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Thesis outline

I/ Introduction

1/ Situation without management system

* Customer must come to hotel to book room => if huge number of customer come at the same time => have to wait => waste time and money => uncomfortable
* Booking based on pen and paper => not convenient for both the customers and the receptionists
* Management is very difficult *(specially in enormous hotels)*
* Reservation might cause a lot of risk *(invalid information of customers, wrong information of rooms or bookings)*

2/ Difficulties with old management system

* Performance might be very bad
* Could overload or run extremely slow when a huge number of users access at the same time
* Look and feed *(User interface was not designed beautifully)*
* Not pleased to use

3/ Proposed approach

* Many deluxe hotels or five-star hotels in the world *(****Marriott International, Hilton Worldwide or InterContinental Hotels Group)*** already have their own hotel booking systems.
* Friendly user interface
* High performance
* Ability to track the behavior of customers.
* The administrators, the managers or hotel owners could know what customer had done on their websites. *(which pages customers clicked on, how long customers stayed at each page, which rooms, which services that customers had searched, booked, ordered or send the feedbacks)*
* Based on the data collection, the systems will automatically suggest what customers may like, recommend which rooms customers should book.
* The hotel owners can improve their hotel business based on the information collected by their systems.

4/ Goals and Scope

* Includes some inherited features from those five-stars hotel booking systems.
* Online single page application with high performance
* Dynamically loading
* Cross-platform system runs well with all operating system.
* Friendly user interfaces
* Supports almost features for hotel bookings & reservations management.
* Ability to track user’s behavior

II/ Software Requirement

1/ System Overview

* Hotel Bookings & Reservations System is a web application running on 2 servers
* 2 servers are running at the same time => each server doesn’t have to do a lot of job.
* The main architecture is using MEAN stack technology and J2EE with Spring MVC framework.
* MEAN stack technology => becomes an online single page application with high performance
* Nodejs and express framework => RESTFULL web service + Angular 2 => Dynamically loading + user tracking
* Java => becomes a cross-platform system runs well with all operating system.
* Spring MVC => most powerful java framework => IOC container
* HTML5 + CSS3 + Bootstrap + AngularJS + Angular 2 => Friendly user interfaces

=> comfortable, easy to use.

* 42 primary feature and hundreds of small features.

|  |  |  |  |
| --- | --- | --- | --- |
| **No.** | **Feature** | **User** | **Description** |
| 1 | Register | Guest, Admin |  |
| 2 | Login | Guest, Admin |  |
| 3 | Logout | Customer, Admin |  |
| 4 | View Rooms | Guest, Customer, Admin |  |
| 5 | View Restaurant | Guest, Customer, Admin |  |
| 6 | Search for Room | Guest, Customer, Admin |  |
| 7 | Search for Food, Drink | Guest, Customer, Admin |  |
| 8 | View gallery of hotel | Guest, Customer |  |
| 9 | View introduction of hotel | Guest, Customer |  |
| 10 | Filer rooms | Guest, Customer, Admin |  |
| 11 | Filer food or drink | Guest, Customer, Admin |  |
| 12 | Send contact | Guest, Customer |  |
| 13 | Send reservation form | Guest, Customer |  |
| 14 | Book room | Customer |  |
| 15 | Cancel room | Customer |  |
| 16 | View profile | Customer, Admin |  |

2/ Feature

* There are many features that my system support for each role *(List functions of each role: guest, customer and admin)*

|  |  |  |  |
| --- | --- | --- | --- |
| **No.** | **Feature** | **User** | **Description** |
| 17 | Edit profile | Customer, Admin |  |
| 18 | Change password | Customer, Admin |  |
| 19 | View activity | Customer |  |
| 20 | Send feedback | Customer |  |
| 21 | Dashboard management | Admin |  |
| 22 | Receive notification | Admin |  |
| 23 | Send message | Admin |  |
| 24 | View users | Admin |  |
| 25 | Manage users | Admin |  |
| 26 | Ban users | Admin |  |
| 27 | Add new room | Admin |  |
| 28 | Delete room | Admin |  |
| 29 | Update room | Admin |  |
| 30 | Add food or drink | Admin |  |
| 31 | Remove food or drink | Admin |  |
| 32 | Update food or drink | Admin |  |
| 33 | Update profile image | Admin |  |
| 34 | Follow users | Admin |  |
| 35 | Send feedback & rate hotel | Customer |  |
| 36 | Send feedback & rate room | Customer |  |
| 37 | View customer activity | Admin |  |
| 38 | View statistic of visit times | Admin |  |
| 39 | View recommendation room | Guest, Customer |  |
| 40 | View related room | Admin |  |
| 41 | View top of rooms | Guest, Customer, Admin |  |
| 42 | Email template | Admin |  |

3/ Use case:



* Describe use case diagram

4/ User story:

* Write user story

III/ Methodology

1/ System Architecture

2/ Resources (Hardware, Software)

1. **Hardware**

|  |  |
| --- | --- |
| Device | Details |
| Intel Core i5 4200 CPU 2.3Hz | Processor |
| Intel Core i7 3537U CPU 2.0Hz | Processor |
| DDR3 | 8GB RAM |
| Intel Graphics MH4400 | Card |
| Intel High Definition Audio | Audio and Speaker |
| Genius | Mouse |
| HD 15.6 inch | Monitor |

1. **Software**

|  |  |
| --- | --- |
| Device | Details |
| Window 7 professional 64 bits | Operating System |
| Microsoft Office 2013 Professional | Document Application |
| Adobe Dreamweaver CS6 | Design Tools |
| Eclipse Mars, NetBeans | Programmer Tools |
| MySQL, Navicat | Database Tools |
| Google Chrome, Cốc Cốc,  Mozilla Firefox, Internet Explorer | Testing Tools |

3/ All Technology used:

* List technology used:
* Project management: Trello

IV/ Implementation

V/ Experiment and Result

1/ Experiments

2/ Evaluation

3/ System demonstration

VI/ Conclusion

VII/ Extended

1/ Definition

|  |  |
| --- | --- |
| Term | Descriptions |
| Customer | The customer’s interface |
| Manager | The manager’s interface |
| Food | The food menu |
| Drinks | The drinks menu |
| Fill form | Customer will input their information and their type of payment |
| Delivery mode | Customer can choose the food & drinks online, pay the bills online |
| Book mode | Customer can look up for available table and book it, then choose the food & drinks online, pay the bills through the app |
| Money bill | It is a term which is used to point to all the information of the dish that the customer chosen including the price of each food by the current customer account. |
| Set table | In this section, the list of all tables is shown. Then customer will choose the available ones |

2/ Sequence diagram

3/ Test Case

4 User Manual