Iteration0

Brandon Koepke, Alberto Saave, Garrick Vdl, Julia, Tyler Gibb, Justin Milanovic

---

Contents

1 Vision Statement **2**

2 Release Plan **2**

3 Requirements **3**
3.1 Client Requirements 3
3.2 Server Requirements 3

4 Critical Success Factors **4**

5 Key Development Technologies **5**

6 Critique **6**

7 Appendix **6**

8 References **9**

1. Vision Statement

Hotel Manager 4000 has a single goal: developing the customer base. HM4000 helps Hotels maintain a mounting database of customers and their preferences, in addition to performing essential management task, such as room management, bookings and generating detailed reports quickly and easily with minimal training. The overall strategy is to create apparent value for your clients by studying their prior behavior in order to fashion a list of their future desires. Providing an added-value incentive, tied directly to sales, increases purchases among customers. Hospitality management is about growing the relationships with your guests, so spend more time pleasing guests than learning software.

2. Release Plan

The main features that we intend to implement for iteration 1 of our system is a user based form of access control. Customer users (guests at a hotel) for instance will have two basic forms of access control, anonymous customers and registered customers. Registered customers and anonymous customers will both have the ability to book and unbook rooms; on the other hand, registered customers will simply have the privilege of not having to enter their information every time they wish to book a room where as unregistered customers must do this every time they book a room, also registered customers will have the privilege of being able to unbook rooms where as unregistered customers will have to go through a sales associate. For users employed in the hotel company there are various levels of privilege, administers will have full access to the system as they represent the corporate scheme of the business so they essentially can do everything that all other users can do with the added benefit of adding hotels. Other users types Include Hotel managers, Sales Managers, Room Service Managers, Sales Representatives and Room Service Associates. Customer information access for associates is also intended to be implemented for iteration 1, this includes features such as adding,deleting and modifying customers as well as the ability to create a list of customers in order for an associate to look them up. Most of the above features are concerned with a partial established user control access mechanism that will be used in the future iterations.

The main features intended for iteration 2 of our system include the ability to allow appropriate users to book or unbook rooms, these users include both types of customer users, sales representatives, sales managers, and hotel managers. In order for this feature to work the user types will also have the ability to look for available booking time slots and choose the time slot most appropriate for them. Associates with the proper privileges working for the company will also have the ability of looking up or adding customer information, to select a customer in order to make a booking on that customers behalf. Hotel managers and sales managers will also have the ability of adding and deleting rooms from the hotel booking list in the case of a hotel restructuration. Also for iteration 2 hotel managers and sales managers should be

able to deal with adding,deleting and modifying associates who report to them in the employee hierarchy.

The main features intended to be implemented in iteration 3 of our system include the management of customer room service charges and anonymous user access. Customer users will be able to look at their current set of charges, this includes booking prices and rooms service charges. Sales associate, sales managers and hotel managers will also be able to look at a customer's billing status and will also be able to add charges regarding room bookings. Managers will also have the added privilege of removing charges. The room service associates and room service managers will have only the privilege to see charges to the customers room service bills, and the rooms service managers and possibly trusted associates will have the added benefit of removing room service charges from a customer's bill. If possible we may also implement a customer ticket system, where a customer can submit a ticket for complaints, complement and/or suggestions to which certain associates can respond to. Another possible feature which may be included in this iteration is for the ability of administrators to add additional hotels to the system.

3. Requirements

The requirements for the client and server for the hotel manager are different.

3.1. Client Requirements

Any operating system capable of running a browser from figure 1 will be supported. This includes Windows Vista and later, Mac OS X 10.5 and later and most Linux variants.

Browser	**Minimum Version**	**Layout Engine**
Firefox	18	Gecko
Google Chrome	24	WebKit
Safari	5	Webkit
Internet Explorer	9	Trident

Table 1: Supported Browsers

These web browsers were chosen because it enables us to support 93.34% of non-mobile web browsers as of October 2012 [2].

3.2. Server Requirements

The server is officially supported on Debian Squeeze. The system can be installed on other Linux and UNIX systems, but the installation will not be officially supported. Table 2 lists the necessary packages and their versions, some of which will have to be installed from backports.

Package	Minimum Version	Description	Rationale
Ruby	1.9.3	Programming Language	Ruby is a dependency of the Ruby on Rails framework.
RubyGems	1.8.24	Ruby Package Manager	RubyGems eases the installation of third-party ruby libraries. Using ruby gems, you can install the latest version of a library without having to use the system package manager.
Ruby on Rails	3.2	Full-Stack Web Application Framework	Most of the group is writing their paper assignment on Ruby on Rails and we currently only have one group member that has previous experience with Ruby on Rails. In order to write a well-reasoned paper on Ruby on Rails, the group decided that Ruby on Rails should also be used for the supplier assignment in order to gain experience with the framework. Ruby on Rails also favours convention over configuration which makes the creation of simple Create, read, update, and delete (CRUD) apps simpler.
Postgresql	8.4.13	Object-Relational SQL Database	Postgresql is the default database supported by Debian, and is also supported by Heroku which is a cloud platform as a service supporting Ruby. Many modern Linux distributions are also leaving MySql as their default database due to the recent Oracle acquisition of Sun (who previously owned MySql) [1].

Table 2: Required Software

4. Critical Success Factors

The hotel manager system must be easy to use, extendible, and scalable. These are non functional qualities that will aid users to have a better experience with the

system, and developers to be able to easily extend, improve, adapt, and add features to the system without breaking its main functionality. We will also like to make the webpage scalable so that the hotel can continue to serve their users better at each stage of their growing process as a company. By allowing the hotel management website to be able to grow together with the company, we are also allowing the hotel to take care of their old and new customers so that they can enjoy of all the amenities and services that the hotel offers in the present and in the future.

The hotel manager website must be easy to use for all the subjects that are going to use this service. This will initially include both staff and the hotel customers. Although it may be necessary to have some basic training to place orders, print records, and to perform other admin activities, we will want to make this as intuitive as possible. This website will certainly need to improve the effectiveness of the staff involved in performing these operations. Similarly, we want to make our customers to be able to find and book a room easy and fast. This will be achieved by focusing early on users and tasks. We will take into consideration and value the experience of the staff and customers with similar systems, and we will improve it upon that.

Besides making the website easy to use, we believe that in order to be successful we need to support extensibility of the system. This needs to be done because we are going to be adding many features on each iteration of the project, and we need to make sure that none of those features restrict the use of other possible features that we will want to implement at some point. One of the most important features that we will need to implement in the future is to allow an anonymous user to browse the contents of our webpage, so that they don?t have the necessity to provide us with sensitive information if they are just potential customers looking for alternatives. This should be done at some point because we acknowledge that some people don?t like the idea of registering for every single thing that they have to do on the internet. Therefore, extensibility is important because although we have considered these cases, we may not have time to implement them, but that doesn?t mean that we will compromise the software so that it is forever static.

5. Key Development Technologies

The key development technologies include the integrated development environment, the continuous integration server, the testing framework, and the version control system. Eclipse was chosen as the IDE due to the fact that it is both open source and cross-platform. Eclipse has also been promoted in previous courses, so the majority of the group is already familiar with it. Unfortunately Eclipse does not have out of the box support for Ruby, so the plugin Aptana is being used for Ruby support.

Jenkins is being used as the CI server, and is being hosted here. Jenkins was chosen because it has an extremely large number of plugins and it is easy to extend. It also has support for many of the common version control systems including git.

We also looked at CruiseControl.rb, but chose not to use it because it does not have a graphical reporting system. Git is being used as the version control system, and Trac is being used as the web interface to git. The git repository can be checked out using:

```
git clone <username>@seng403.ssh22.net:/var/cache/git/hotelmanager
```

The trac repository can be accessed here. We also tried the Gitlab web interface, but it was missing timeline and roadmap functionality and its bug reporting functionality was poor.

Shoulda will be used as the unit testing framework. This is because it is an extension of the built in Ruby unit testing framework Test::Unit. Unlike RSpec which encourages Behaviour Driven Development, Shoulda uses Test Driven Development which the group is more familiar with.

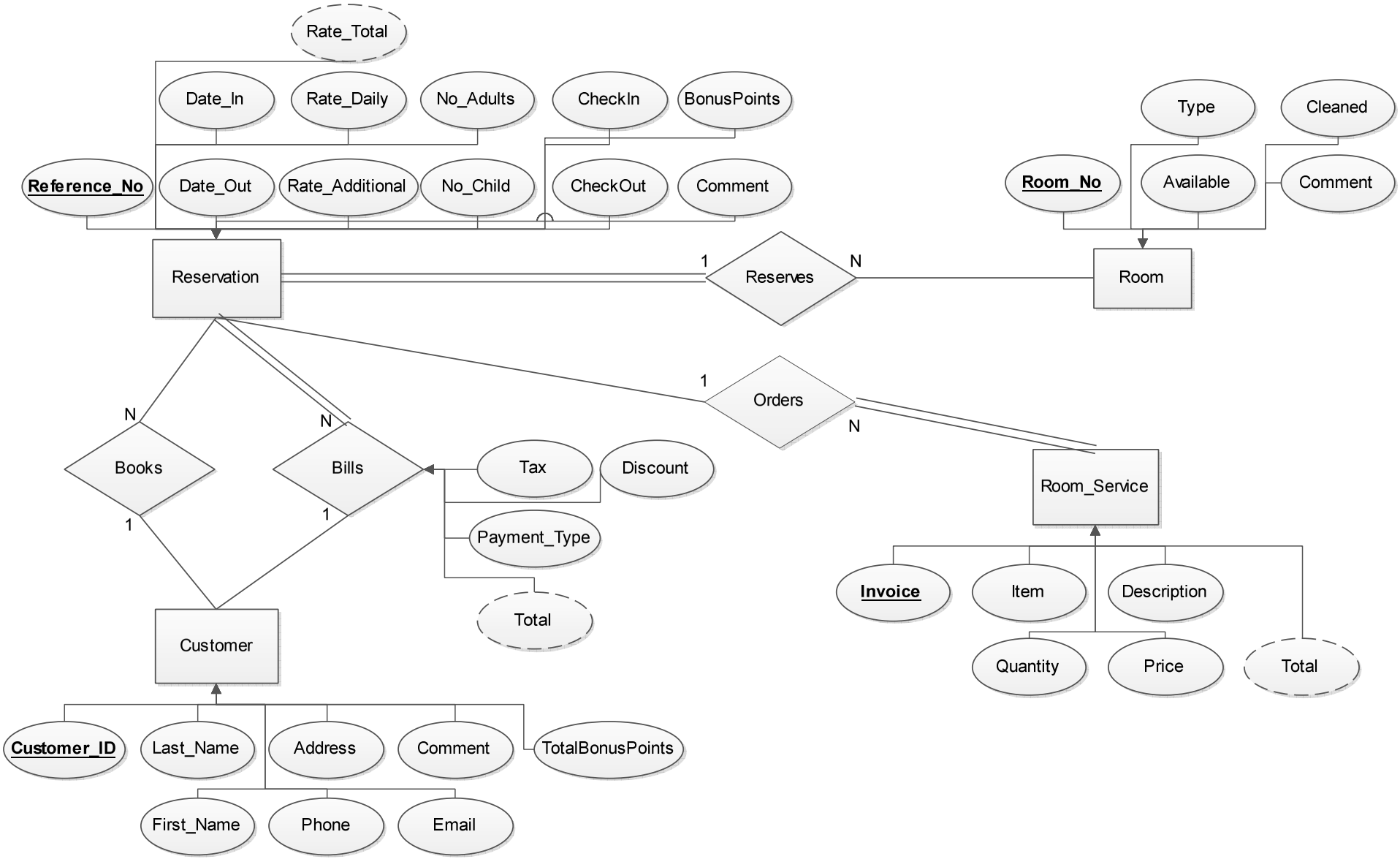
6. Critique

Name	Description	Comments
Brandon	Evaluated and setup continuous integration server	
Julia	Wrote the critical success factors Chose the IDE plugin	
Tyler	Wrote operational requirements	
Garrick	Release plan Chose the IDE plugin	

7. Appendix

Release 1

Iteration	User Stories	Tasks	Priority	Difficulty/Estimate	Status	Owner	Description
Iteration 1 Deadline (Feb26)	Development Setup (Bootstrap)	Setup Jenkins CI System	High	Hard	Done	Brandon	
		Setup Rails Environemnt	High	Medium		Everyone	Install Aptana, ruby, get familiar with Ruby
	Administrator is able to maintain users	Setup a baseline for user access control	High	Hard			Investigate Available Ruby User Management Plug-ins. Implement baseline.
		Implement user control for administrator	High	Medium			Given that the user is a valid user, when he/she enters user credentials in a login form, then an permissable webpage of the system appears.
		Admin is able to create and delete users	High	Medium			Given that the user is an administrator, when he/she is in the Users tab, then he/she will be able to add, and delete users
		Admin is able to view users	High	Medium			Given that the user is an adminstrator, when he/she is in teh Users tabe, then he/she will be able to view all users.
		Implement User Permission Assignment	High	Hard			Given that a user is a valid user and has "Admin" rights, when he/she selects another user, then that user will be assigned "Admin" rights
	Users are able to log into the system.	Implement user control for sales associate	High	Medium			Given that the user is a valid user, when he/she enters user credentials in a login form, then an permissable webpage of the system appears.
		Implement user control for sales manager	High	Medium			Given that the user is a valid user, when he/she enters user credentials in a login form, then an permissable webpage of the system appears.
		implement user control for elevated trusted sales associates	Low	Medium			Given that the user is a valid user, when he/she enters user credentials in a login form, then an permissable webpage of the system appears.
		implement user control for room service	Low	Medium			Given that the user is a valid user, when he/she enters user credentials in a login form, then an permissable webpage of the system appears.
		implement user control for room service manager	Low	Medium			Given that the user is a valid user, when he/she enters user credentials in a login form, then an permissable webpage of the system appears.
		implement user control for hotel manager	High	Medium			Given that the user is a valid user, when he/she enters user credentials in a login form, then an permissable webpage of the system appears.
		implement user control for anonymous costomers	Low	Medium			Given that the user is a valid user, when he/she enters user credentials in a login form, then an permissable webpage of the system appears.
		implement user control for registered customers	Medium	Medium			Given that the user is a valid user, when he/she enters user credentials in a login form, then an permissable webpage of the system appears.
	Sales associates are able to deal with customer information.	Sales associates can create a customer	High	Medium			Given that the user has logged in, when he/she enters customer's information and submits form, then a new customer is created.
		Sales associates can look up customers billing history	High	Medium			Given that the user is a sales representative, when he/she has found a customer, then the customer's billing history will appear.
		Sales associates can modify or delete customers information	High	Medium			Given that the user is a sales representative, when he/she has found a customer, then he/she will be able to edit the customer's information or delete the customer.
		Sales associates can view a list of customers	High	Medium			Given that the user is a sales representative, when he/she is in the customer webpage, then a list of customers will appear if any.
		Sales associate can search for specific customers	High	Medium			Given that the user is a sales representative, when he/she is in the customers webpage and entered customer's information (name, phone number, email, and customer-since date), then the customer will appear if found.
Iteration 2 (March 19)	Hotel Managers and Sales managers are able to handle rooms information.	Hotel managers and Sales Managers can create rooms	High	Medium			Given that the user is Hotel/Sales Manager in the rooms webpage and clicked on the New Room button, when the sales associate has entered the necessary room's information (room number, room type, description, price) and clicked on the save button, then a new room is created.
		Hotel Managers and Sales Managers can modify, and remove rooms.	High	Medium			Given that the user is a Hotel/Sales Manager in the rooms webpage and clicked on the edit or delete button of given room, when the user either edits the room information or confirms the room deletion, then the changes are persisted.
		Hotel Managers and Sales Managers can create, modify and delete room types	Low	Easy			Given that the user is a Hotel/Sales Manager in the rooms main webpage, when he/she clicks on the Room Types menu, then the user should be able to add, edit, and remove room types.
	Managers Should be able to deal with associates	Hotel Managers And Sales managers can add or delete sales associates	High	Medium			Given that the user is a Hotel/sales manager, when he/she is in the Associates tab, then he/she will be able to add, and delete Associates
		Hotel Managers should be able to promote sales associates to sales managers	High	Medium			Given that the user is a Hotel manager, when he/she is in the Associates tab, then he/she can promote/demote an associate to a/from a sales manager
		Hotel Managers should be able to add and delete Sales Managers	High	Easy			Given that the user is a Hotel manager, when he/she is in the Associates tab, then he/she can add a amnd delete sales managers
	Sales associates are able to handle room bookings information.	Sales assoicates can view a list of rooms	High	Medium			Given that the user is sales representative, when he/she is in the Rooms tab, then all rooms will appear.
	Sales associates are able to handle room bookings information.	Sales associates can book a room for a customer	High	Hard			Given that the user has logged in, when the sales associate has selected a customer and entered the booking information, then a new room reservation is created.
		Sales associates can view room bookings.	High	Medium			Given that the user is a sales representative, when he/she clicks on the room bookings tab, then all the room bookings will appear
		Sales associates can cancel a room booking	High	Easy			Given that the user is a sales representive, when he/she has found a room booking, then she can cancel such booking.
		Sales associates can search bookings.	High	Medium			Given that the user is a sales representative and in the main bookings webpage, when he/she enters room information (check-in/check-out dates, room type and/or roomt number), then the room will appear if found.
		Sales representative is able to record customer's payments	High	Hard			Given that the user is a sales representative and in the Payments main webpage, when he/she enters the payment information for a specific room booking, then the payment is recorded as well as the customer's billing information
	System should be able to handle registered customers	New customers can register to the system	Medium	Medium			Given that the user is a new customer, when the customer has entered all his/her customer information, then the a new registered customer is added.
		Registered customers can update their profile information	Medium	Medium			Given that the user has logged in as a customer, when the customer has edited his/her profile and clicked on save changes, then customer's information will be persisted.
		Registered customers can book a room	Medium	Hard			Given that the user has logged in as a customer, when the customer has selected the necessary room booking information and submitted the information, then a new room booking will be created
		Registered customers can view his/her bookings	Medium	Medium			Given that the user has logged in as a customer, when the customer is in the My Room Bookings tab, then all his/her bookings will appear.
Iteration 3 (April 9)	System Should be able to handle Room Service associates	Room Service Associates can look up customers by room number	Medium	Medium			Given that the user is logged in as a room service associate, the user can click on a room currently being booked and view a customer
		Room Service Associate can add to and delete a room service bill	Medium	Medium			Given that a the user is logged in as a room service associate and is on a customers page, then the Room service associate may add bills or credits to a customers room service charges
	System Should be Able to Handle Room service Managers	Room Service Managers should be able to add and delete Room Service associates	Medium	Medium			Given that the user is logged in as a room service manager, the user can add or delete room service associate in the system
	System could be able to handle anonymous customers	Anonymous users are able to book rooms	Low	Medium			Given that the user is an anonymous customer in the room booking main webpage, the user can enter the necessary booking information, then a new room booking is created and the anonymous user receives the booking information in his/her email.
		Anonymous users can become registered customers	Low	Medium			Given that the user has performed a booking in the past, when the system finds a match with his/her email account, then the user can become a registered customer.
	Administrators are able to handle hotel information	Administrators can create, modify and delete Hotels	Low	Medium			Given that the user is an Administrator and in the hotel admin webpage, when the user enters hotel's info, modifies hotel's infor or deletes hotels, then the changes are persisted.
		Administrators are able to view hotels	Low	Easy			Given that the user is a Administrator, when the user is in the Hotels main webpage, then the listing of hotels should appear.
		Administrators are able to add rooms to hotels	Low	Medium			Given that the user is a Administrator, when the user is looking at a specific hotel, then the user should be able to assing rooms to that hotel.
	System must handle trouble tickets	Any customer can issue trouble tickets	Low	Medium			Given that the user is either anonymous or a registered one, when in the ticket main page, then the user shoudl be able to send ticket.
		Sales people should be able to resolver trouble tickets	Low	Medium			Given that the user is a sale people, when the user is in the tickets main webpage, then he/she will be able to update/delete the status of a ticket.


Rate_Total
Date_In
Rate_Daily
No_Adults
CheckIn
BonusPoints
Reference_No
Date_Out
Rate_Additional
No_Child
CheckOut
Comment
Type
Cleaned
Room_No
Available
Comment
Reservation
1
Reserves
N
Room
1
Orders
N
N
Books
N
Bills
Tax
Discount
Room_Service
1
1
Payment_Type
Total
Invoice
Item
Description
Customer
Quantity
Price
Total
Customer_ID
Last_Name
Address
Comment
TotalBonusPoints
First_Name
Phone
Email

8. References

[1] M. Maslanova. Summary/minutes for fesco 2013-01-30, 2013. [Online; accessed 5-February-2013].

[2] Wikipedia. Wikimedia traffic analysis report - browsers, 2012. [Online; accessed 5-February-2013].