and can be slow during the check in and check out process. Our system however, will be constantly updated monthly, and will always be aimed for better customer and staff experience with the interface.

**eZee Frontdesk by eZee Technosys**

EZee frontdesk is a great Front Desk software, it provides you with the ability to book multiple rooms at once, it also has great management, and a mobile app. Most softwares don’t compare and look lackluster to this software, but where eZee frontdesk falls short in, is that there are many inconsistencies in their chinese language pack. Some words are totally wrong and don't make sense. For us, we will constantly have our admins maintain and look out for such hiccups like these in our system. So in summary, what makes us better, is our ability to change things fast and efficiently after every feedback.

**roomMaster by InnQuest**

Room Master is one of the top leading room booking systems and it widely used in the world. They are very tight on every single financial transactions, and unlike most room booking softwares, they allow you to book as per rates. Meaning you have the option to book weekly, monthly, or even yearly. While it is a small defect, why our system is better is because as of now, roomMaster allows transactions only in USD. But our Room booking system will have more than 1 currency to allow versatility for any kinds of people to use.

**PayPal**

Our payment system will include just like payPal, registering for an account, but we will have more options of payment. Including apple and samsung pay.

**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.

The development model that the team will be using is the waterfall model. It's a 5-step model that is a sequential development approach. It starts with requirements then design, implementation, verification and lastly maintenance. The potential risks that are in this model are, first because it's sequential the previous step must be done to continue with the process and steps can't be jumped back if there were to be any change, this can cause a problem if there were supposed to be changes made in mid process that are required. To overcome this all the requirements that are stated can be first implemented to check if the work so if there is a need for subsequent changes they will not affect the previous requirements.