Temasek Polytechnic

School of Informatics and IT

**Diploma in Information Technology (IT)**

Project Plan

**Project Particulars**

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| --- | --- |
| **Tutor** | Qi Yutao |
| **Class** | P04 |
| **Project Title** | Hotel Management System |

**Project Team’s Particulars**

|  |  |
| --- | --- |
| **Matric Number** | **Student Name** |
| 1702378I | **Lee Jing** |
| 1705978C | **Koh Jia Hui** |
| 1705766B | **Lee Choon Loong** |
| 1603305B | **Toh Chien Yuan** |

Revision History

|  |  |  |  |
| --- | --- | --- | --- |
| **Date** | **Version** | **Description** | **Author** |
| 13/11/2018 | 1.0 | Added Objective and scope | Lee Jing & Lee Choon Loong |
| 14/11/2018 | 1.1 | Added Roles and Responsibilities | Koh Jia Hui |
| 16/11/2018 | 1.2 | Added Work breakdown structure | Lee Choon Loong |
| 17/11/2018 | 1.3 | Added Risk management plan | Lee Jing |
| 18/11/2018 | 1.4 | Added Assumption & constraints and Budget summary | Toh Chien Yuen |
| 18/11/2018 | 1.5 | Added Project schedule | Koh Jia Hui |

Table of Contents

1. Introduction
   1. Objectives and scope of the project
   2. Assumptions and constraints
   3. Definitions and acronyms
2. Roles and responsibilities
3. Estimates and project schedule
   1. Work breakdown structure
   2. Project schedule
   3. Budget summary
4. Risk management plan

Project Plan

1 Introduction

1.1 Objectives and scope of the project

Objective

The objective of the project is to deliver a hotel management system that will help Mr and Mrs Wang to better manage their hotel, Delonix Regia.The system will be able to perform important organization and financial task and activities. It is to help Mr and Mrs Wang to increase their revenue and save time on hotel operation.

The modules that will be developed are management of rooms and facilities, management of reservations, management of employees, management of users and hotel website.

At the end of the project, the hotel management system will be fully functional with all key features added it. It will be able to help to management the hotel smoothly without fail. The system should also have a database, a reservation website for users/guest and an admin page to manage the hotel.

Scope

**Management of rooms and facilities** - this feature enables the administrators to view the number of rooms and facilities in the hotel and its relevant details. It also enables the administrators to edit the details of the rooms and facilities. Administrators can also add new rooms and facilities and at the same time delete them.

**Management of reservations** - this feature enables the administrators to look at the number of current and past reservation and at the same time edit each reservation if needed. It also enables the administrators to add new reservations and delete reservations. This module also contains features such as check-in and check-out which allow employees to check-in and check-out customer.

**Management of employees** - this feature enables the administrators to view employee’s information and their work schedule and also allow administrators to edit them according when deemed necessary. Administrators can also add new employees and delete employees.

**Management of users** - this feature enables the administrators to view user’s account information and past reservation history and delete or red flag(blacklist) them if needed.

**Hotel Website** - this module contains features such as the hotel booking feature which enables customer to make a reservation online. They will also be able to make changes to the reservation or cancel the reservation if needed. The website will also allow customers to view hotel information.

1.2 Assumptions and constraints

Hardware Resources

We will purchase our servers from e-commerce websites. We will be expecting shipping to arrive in 2 weeks (12-14 days).

However, if the shipping arrives later than 14 days, it might affect our schedule and we might have to push the project back a little. Hence, the project finish date might be affected.

To mitigate such problem, we will plan out a risk management plan to reschedule or work patterns to maintain that everything will be done by the proposed date or earlier.

Software Resources

Visual Studio, Axure and MongoDB are available online. They will be downloaded into the computers on the first week and we will start working on the project itself.

1.3 Definitions and acronyms

|  |  |
| --- | --- |
| **Word** | **Meaning** |
| Sprint | It is a term that is use in SCRUM, an agile method, for its iterations, that is one development cycle. |
| Severity of Impact | Degree of damage if it happens |
| Risk Exposure | Impact x Likelihood  Values  High = 3  Medium = 2  Low = 1 |

2 Roles and responsibilities

|  |  |
| --- | --- |
| **Module** | **Role & Responsibility** |
| Management of reservations | Lee Jing - Implementation, analysis  Toh Chien Yuen - Implementation  Koh Jia Hui - Testing  Lee Choon Loong - Design |
| Management of employees | Koh Jia Hu- Implementation, analysis  Lee Choon Loong - Implementation  Lee Jing - Testing  Toh Chien Yuen - Design |
| Management of users | Lee Choon Loong - Implementation, analysis  Toh Chien Yuen - Implementation  Lee Jing - Testing  Koh Jia Hui - Design |
| Hotel Website | Toh Chien Yuen - Implementation, analysis  Koh Jia Hui - Implementation  Lee Choon Loong - Testing  Lee Jing - Design |
| Management of rooms and facilities | Lee Choon Loong - Implementation, analysis.  Koh Jia Hui - Implementation  Toh Chien Yuen - Testing  Lee Jing - Design |

Workload distribution for Project plan

|  |  |
| --- | --- |
| **Objectives/Deliverables** | **Members** |
| Objectives and scope of the project | Lee Choon Loong & Lee Jing |
| Assumptions and constraints | Toh Chien Yuen |
| Roles and responsibilities | Koh Jia Hui |
| Work breakdown structure | Lee Choon Loong |
| Project schedule | Koh Jia Hui |
| Budget summary | Toh Chien Yuen |
| Risk management plan | Lee Jing |

3 Estimates and project schedule

3.1 Work breakdown structure

The project will begin on the 19 Nov 2018, and the working times are as follows:  
Mon-Fri 8am - 5pm.

Number of working hours per day = 9 hours

Number of working hours per week = 45 hours

Number of working days per month = 20 days

**Task Name Duration Resources**

**Project Schedule 72 days**

**Project Management 3 days**

Approval 1 day Lee Jing

Plan software system 2 days Lee Choon Loong

**Requirements 6 days**

Gather required scope 3 days Lee Jing, Koh Jia Hui

Documentation 1 day Toh Chien Yuen

Confirmation of requirements 1 day Koh Jia Hui

Planning of sprints 2 days Lee Choon Loong

**Project build phrase 66 days**

**Sprint 1 - Room & facility management 11 days**

Requirement analysis 1 day Lee Choon Loong

Design user interface 1 day Lee Jing

Feature development 4 days

Adding and viewing rooms & facilities 4 days Koh Jia Hui

Editing and deleting rooms & facilities 4 days Lee Choon Loong

System integration 1 day Lee Choon Loong

Quality assurance 2 days Toh Chien Yuen

Client feedback 1 day Lee Choon Loong

Make changes 2 days Koh Jia Hui, Lee Choon Loong

Release 1

**Sprint 2 - Reservation management 12 days**

Requirement analysis 1 day Lee Jing

Design user interface 1 day Lee Choon Loong

Feature development 5 days

Adding and viewing reservation 5 days Toh Chien Yuen

Editing and deleting reservation-

and check-in and check-out 5 days Lee Jing

System integration 1 day Lee Jing

Quality assurance 2 days Koh Jia Hui

Client feedback 1 day Lee Jing

Make changes 2 days Lee Jing, Toh Chien Yuen

Release 2

**Sprint 3 - User management 11 days**

Requirement analysis 1 day Lee Choon Loong

Design user interface 1 day Koh Jia Hui

Feature development 4 days

Adding and viewing user 4 days Toh Chien Yuen

Editing and deleting user 4 days Lee Choon Loong

System integration 1 day Lee Choon Loong

Quality assurance 2 days Lee Jing

Client feedback 1 day Lee Choon Loong

Make changes 2 days Lee Choon Loong, Toh Chien Yuen

Release 3

**Sprint 4 - Employees management 11 days**

Requirement analysis 1 day Koh Jia Hui

Design user interface 1 day Toh Chien Yuen

Feature development 4 days

Adding and viewing employees 4 days Koh Jia Hui

Editing and deleting employees 4 days Lee Choon Loong

System integration 1 day Koh Jia Hui

Quality assurance 2 days Lee Jing

Client feedback 1 day Koh Jia Hui

Make changes 2 days Koh Jia Hui, Lee Choon Loong

Release 4

**Sprint 5 - Hotel website 11 days**

Requirement analysis 1 day Toh Chien Yuen

Design user interface 1 day Lee Jing

Feature development 4 days

Booking and cancelling reservation 4 days Koh Jia Hui

Hotel details and editing reservation 4 days Toh Chien Yuen

System integration 1 day Toh Chien Yuen

Quality assurance 2 days Lee Choon Loong

Client feedback 1 day Toh Chien Yuen

Make changes 2 days Koh Jia Hui, Toh Chien Yuen

Beta release

**Sprint 6 – Finalisation 10 days**

Requirement analysis 1 day Toh Chien Yuen

Feature development 3 days Lee Choon Loong, Lee Jing

System integration 1 day Lee Jing

Quality assurance 2 days Koh Jia Hui

Client feedback 1 day Lee Jing

Make changes 2 days Lee Choon Loong, Lee Jing

Final release

3.2 Project Schedule

Refer to the document name SWEN assignment1.mpp

3.3 Budget Summary

|  |  |
| --- | --- |
| **Category** | **Cost** |
| **Manpower** | **Approx. pay of a Software Engineer:** $4000  **Duration of Project:** 1 month  **No. Of people Hired:** 4 people  **Total Amount:** $12k - $13k |
| **Hardware** | **4X** Lenovo ThinkServer TS140  **Price:** 299.95  **CPU:** Intel Xeon E3-1226 v3  **RAM:** 4GB  **Memory:** 2X 1TB HDD  **Total Price:** $1,199.80 |
| **Software** | NIL |
| **Total** | **$14,199.80** |

4 Risk Management Plan

|  |  |  |  |
| --- | --- | --- | --- |
| **Risk** | **Severity of Impact** | **Likelihood of occurrence** | **Risk Exposure** |
| Implementation error | High | High | 9 |
| Client might insist on changing the requirements during the implementation stage | High | Medium | 6 |
| Requirement unclear causing the development of the wrong product | High | Low | 3 |
| We might receive a cut in funding | Medium | Medium | 4 |
| Design a system that is hard to maintain | Medium | Medium | 4 |
| Developer resign | Medium | Low | 2 |
| Technological uncertainties / Lack of skills to implement the feature | High | Medium | 6 |
| No time for system tester to conduct quality assurance test to validate, equally, on all browsers on all operating systems. | Medium | High | 6 |

**What happen if the risk listed occurs:**

If risk exposure is more than 6 it will require urgent action to reduce the negative impact of the risk and must be tracked daily. The whole team should also be notified in order to reach for more help.

If risk exposure is 3 to 5, actions should be taken immediately, and it must be monitored and reviewed every alternate day.

If risk exposure is 1-2, the team would try to live with it.

**Strategy:**

Our main strategy for risk management will be implementation for risk mitigation, where the team will take actions to reduce the negative impact of the risk before it even occurs.

It will be done by using an iterative and risk-based approach where the team will be dealing with high risk task first. It is done by dividing the project schedule into iteration (sprint / intervals of time period) where the functional feature or task that is of the highest risk will be addressed first in the iterations.

By dealing with high risk task first, the team would be able to experience failure early, hence being able to have a longer time to solve the issue. Putting high risk task up front will also allow us to know what requirements for the hotel management system is realistic and unrealistic, giving us more time to negotiate with client for a change or revised, more realistic requirements.