Temasek Polytechnic

School of Informatics and IT

**Diploma in Information Technology (IT)**

Terms of Reference

**Project Particulars**

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| **Tutor** | Mr. Mel Goh |
| **Class** | P03 |
| **Project Title** | Delonix Regia Hotel Management System |

**Project Team’s Particulars**

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| --- | --- |
| **Matric Number** | **Student Name** |
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# 1. Introduction

The group has been assigned to work in a small software development firm known as Pantheon Systems as part of our Student Internship Programme (SIP). On the very first day of work, our boss, Mr. Lim, Calls the group into his office. He stated that a group of students last year worked on a personal information management system for Sonium and he was quite pleased with their achievement. Mr Lim assigns us a new project which concerns the development of a hotel management system for Delonix Regia. The Hotel is currently managed by Mr. and Mrs. Wang and is located at a reasonably good district. Mr. and Mrs. Wang wants the group the produce the following deliverables for the project as a start, Terms of Reference (TOR), Project Plan.

# 2. Objectives of the Project

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

Through the project, the few objectives to conquer are to make a software to allow customers to understand the different accommodations provided by the hotel, as well as various information involving checking in and out, seeing room status, taking reservations, customer’s services. With this system, we aim to ensure system to best suit the customers and staff needs. With various objectives like ease of access to client’s information/records, enabling online booking reservations (Local and International), customer feedbacks to ensure satisfaction, as well as data management internally (i.e. Updating, Creating, Deleting client data). This would greatly reduce the need paper work in the hotel, as well as processing errors made by human records. Furthermore, this ensure speed in serving customers as with data management of the software, client data can be extracted and displayed instantly, reducing the time to search it on the storehouse or record.

With this, the Fundamental Goal of this project is also to increase the Business for the hotel, with the ultimate goal to ensure regular supply of customer into the hotel for a variety of needs and purpose like Room Service, Laundry Service, Food and Beverages Service and other facility needs etc

# 3. Scope of the Project

The key features of the hotel management software includes user management which includes login, register, update profile. Besides, after retrieving the hotel list, we also need to perform CRUD and lastly is the payment modules.

# 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** |
| * Constraints * Resources * Scope of Project | Kenji Leong |
| * Objectives of the Project * Approach and Methodology of the Project * Scope of Project | Koh Jia Cheng |
| * Introduction * Product positioning in the market/company * Scope of Project | Goh Mao Cheng |

# 5. Constraints

Firstly, one of the biggest constraint is set the correct time frame needed to meet the deadline since every member schedules to do their work differently. For example, one of the member might prefer to do their work at night. Meanwhile, another member might want to do their work in the afternoon. Also, even if the member scheduled a certain time to do their work, there may be circumstances where they might not be able to do it. For example, they might be sick. Furthermore, depending on the difficulty of the requirements, members might not have the technical required to develop the features on time. For example, advanced features such as maintaining user integrity.

Besides, assigning the correct resources depending on the requirement is very important. For example, the team leader has to ensure the he or she choose the right members based on their technical skills for the task that are suitable for them. Also, the team leader has to provide proper equipment such as laptop and facilities such as lab or classroom so that the members can work in a conducive environment. As a result, the members will be able to perform better.

Lastly, if our team were to use a prototype model to develop our hotel management software. This can affect our scope because we would have to listen to feedback from the lecturers or sponsor on how to better implement the functionalities. As a result, the scope will become much more in-depth and depending our technical skills, we might need more resources such as time and member to tackle each functionality. For example, the original plan was just to develop a check in system. However, the sponsor might want to have a feature to assign privileges for each role. By doing so, the team leader might need to assign more members to tackle this functionality since we have not developed this feature before.

# 6. Resources

Firstly, the first software that we required is definitely Visual Studio because the software allows us to develop a website through the ASP.NET Framework and the language used is C#. For example, we could make use of Model-View-Controller MVC framework where the model is used to create the database, the view make use of Hypertext Markup Language (HTML) to design our interface and Controller which is used to write down functionalities.

Besides, after we have developed the hotel website, Visual Studio also allows us to deploy it onto a cloud services such as Azure. As a result, this makes it convenient to access the website online since it is uploaded on the cloud. However, if we did not upload it on the cloud, we would have to run the website on a private Internet Information Security (IIS) web server which is build temporarily to run the website.

Besides, Android Studio is another software that is required and we use it only if we got extra time to develop a hotel mobile application for it. Android studio makes use of languages such as Java, where this language is used to code the functionalities of the application. Also, Extensible Markup Language (XML) is used to develop the interface of the application. Furthermore, Android Studio allows us to deploy our application to the Play Store. As a result, this makes it easier for our customer to search and download our app.

On the other hand, for hardware we definitely would need a laptop in order for us to do our coding. Also, for the specifications of the laptops firstly, we would need a Central Processing Unit (CPU) that is at least i5 onwards because the software would require to load a lot of codes. As a result, we need a CPU to be able to process the data fast. Furthermore, the laptop requires at least 8 Gigabyte (GB) of Random Access Memory (RAM) because of software such as Android and Visual Studio that require intensive processing and this amount is sufficient for the laptop to continue to maintain its speed to perform other tasks. Lastly, the laptop would require at least 24GB of internal storage since the total size of the programs such as Visual and Android Studio is around 10GB.

# 7. Product Positioning in the Market/Company

*Our product differentiates itself from similar products in the market by providing the users with a much easier and user friendly user interface and overall better user experience.*

*We also focus a lot on the learnability and adaptability of the product. We want to make the product so that anyone can learn how to use it in a few minutes on their first try of the product.*

*Our security system will also be better than that of any other related products in the market.*

*This product will also be very compatible with many forms of internet banking such as paypal, ibanking, mastercard, visa and many others.*

*The product includes all kinds of tutorials and instructions ranging from the most basic to the most advanced in video tutorial format and instruction manual format.*

*The product includes a feedback feature which will allow customers to write a feedback about their experience in the hotel.*

*The product also includes a feature that allows the customers to view the food menu item for breakfast, lunch and dinner available in the hotel and may even place their order.*

# 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.

For this entire span of the project. I believe adopting Agile Model approach is well sufficient to steer this project towards its objective. We however, will not be following entirely of SCRUM’s Agile approach as we are lacking of a lot of members for this projects.

Since for this project, it’s hard, for certain to predict and see what might come next into the project scope (Things that we might have missed out). So it’s best we adopt a Model that is adaptive and flexible to changes. With this said, we can deliver working build after each phase (Iteration) for further confirm that the software is what the client (Mr and Mrs Wang) wants. This also ensures that the devs and the client is on the same page.

A few problems we might face is if the client did not state clearly what is the final outcome they want it to be. Which is true current as Mr Wang did not state any specifications. This could throw off the entire project if it were to completely miss its objectives of what the client wants. To overcome this, we will make sure after every phase of our project (Iterations/Sprints), we will get in contact with Mr and Mrs Wang to ensure that we are in the same page as they are and slowly build above the build. This would mean close collaboration between us (Devs) and the Mr and Mrs Wang (Client) of a noteworthy factor, as communication is the key factor here.

Another one of the problem we might face would be that during the development process, we lack the expertise to make decisions required during some of the phases, which that wrong decision could very well hinder the project's direction and progress. To overcome this, we can speak to experienced people like our lecturers regarding the resolution and the best conclusion we could

Other than communication between the client and the devs, the communication between the devs, basically our team, ourselves plays a part into this project’s success. Some team member might not be on the same page as the other group member which could lead to many other misunderstand and error and in product design which could slow down the progress. So, to overcome this, we could use a technique that is used by SCRUM, which is so known as the Daily Scrum. This is done every day to make sure the entire team is on the same page, and every team member goes through with everyone what they have done since the last standup, what they plan to work next and the few obstacles they might face.

# References used:

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**Koh Jia Cheng-**

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^solid sample of data and examples for hotel objectives and budgets

<http://scrummethodology.com/>

^Scrum info

<http://www.onedesk.com/scrum-methodology-vs-agile-methodology/>

^Very helpful Scrum info

<http://istqbexamcertification.com/what-is-agile-model-advantages-disadvantages-and-when-to-use-it/>