Introduction

The above system is originally a private software project by one of the proponents to a specific pension house in Iligan City. Currently, the development track is still at the requirements’ analysis. But the current proponents, on the need of a current project for this, have agreed to choose this as their final project for some reasons:

**PACT Analysis**

**People** **–** Prospective end-users of this system would be the **front-desk clerks** for the front-desk management system, and **guests** that would like to have a reservation for the online reservation system. The age bracket would be different from the two user roles. For the front-desk clerks, their probable age bracket would be from 20-40 years old, while the guests would range from as early as 16 to as late as 60. Knowledge in basic internet browsing would be a great factor for the prospective users. Additionally, front-desk clerks must have basic or intermediate knowledge of computer use, as they would manage the transactions that the system will work on.

**Activities –** Users who would utilize the online reservation system would basically book their reservations online. He or she can see the available rooms for a specific date and can check their reservation status online. Additionally, he or she can change the reservation or further revoke the reservation. For the front-desk clerks who would like to utilize the front-desk reservation system, they would basically manage the room and reservation management of the whole hotel/pension house. He or she can check who occupies the room, which guest reserved the room for a specific date, can confirm the reservation sent from the online reservation system, and more importantly, checks-in and checks-out a guest from a room.

**Context –** The context of the proposed system is will be of two types. First is on a typical front-desk environment, where front-desk clerks are on the sole helm of the system. System actions are at the responsibility of the user, and if help from a higher authority is needed, it can be invoked through telephone calls. The given user holds all the functionalities given. The other is on an environment where all users would purportedly use the online reservation system. Given that scenario, transaction and user security will be the top priority. Further environments are also being tried to be explored such as mobile environment.

**Technologies –** The original developers of the project would like to utilize a web-based approach for the said system. They further claimed that their client has availed a web-hosting service, in which their current website is deployed. Currently, the proponents would like to use what the original developers have declared. Moreover, the proponents would like to use the jQuery Javascript library to effectively manipulate the HTML DOM and generate/receive HTTP and AJAX Requests, jQueryUI and Twitter Bootstrap library for front-end elements and additional “eye-candy”, and Adobe Photoshop for generating graphic elements to be utilized for the system.

**User Requirement Techniques**

In gathering more information for the design of the front-desk reservation system, the following user requirements technique would be very useful:

* *Interview Users (one-on-one).* The primary source of requirements is the users. Interviewing them face-to-face is a good way to gather requirements and to validate them immediately. By doing this, the user’s problem will be described clearly and correctly and will then be easy to understand.
* *Group Interviews.* Similar to one-on-one except that two or more persons are being interviewed. This technique work well when everyone is at the same level or has the same role. More preparation and more formality are required in this technique to get the information you want from all the participants.
* *Send Questionnaires.* If interviewing the users personally is not possible, questionnaires are considerable. But if the interview is possible, it is preferable. A set of questions, may be a multiple choice type, will be sent to the users. This technique has the advantage of providing a lot of information for statistical analysis. However, the questions must be well designed to be clear and to avoid so-called "leading questions", which bias the responses.
* *Study analogous systems.* The starting point for many projects is often a similar or an existing system. Sometimes, comparable products and systems contain working versions of good ideas for solving user problems. You can save the time lost in reinventing the wheel by looking at systems already on the market, whether they are systems installed at the user's site or products made by rival organizations. Even if they are trying to solve slightly different problems, they often provide valuable clues as to what you need to do.
* *Prototyping.* This is a really modern technique in gathering the requirements. An initial version of the solution is to be built from the gathered preliminary requirements. This prototype will then be presented to the client, who then gives back additional changes and requirements. The prototype will then be changed according to the client’s new requirements and will be presented again to the client. This cycle goes on and on until the client approves of the system.
* *Use Cases.* Use cases are basically stories that define the interactions between external actors and the system under consideration to accomplish a goal. The stories include people (actors) and describe how the solution works from a user perspective. Use cases may need to be distilled later to get the more specific detailed requirements.

**Design Choice**

Interaction between the system and the users would be as easy as possible, based on the system requirements have described. Since the system will be viewed upon a web-browser, it is necessary to apply all standards on web design and interfaces. Additionally, PCs, laptops, netbooks, and mobile devices will be utilized to view the system inside the web browser. Basically, design principles will be as follows:

* **Simplistic and minimalistic approach –** The proponents feel the need of fewer elements in the page, thus resorting to a minimalistic approach on the design. The original developers have an idea of the system, and also their client left them on their own on what to do with the design and such; they’ll just give their comments later on. Given that approach, it also reflected on the proponents, and therefore they will do such also. The main word is **KISS: Keep It Short** and **Simple.** Shorter transaction time and simpler user interactions would give user easiness thus their respective mental models would be also quicker to develop.
* **Graphic Images and Environment Theme –** The online reservation system would utilize graphic images that are designed by the proponents themselves. Since the said hotel/pension house is situated in a metropolitan area, thus the images convey also a metropolitan area but with a cleaner approach. Furthermore, the front-desk management system would utilize a white-dominated design to give a simple and cleaner look, making it easy to notice the buttons and other interactive widgets.
* **Color Choice –** Primary color choice would be **white** and **blue**, since aside from the designers like the color, but also give way for users who suffer from color blindness to still use the system, especially the online reservation system.
* **Animations –** Since the proponents would like to use jQuery to dynamically animate the system, thus fade and slide animations will be implemented on the system, since it is the only “lighter” type of animation that is available on the jQuery library. There will be no Flash animations to be utilize since the proponents see the situation wherein some computer units may have Flash plugins that are outdated or none at all, thus giving them the option to download it for an additional waste of time.
* **User Input and Output mediums and interactions –** Interacting with the system must be used basically with a web browser. Therefore, any computer and/or mobile device with an internet connection will do the medium. Text input will be utilized through keyboard (hardware on most PCs or laptops and on-screen keyboard for mobile devices). Disabled persons would utilize speech-to-text systems that are available on their respective computer units. Additionally, pointer interactions will be handled through the mouse, touchpad, or touch-enabled screens for mobile devices. Primary gesture is by **clicking** or **pressing** a button, thus making actions especially on mobile devices simple. System outputs are visualized on HTML tables, stylized pop-up alerts and notifications.
* **System Feedback –** Text feedback should be as simple and informative as possible. The proponents don’t want to show a geeky 404 Error to its prospective users, rather they wanted to inform the end-users what is happening in their system. Titles on the form fields on the online reservation system are on question type, to give the sense of friendly interrogation to the end-users. Given that, questions are as simple as possible to provide the fastest understanding on the users of what this specific form field needs to be filled up.

**Usage Scenarios**

*The given names are hypothetical, based on the specified roles and personas collected by both the original developers and the current proponents.*

* Genesis is a 27-year old IT expert based in Agusan who have been just married and wants to have their honeymoon by touring around Mindanao. One of their destinations is Iligan City, and prior to that, they wanted to have a reservation at one of the best hotels in the city. He searched on the internet for their website and opened it. Then, he clicked on the button that directs them to the reservation system. The system opens and asks them if whether he want to reserve a room or check their reservation online. He chooses the option to reserve a room, and the screen shows a form that needs his personal details and his schedule. Reluctantly, he gives his name, address, contact number and his expected date and time to arrive at the hotel. Additionally, the system asks whether how many guests will be with him. But then obviously, he will be accompanied by his wife, so he gives 2 as the number of guests (and that includes himself). Then, after clicking the “Next” button, he was shown a list of rooms available for them in that day and their respective prices. He chose one room with a price tag of 250/day. He was also informed that if he will not be satisfied by the room he chose, he can still choose another room right now, or during the day itself. Relying on that, he presses the “Next”. Right then, the system shows a confirmation message on his transaction, including a **reservation code** that the system generated for him. That will be the code that he will be showing to the front desk when he arrives. He is also informed that the payment will be on his arrival. Aware of the information that he has just known, he presses “Confirm”, and the system informs Genesis that the reservation has been sent and the information that he needs when he arrived in there. Since the system said that the transaction is done, Genesis gets back on his Facebook account and watches his photos with his wife.
* Jane is a hospitality clerk in a prestigious hotel in Iligan City. She is assigned in the hotel’s front desk as a reservation clerk. She handles every booking and reservation that customers want. One time, she looks at her screen and she saw a notification that a customer has reserved a booking online. She confirms it and puts it in the waiting list. Then after a few moments, a customer has arrived and wishes that his reservation to be confirmed. She clicks on the reservation tab and asked for the customer for his reservation code. The customer tells Jane his code and Jane entered it in the system. The system shows that the customer is “Emman” and he wishes to stay at Room 210 at that time. He was prompt at his arrival. She then clicks the “Check-in” button, and the system prompts for the payment details. Emman then pays to the cashier, and after the cashier confirmed the payment, Jane called a bellman over and the bellman escorted Emman to Room 210.

**Screen Layouts:**