**ABSTRACT**

This document describes a system to be used by a guest lodge (ResHotel+) which offers relaxation and genuine hospitality to guest occupants of its rooms. The system will offer an online service for customers, where they can view rooms available in the lodge and also reserve those rooms. In this document, I discussed the software development architecture for ResHotel+, and the software development approach. Thereafter, the system security will be detailed. Finally, I share the testing strategies deployed in ensuring the system performance and reliability was not compromised. The system was developed within a week. There is only one person working on this project. PHP and MySQL are the main development tools for handling server side scripts, and HTML5, CSS3 and JQuery were used to support interactivity in the front end.

**ATTACHMENTS**

Database Diagram

Process Flow Diagram

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**INTRODUCTION**

**PROJECT OVERVIEW**

ResHotel+ is purely a relaxation and hospitality provider in Durban, South Africa. They are one of the leading hospitality providers that ensures to make relaxation worth the name.

This project is based on the internet technology; the main objective of this project is to offer an on-line service for prospective guests, where they can electronically view rooms and make reservations for a room on demand. Users have their own rights to access information about any public field of the ResHotel+ according to the requirement. The other objective is to save time of the customers and other end-users who intend to search for details about rooms given that it is in the database of the ResHotel+. Another objective is to allow ResHotel.com showcase its newest rooms to the customers and other end-users. Furthermore, the System is expected to generate reports on; the number of rooms available for bookings, list of rooms booked, show the summary of a reservation details. The statistics in terms of reports will also allow the manager to make informed decisions about the activities of the system.

**SOFTWARE PROCESS/ARCHITECTURE**

In this project several of the traditional process models seem to fit, most of all the Waterfall Process Model and the Prototype Model. Incremental Process Model was adopted as it supports iteration. Incremental model is a stepwise development of a system in which deliverables are portioned into parts.

As this is an interview project where the deliverables are set up for me progressively to give me the best learning process with set deadlines and tasks, the most obvious choice for a process model would be a waterfall model, where each phase is finished before the next one starts, but as I am both able and encouraged to go back and change the earlier deliverables as the project moved on, this added the iterative aspect to the model.

In addition, the incremental development is the most appropriate process when developing the user interface. The test users of the system will test the system and give feedback and so we will discover how the interface should be made so that it is as user friendly as possible.

**SOFTWARE APPROACH**

**TOOLS**

Tools that were used in the project are as follows:

|  |  |  |
| --- | --- | --- |
| STANDARD | IMPORTED LIB | OTHERS |
| 1. HTML5 2. CSS3 3. JQUERY 4. PHP 5. MYSQL | 1. Bootstrap 3 by Twitter Bootstrap 2. MeekroDB by Sergey Tsalkov 3. CSRF\_Protect by Josep Viciana 4. GUMP by Filis 5. Password Compact by Anthony Ferrara 6. Carbon DateTime by Brian Nesbitt 7. DateDropper by Felice Gattuso 8. DropZone by Matias Meno 9. Nice Select by Hernan Sartorio 10. Oh Snap by Justin Domingue 11. Pace by Zack Bloom 12. Parsley by William Durand 13. Images by Unsplash.com | Sublime Text 3  MAMP Server  Valet  SEQUEL PRO |

**TECHNIQUES**

1. Performed review to detect errors in the requirements, design or code by doing program inspections
2. Made unit test modules to test function by “injection methods”

**HCI**

I adopted the User Centered Design (UCD) approach in the development of ResHotel+, this approach prioritizes User Interface (UI) at the center of my development process.

**QUALITY**

I identify quality factors that influence the extent to which the software fulfills its specification like:

1. Correctness, required functionality are provided according to the system’s specification
2. Reliability, the systems’ inputs and outputs are ordered and structured in an easy to use manner
3. Efficiency, maximize system resource usage to ensure that users carry out their tasks safely and enjoyable.
4. Integrity, the system provided secured protection from unauthorized access.
5. Usability, the system made itself usable to users in an easy to use and easy to learn way.

**SECURITY**

1. Security activities adopted here includes authorization, authentication and user accounts
2. Control and safety features were used to restrict public access to the administration area.
3. Parameterized queries were used to prevent SQL inject. Courtesy of MeekroDB

**TESTING**

I adopted the WebApp testing model because it is exclusively made for website applications. It tests the viability and functionality of the website. The following tests were carried out: interface testing, content testing, navigation testing and components testing

Alpha and Beta testing is to be used when the program passes the tests specification described above. I did an alpha test to validate every task I initiated

ResHotel+ is responsible for Beta testing phase to check its usability and functionality.