**Temasek Polytechnic**

**School of Informatics and IT**

**Diploma in Information Technology (IT)**

**Terms of Reference**

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| --- | --- |
| **Tutor** | **Mr. Mel Goh** |
| **Class** | **P02** |
| **Project Title** | **Delonix Regia Hotel Management System** |

**Project Team’s Particulars**

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| --- | --- |
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# **Introduction**

Our group has been assigned to work in a small software development firm which is known as Pantheon Systems as part of our Student Internship Programme (SIP). The project that has been assigned to us is development of a hotel management for Delonix Regia. The hotel is currently managed by a middle-aged couple, Mr. and Mrs. Wang. That being said, they might not be well-apt to the current technology and might not be tech-savvy. With that in mid, their hotel has not been doing well although the location of the hotel is in a good district. This is probably because of the lack of technology used in the hotel.

Hence, the purpose of our project is to create a hotel management system for Delonix Regia.

Hotels have different types of operations such as the front office, booking and reservation of rooms, banquet and buffets, Human Resources, Inventory, Housekeeping and many more. There is a growing competition in the industry. Therefore, it is important for Delonix Regia to comprehend the needs of their potential guests or even the guests themselves.With a good hotel management system, it will enable them to identify just that.

The users of our system are mainly the HR department, front office staff, guests and users who potentially can be our guests, such as people who are surfing through the internet to check what Delonix Regia has to offer.

These are the ideal usage and functionalities of the system:

Guests or/and Potential Guests

* Sign in/join membership with the hotel
* Book a room
* Details on banquet available
* Check and update reservations
* (for current guests) housekeeping
* Early check-in
* Rates and availability of rooms

Front Office

* Check for reservations
* Check In/Check out for guests

HR (Human Resources Department)

* Settling payrolls of staff
* Administration of Staffs

Without the system, there are many problems that can be faced such as for the HR, they will not be able to manage the pay rolls and errors can occur such as designating the wrong payroll to the wrong staff.

For the front office, overlapping of bookings/reservations may occur if there is no proper system installed in the hotel.

For the guests, without the hotel management system, they will not be able to do bookings or reservations online, or with an ease. So this has the tendency that they will lose interest, hence the company losing their potential guests/customers.

All in all, the problems addressed are caused because there is no system present which makes things unorganized.

# **Objectives of the Project**

The objective of this project is to create a system:

**For User**

* For user seeking hotel rooms with accurate information about available accommodations
* Allow booking of room without creating conflict and errors
* To provide reliable and accurate reservation details for rooms and banquets
* Effectiveness of booking, for guest or repeated customer

**For Hotel**

* To maximize available rooms
* To provide real time information about reservation status
* For staff to be able to easily update information in the system, and have the system informs staff that needs to know
* For staff to easily check in and check out guests

# **Scope of the project**

The key features of our product are cloud computing, self-check in and multi-language.

Cloud computing is an internet based computing that provides shared computing resources and data to computer and other devices. With this stuff will be able access all data instantly to update information easily. With cloud computing privacy settings can be set up which allow certain employees to read certain data.

Self-check in allow the customer to choose the time they use at their convenience. This mean that guests can register and check in on their own to avoid the queue at the reception desk.

With multi-language when guests/users whose English is not their first language can change to the language of their own and uses the system.

# **Distribution of workload**

|  |  |
| --- | --- |
| **Objectives/Deliverables** | **Members** |
| **Introduction & Constraints** | **Camille** |
| **Objective & Scope of the project** | **Timothy** |
| **Resource & Product positioning in the Market/Company** | **Afnan** |
| **Approach and Methodology of the Project** | **Dixon** |

# **Constraints**

The constraints that we expect to face are the following

* The budget of the company
* Time span/given to build the system
* Provision of hardware resources to implement
* Compatibility and availability of website to different OS such as android and apple

# **Resources**

**Software**

* Database user licences
* IBM Rational Functional Tester
* Microsoft Visual Studio  
  Professional
* Microsoft Project  
  Professional 2016
* Macromedia Dreamweaver
* Operating system: supports known operating system such as Linux, Windows
* Microsoft SQL Server Management Studio Express 2010
* Server: Apache

**Hardware**  
**System development hardware**

* Printers and scanner
* PC
* CPU: Intel dual core, 3.0 GHz
* RAM: 8GB
* HDD: 1TB
* Monitor
* Cloud service: Google Drive
* Keyboard and Mouse

**User hardware requirement**

* CPU: Intel Pentium 4, 2.0 GHz
* RAM: 8GB
* HDD: 1 TB
* Monitor

# **Product positioning in the market/company**

Unlike many software system in the market that has features such as multiple bookings. The proposed system allows customer to self check-in using the check-in kiosk. This improves to the check-in process of rooms for the customers.  Furthermore, it has features which supports multi-language and global currency which somehow makes it easier for tourist especially for those who are not proficient in English.

One interesting feature that the system implements the wearable integration which helps with the housekeeping management. Similar to wearable watches that tracks your footsteps, this feature that is applied to the system allows the front desk of the hotel to keep track of housekeeping progress. Unlike the traditional system where the housekeeper has to manually report the progress of the room cleaning. This gives more accurate data and improve the efficiency of the cleaning process.

# **Approach and Methodology of the Project**

The team will be adopting Rational Unified Process (RUP). The Rational Unified Process (RUP) is an iterative software development process framework. RUP is not a single concrete prescriptive process, but rather an adaptable process framework, intended to be tailored by the development organizations and software project teams that will select the elements of the process that are appropriate for their needs. RUP is a specific implementation of the Unified Process.

RUP establishes four phases of development, each of which is organized into a number of separate iterations that must satisfy defined criteria before the next phase is undertaken, which are the inception, elaboration, construction and transition phase.

**In the inception phase,**

developers define the scope of the project and its business case.

**In the elaboration phase,**

developers analyze the project's needs in greater detail and define its architectural foundation.

**In the construction phase,**

developers create the application design and source code.

**In the transition phase,**

developers deliver the system to users. RUP provides a prototype at the completion of each iteration.

Potential risks or problems and how to overcome them

**Develop iteratively**

It is best to know all requirements in advance; however, often this is not the case. Several software development processes exist that deal with providing solution on how to minimize cost in terms of development phases.

**Manage requirements**

Always keep in mind the requirements set by users.

**Use components**

Breaking down an advanced project is not only suggested but in fact unavoidable. This promotes ability to test individual components before they are integrated into a larger system. Also, code reuse is a big plus and can be accomplished more easily through the use of object-oriented programming.

**Model visually**

Use diagrams to represent all major components, users, and their interaction. "UML", short for Unified Modelling Language, is one tool that can be used to make this task more feasible.

**Verify quality**

Always make testing a major part of the project at any point of time. Testing becomes heavier as the project progresses but should be a constant factor in any software product creation.

**Control changes**

Many projects are created by many teams, sometimes in various locations, different platforms may be used, etc. Thus, it is essential to make sure that changes made to a system are synchronized and verified constantly.