



# System Proposal

## **Team TGIF**

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ISDS 406



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## Executive Summary

With the construction of new conference rooms, Cowboy Hotel has requested to create a more efficient system that is able to make reservations for the newly constructed conference rooms. This system proposal outlines the purpose, scope, conclusion as well as any recommendations we make. In this document, we included the hotel's system request, the schedule for the duration of this project, the feasibility of this system, the tangible and intangible costs and benefits, as well as any hardware and software needs, and finally, models that outline the database, the interface and processes included in this system.

The system request defines the scope of the project. It will be a complete overhaul of the system which is currently manual and minimal booking of the conference rooms. The current system has resulted in double booking and doesn't fully utilize the potential of the conference rooms. The requirements for the system are as followed:

- Making reservations easily and quickly through each user log in
- Proper storage of customer information
- Change reservations through manager logins
- The ability to generate reports for effective advertising.


Through the feasibility analysis and the requirements definition document, we are able to deduce if the software will have technical feasibility, economic feasibility, and organizational feasibility. With proper training, the users will be able to utilize the software to its full capability. Economically, the system will be feasible. The development costs are below the cost of the budget of \$40,000 and the system will have an increase of sales of:

- Total reservation sales will have an increase of \$80,000 by year 1.
- By year 3, it will increase up to \$100,000.
- Increased total revenue for hotel room bookings will be \$67,000.

Lastly, the booking software will be much more user friendly and in result will be able to organize appointments more effectively. Through reports, the managers will be able to deduce which rooms are being cancelled. This organized data could be handed to the marketing team to create advertising for these rooms.

On page 21, we included the hardware and software that will be needed for the completion and implementation of the program. We will need to buy a total of 2 monitors and 2 desktops. As it was specified by the client, the computers and software will run on both Windows Pro 10. The physical server we will buy to hold the application and the database will be an expense of \$1,690 and the software needed will be \$1,619.95. In total, it will be \$4,981.95 for the hardware and software. With this cost, we are on budget and still have much to spare for any unexpected expense that arises

Within the Requirements Definition Document, there are written requirements on how the system should perform and its characteristics. This will prevent scope creep. With the



requirements outlined in this document, we were able to come to the conclusion of incorporating bought software and customizing it in a way to best fit the system the client wants. This is to ensure that Cowboy Hotel receives a system that fit their needs, of which a few examples are shown below:

- Reservations need to update on real time.
- Guest information needs to be stored.
- Reports need to be generated of cancelled rooms
- Managers are the only users that can edit and cancel reservations

We have come to the conclusion of the Acquisition Strategy because the needs that are being met are very common and it is cost beneficial to the project. With the low cost of the bought software and its continued recurring charges, we will be able to increase the pay of our development team. Using our own development team, we will be able to customize the database that will be made in the SQL Server so that the employees will be able to complete their tasks. In result, we will be able to provide maintenance and technical support at a much lower cost as well after the implementation of the project.

Through use cases, the system is able to map the processes to reach the goal of the booking system. The use case on page 11, ties all the processes together. The other use cases on pages 12 to 14, all go through the processes in detail. Which leads us into the imagery of the process models, these show the different levels of the software interaction. The diagram shown on page 15, graphically depicts the entire system and its processes in one simplified process. On pages 16 to 18, we get a much closer look at the major internal processes, for example, how each process connects to a data store or how data moves from one place to another. Following the process models, the physical data model on page 19 shows the project in its entirety. This will help with designing the software and what is needed for each entity. This includes: the payment, catering services, customer, conference room and the reservations. With this database, the employees will be able to store data as well as pull out any reports needed.

We included the Interface Structure Diagram with two examples on how two web pages will look on pages 22 to 24. Through the Interface Structure Diagram, we see the structure of the system. This will include the web pages needed to make reservations and input guests, as well as generate revenue reports and cancellations. As stated before, it will be running in real time which is demonstrated within this diagram with the connection between Create Reservation Form and the Room Availability Form.

As reflected in the work plan on page 6, the project is on track to be completed. This project will help organize the current system and will be able to utilize the full economic potential of the newly built conference rooms.

## Systems Request- Cowboy Hotel Booking and Events Planning

**Project Sponsor:** Jaime Bradson, Hotel Manager

**Business Need:** This project has been created to set a new software system in order to properly schedule booking for the new conferences rooms of Cowboy Hotel.

As of right now,

- Despite the conference rooms being built several weeks ago, there is no advertisement of the conferences rooms due to no proper system.
- Rooms are booked minimally and all bookings are a manual process.
- With bookings being a manual process, mistakes are a common occurrence.
- The current system used for the hotel rooms is not suited for the conference rooms and would cause an overhaul on the system.

**Business Requirements:** To design a software system where the employees can access and process bookings for the conference rooms through the conference room office and the hotel manager office.

The software system must be user-friendly in terms of:

- Proper storage of customer data such as names and addresses.
- Automated process of booking conference rooms through a “virtual” calendar.
- Listing of all reservations

**Business Value:** With an implemented new system, Cowboy hotel is able to start investing on advertising the conference rooms. We expect Cowboy Hotel to have a new stream of sales through reservations for their conference rooms and an added number of sales with hotel room reservations to host the guests for their events.

Estimate value to the company:

- At the end of the first year, \$80,000 in sales from conference room bookings (Around 20% of actual revenue from booking suites and bedrooms).
- An increase of 5% for hotel revenue through booking suites and bedrooms for guests who are staying for events.
- At the end of the third year, \$100,000 in sales from conference room bookings (Up to 25% of actual revenue from booking suites and bedrooms).

**Special Issues or Constraints:**

- There is \$40,000 available for the project upfront.
- The project must be complete as soon as possible to reduce booking errors.

## Work Plan

Task ID	Task Name	Assigned To	Estimated			Actual			Dependency	Status
			Duration(Days)	Start Date	End Date	Start Date	End Date	Duration Variance		
1	<b>Planning</b>		22	1/18/20	2/9/20	1/18/20	2/9/20	0		Closed
1.1	Classify opportunity and feasibility	Giselle, April	7	1/19/20	1/26/20	1/19/20	1/26/20	0		Closed
1.2	Create Workplan	Giselle	7	1/26/20	2/2/20	1/26/20	2/2/20	0		Closed
1.3	Project Management	Giselle	8	2/1/20	2/9/20	2/1/20	2/9/20	0	1.2	Closed
2	<b>Analysis</b>		35	2/9/20	3/15/20	2/9/20	3/15/20	0		Closed
2.1	Set analysis strategy	Keti	1	2/9/20	2/10/20	2/9/20	2/10/20	0		Closed
2.2	Gather business requirements	Keti	5	2/10/20	2/15/20	2/10/20	2/15/20	0		Closed
2.3	Requirement statements and analysis models	Keti	15	2/15/20	3/1/20	2/15/20	3/1/20	0	2.2	Closed
2.4	Prepare system proposal	April	14	3/1/20	3/15/20	3/1/20	3/15/20	0		Closed
3	<b>Design</b>		39	3/15/20	4/23/20	3/15/20	4/23/20	0		Closed
3.1	Define design strategy	April	7	3/15/20	3/22/20	3/15/20	3/22/20	0		Closed
3.2	Develop architecture design	Rahul	7	3/22/20	3/29/20	3/22/20	3/29/20	0		Closed
3.3	Develop interface design	Rahul	14	3/29/20	4/12/20	3/29/20	4/12/20	0		Closed
3.4	Set Database	Rahul	8	4/11/20	4/19/20	4/11/20	4/19/20	0		Closed
3.5	Develop program	Irving	8	4/15/20	4/23/20	4/15/20	4/23/20	0	3.2,3.3	Closed
4	<b>Implementation</b>		37	4/23/20	5/30/20	4/23/20	5/30/20	0		Closed
4.1	Build System	Kenneth, Irving	7	4/23/20	4/30/20	4/23/20	4/30/20	0		Closed
4.2	Installation	Kenneth, Irving	15	4/30/20	5/15/20	4/30/20	5/15/20	0	4.1	Closed
4.3	Post-Implementation	Kenneth	15	5/15/20	5/30/20	5/15/20	5/30/20	0		Closed

## Feasibility Analysis

### Cost-Benefit Analysis

<b>Benefits</b>	<b>2016</b>	<b>2017</b>	<b>2018</b>	<b>2019</b>	<b>Total</b>
Increased Sales with conference room bookings	\$ -	\$ 80,000.00	\$ 92,000.00	\$ 100,000.00	\$ 272,000.00
Increased Sales with hotel room bookings	\$ -	\$ 20,000.00	\$ 22,500.00	\$ 24,500.00	\$ 67,000.00
<b>Total Benefits</b>	<b>\$ -</b>	<b>\$ 100,000.00</b>	<b>\$ 114,500.00</b>	<b>\$ 124,500.00</b>	<b>\$ 339,000.00</b>
<b>Development Costs</b>					
Hardware (Computers)	\$ 3,362.00	\$ -	\$ -	\$ -	\$ 3,362.00
Software (Servers)	\$ 1,619.95	\$ -	\$ -	\$ -	\$ 1,619.95
Software License	\$ 700.00	\$ -	\$ -	\$ -	\$ 700.00
Desk and Chairs	\$ 1,500.00	\$ -	\$ -	\$ -	\$ 1,500.00
Salary of Development team	\$ 25,000.00	\$ -	\$ -	\$ -	\$ 25,000.00
<b>Total Development Costs</b>	<b>\$ 32,181.95</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ 32,181.95</b>
<b>Operational Costs</b>					
Software upgrades	\$ -	\$ 2,000.00	\$ 2,000.00	\$ 4,000.00	\$ 8,000.00
Software licensing fees	\$ -	\$ 1,900.00	\$ 1,900.00	\$ 1,900.00	\$ 5,700.00
Hardware repair and upgrades	\$ -	\$ 2,000.00	\$ 5,000.00	\$ 3,000.00	\$ 10,000.00
Booking Specialist (Hired after 6 months)	\$ -	\$ 40,000.00	\$ 40,000.00	\$ 40,000.00	\$ 120,000.00
Assistant(Hired after 6 months)	\$ -	\$ 30,000.00	\$ 30,000.00	\$ 30,000.00	\$ 90,000.00
Miscellaneous Expense	\$ -	\$ 5,000.00	\$ 5,000.00	\$ 5,000.00	\$ 15,000.00
User training	\$ -	\$ 2,000.00	\$ 1,500.00	\$ 1,000.00	\$ 4,500.00
<b>Total Operational Costs</b>	<b>\$ -</b>	<b>\$ 82,900.00</b>	<b>\$ 85,400.00</b>	<b>\$ 84,900.00</b>	<b>\$ 253,200.00</b>
<b>Total Costs</b>	<b>\$ 32,181.95</b>	<b>\$ 82,900.00</b>	<b>\$ 85,400.00</b>	<b>\$ 84,900.00</b>	<b>\$ 285,381.95</b>
<b>Total Benefits- Total Costs</b>	<b>\$ (32,181.95)</b>	<b>\$ 17,100.00</b>	<b>\$ 29,100.00</b>	<b>\$ 39,600.00</b>	
<b>Cumulative Net Cash Flow</b>	<b>\$ (32,181.95)</b>	<b>\$ (15,081.95)</b>	<b>\$ 14,018.05</b>	<b>\$ 53,618.05</b>	
<b>ROI</b>			<b>18.78%</b>		



### **Technical Feasibility**

The authorized user will need to get familiar with the application and technology for the new booking system. With the current booking system, the employees are disorganized and making errors that are time-consuming and costly. The new booking system for the conference rooms will have to be user friendly and have a quality-enhanced reporting. In order to have a lower risk, the system will be compatible on the same computer (Microsoft Windows 10) and software (Microsoft Office Professional 2013).

### **Economic Feasibility**

To create the new booking system for the conference rooms, there will be a set budget of \$40,000 upfront to start it. The budget will be spent on the operational and development costs. Development costs include hardware, software, furniture (such as desk and chairs), and the salary of the development team for a cost of \$32,181.95 for the year of 2016. As we get into operations in 2017, our operational costs start with \$82,900 with a total benefit of \$100,000 (increased sales of conference room bookings and hotel room bookings being \$80,000 and \$20,000 respectively). With the new software, the profit goal is to gain 20% of revenue during the end of the first year and 25% of revenue during the end of three years. There will also be an additional of 5% increase for the hotel room bookings for those who will be attending these conference events. Later, there will be more profits and benefits to upgrade for the operational costs such as when we move into 2018 where we start to produce a cumulative net cash flow of \$14,018.05 after covering the operational and development costs.

### **Organizational Feasibility**

The impact of the new booking software should be user friendly and more efficient than the old booking software which did not account for the bookings of the conference room. To ensure that there is organizational feasibility, a strategic alignment shows that the new booking system will increase consumers to reserve. Users in the organization will be benefited so that there are less errors that can make the hotel fail.





## **Requirements Definition Document**

### **Functional Requirements**

#### **1. Conference Room Booking Management**

- 1.1 The system will allow users to see current availability of conference rooms.
- 1.2 The system will allow users to book conference rooms.
- 1.3 The system will allow users to cancel reservations.
- 1.4 The system will allow users to edit room reservations.
- 1.5 The system will record user information and credentials.

#### **2. Customer Records Management**

- 2.2 The system will indefinitely save customers' email addresses, full names, phone numbers, and address.
- 2.3 The system will allow customer accounts to be created by booking staff members.

#### **3. Caterer Records Management**

- 3.1 The system will indefinitely save the history of catering service from caterers.
- 3.2 The system will indefinitely save the caterer's name, menu, and type of cuisine.

#### **4. Data Report Management**

- 4.1 The system will generate reports based on which rooms are being rented the most.
- 4.2 The system will generate which rooms are being cancelled.



## **Nonfunctional Requirements**

### **1. Operational**

1.1 The software requires Windows 10 and will only operate if Windows 10 is used.

1.2 The user will be able to operate the software on all the computers in the hotel.

### **2. Performance**

2.1 The software should be capable of transferring data without long periods of lag.

2.2 The software should update itself on time to display current occupancy levels and additional information.

2.3 The software would occasionally require maintenance.

2.4 The software is set up to run indefinitely.

### **3. Security**

3.1 The software will only allow a user to login if the user has a username and password.

3.2 The manager and the hotel staff are the only ones that have a user account and password to the system.

3.3 The software will keep a record of too many incorrect login entries of users.

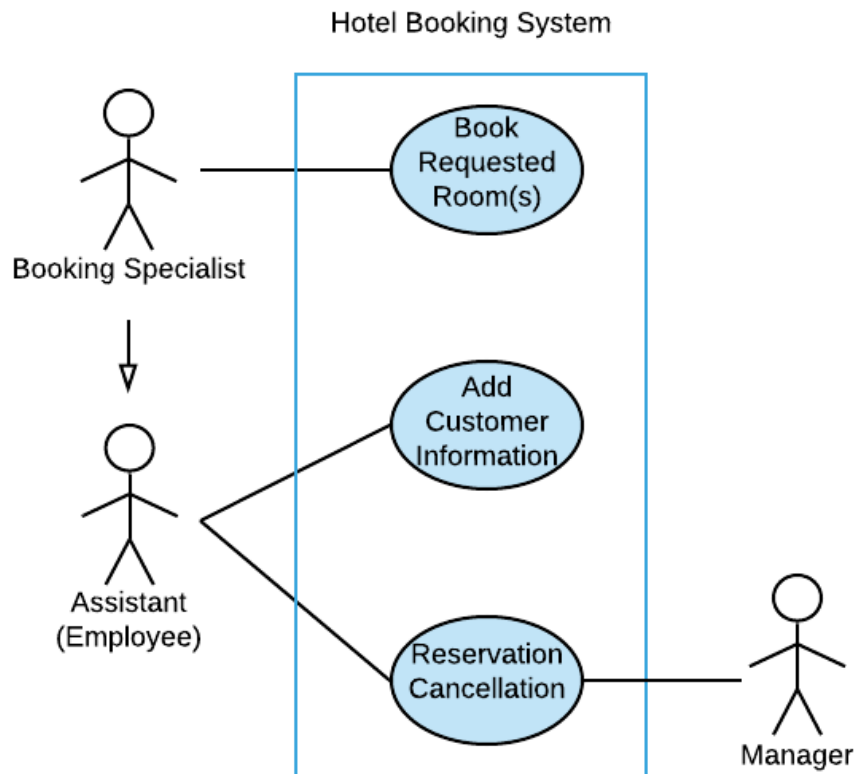
3.4 The software will automatically ask for a password again after 30 minutes of inactivity.

### **4. Cultural and Political**

4.1 The software will not ask about the customer's potential disabilities.

4.2 The software will initially ask the user to agree to terms and conditions to protect the customers' personal information.

## Use Case Diagram (UML)



### Set of use cases

<b>Use Case Name:</b> Book requested room(s)	<b>ID:</b> UC-1	<b>Priority:</b> High
<b>Actors:</b> Booking Specialists		
<b>Description:</b> This use case describes how the booking specialist will book the room(s) for the client.		
<b>Trigger:</b> Booking Specialist books the client's room(s). <b>Type</b> <input checked="" type="checkbox"/> <b>External</b> <input type="checkbox"/> <b>Temporal</b>		
<b>Preconditions:</b> <ol style="list-style-type: none"><li>1. Booking specialist is an authorized user in system.</li><li>2. Account has been created for client.</li></ol>		
<b>Normal Course:</b> <ol style="list-style-type: none"><li>1. Booking Specialist logs in.</li><li>2. Booking Specialist logs a specific room from the system.</li><li>3. System will retrieve information of specific room.</li><li>4. System will show if the specific room is available or not from a specific date.</li><li>5. System will give an option of "Reserve" on a specific available date or to "Continue Searching".</li><li>6. If "Reserve" is chosen, system will prompt for client ID.<ol style="list-style-type: none"><li>a. Booking Specialist will input client ID for the client.</li><li>b. The system will pre-fill out the client information form for the requested room.</li><li>c. System will ask for any changes in regards to the pre-filled out client information.</li><li>d. System will ask to confirm client information with specified room and date.</li><li>e. System will mark "Booked" for the room.</li></ol></li><li>7. If "Continue Searching" is selected,<ol style="list-style-type: none"><li>a. The system will prompt the Booking Specialist to choose other rooms.</li></ol></li><li>8. System will give option to "Exit".</li><li>9. System will terminate use case when chosen "Exit".</li></ol>		
<b>Postconditions:</b> <ol style="list-style-type: none"><li>1. The room is marked "Booked".</li></ol>		
<b>Exceptions:</b> <b>E1:</b> The requested room has already been reserved by another booking specialist. <ol style="list-style-type: none"><li>1. The system displays the date and "Room has been reserved."</li><li>2. The system will ask the Booking Specialist to "Continue Searching" or "Exit."</li><li>3. If Booking Specialist chooses "Continue Searching", system will prompt to log a specific room.</li><li>4. After logging specific room, Normal Course begins.</li><li>5. System will give option to "Exit".</li><li>6. System will terminate use case when chosen "Exit".</li></ol>		



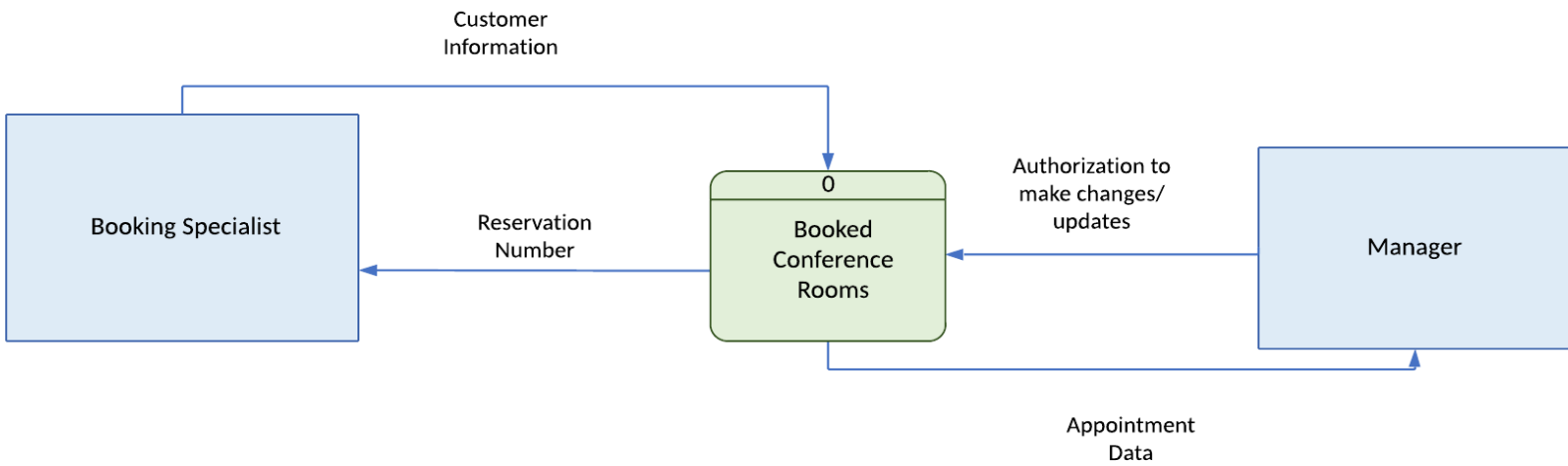
<b>Use Case Name:</b> Add Customer Information		<b>ID:</b> UC-2	<b>Priority:</b> High
<b>Actor:</b> Booking Specialist			
<b>Description:</b> This use case describes the Employee's input and storage of customer information.			
<b>Trigger:</b> Customer arrives at the hotel and needs to be checked-in the system.			
<b>Type</b> <input checked="" type="checkbox"/> External <input type="checkbox"/> Temporal			
<b>Preconditions:</b>			
<ol style="list-style-type: none"> <li>1. Employees are authenticated to use the system.</li> <li>2. Customer is staying at the hotel or booking an event.</li> <li>3. Customer willing to provide required information.</li> <li>4. Customer information is available and online.</li> </ol>			
<b>Normal Course:</b>			
<ol style="list-style-type: none"> <li>1.0 Input customer information into the system for registration.             <ol style="list-style-type: none"> <li>1. Employee logs in to the system with ID and password.</li> <li>2. Employee asks the customer for their information (name, contact information, etc).</li> <li>3. If customer information already exists, the system will notify the employee.                 <ol style="list-style-type: none"> <li>a. System asks if employee wants to overwrite.</li> <li>b. If overwrite is allowed, employee will make changes to customer information.</li> </ol> </li> <li>4. If there is no existing customer information, the system requests input of data.</li> <li>5. System accepts data and generates customer ID.</li> <li>6. Customer data is saved and stored.</li> </ol> </li> </ol>			
<b>Postconditions:</b>			
<ol style="list-style-type: none"> <li>1. Customer data is recorded.</li> <li>2. Customer information is online and accessible.</li> </ol>			
<b>Exceptions:</b>			
<b>E1:</b> Customer information already exists (occurs at step 3).			
<ol style="list-style-type: none"> <li>1. System displays a message that the data already exists.</li> <li>2. System asks employee if they would like to overwrite the data or use the existing one.</li> <li>3. System overwrites and stores new data or uses existing customer info.</li> </ol>			
<b>Summary Inputs</b>	<b>Source</b>	<b>Outputs</b>	<b>Destination</b>
Employee credentials Customer name Customer contact info	Employee Customer Customer	System access Customer modification Customer modification	Datastore access Customer datastore Customer datastore



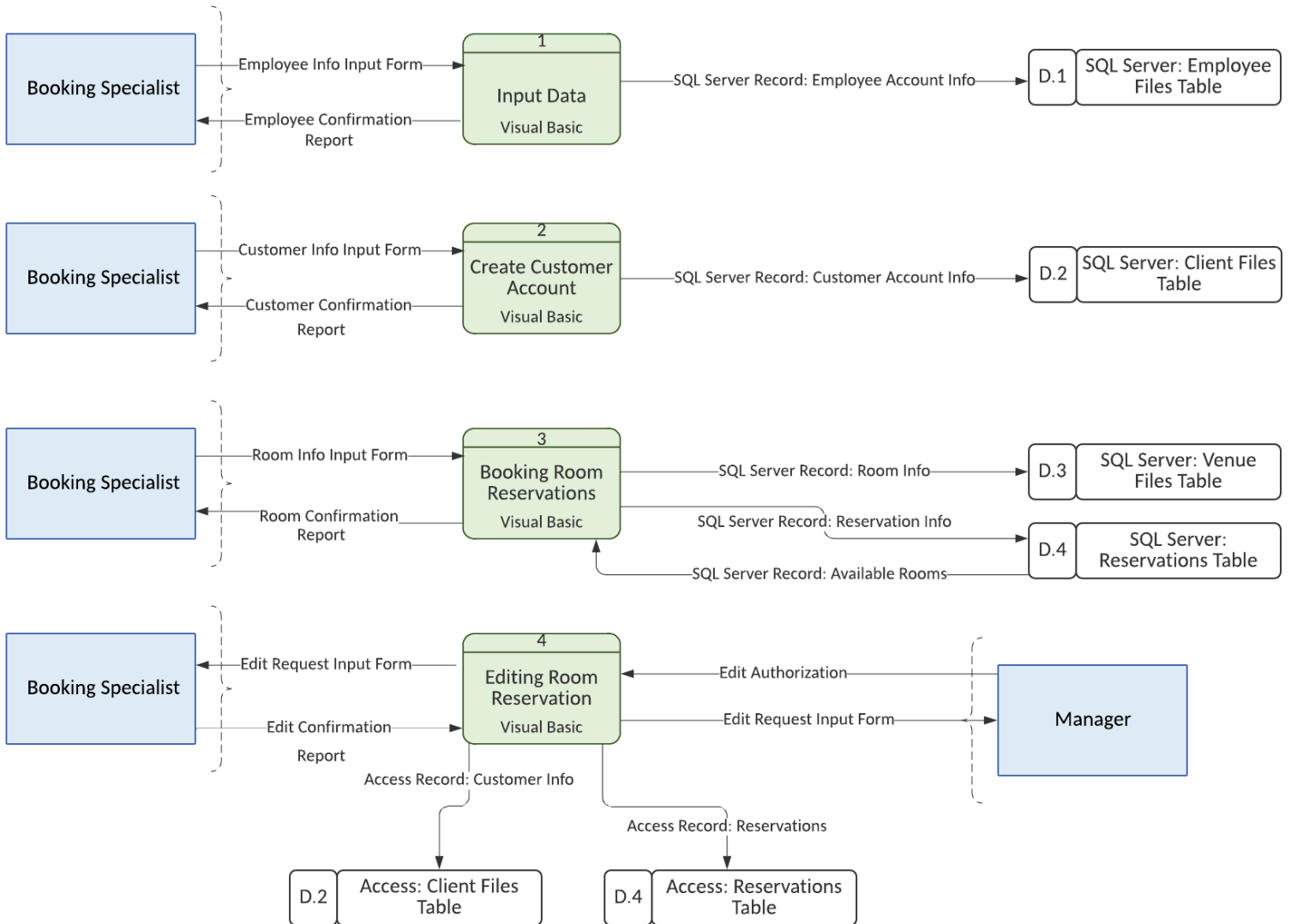
<b>Use Case Name:</b> Reservation Cancellation	<b>ID:</b> UC-3	<b>Priority:</b> High
<b>Actors:</b> Booking Specialist and Manager		
<b>Description:</b> This use case describes how an employee cancels a conference room reservation.		
<b>Trigger:</b> Customer decides to cancel their conference room reservation. <b>Type</b> <input checked="" type="checkbox"/> <b>External</b> <input type="checkbox"/> <b>Temporal</b>		
<b>Preconditions:</b> <ol style="list-style-type: none"><li>1. User had made a reservation.</li><li>2. Employee is registered and has proper log in credentials.</li></ol>		
<b>Normal Course:</b> <ol style="list-style-type: none"><li>1. Employee gets notified from the customer to cancel the room.</li><li>2. Employee looks up the reservation number to be deleted.</li><li>3. The system displays the reservation of the customer that is correlating to the reservation ID.</li><li>4. Manager approves cancelation if it involves a caterer.</li><li>5. The employee clicks the option to delete the reservation.</li><li>6. The system removes the customer's reservation.</li><li>7. If the reservation was already paid for, a refund is to be issued.</li></ol>		
<b>Postconditions:</b> <ol style="list-style-type: none"><li>1. Manager receives notification of cancelation.</li><li>2. If necessary, a refund is issued.</li></ol>		
<b>Exceptions:</b> <b>E1:</b> It is too late to cancel the reservation. <ol style="list-style-type: none"><li>1. The system displays the message “Unable to cancel reservation”</li><li>2. The system asks the user to return to the main menu.</li></ol>		

**Process model (DFDs)**

**Context Diagram**

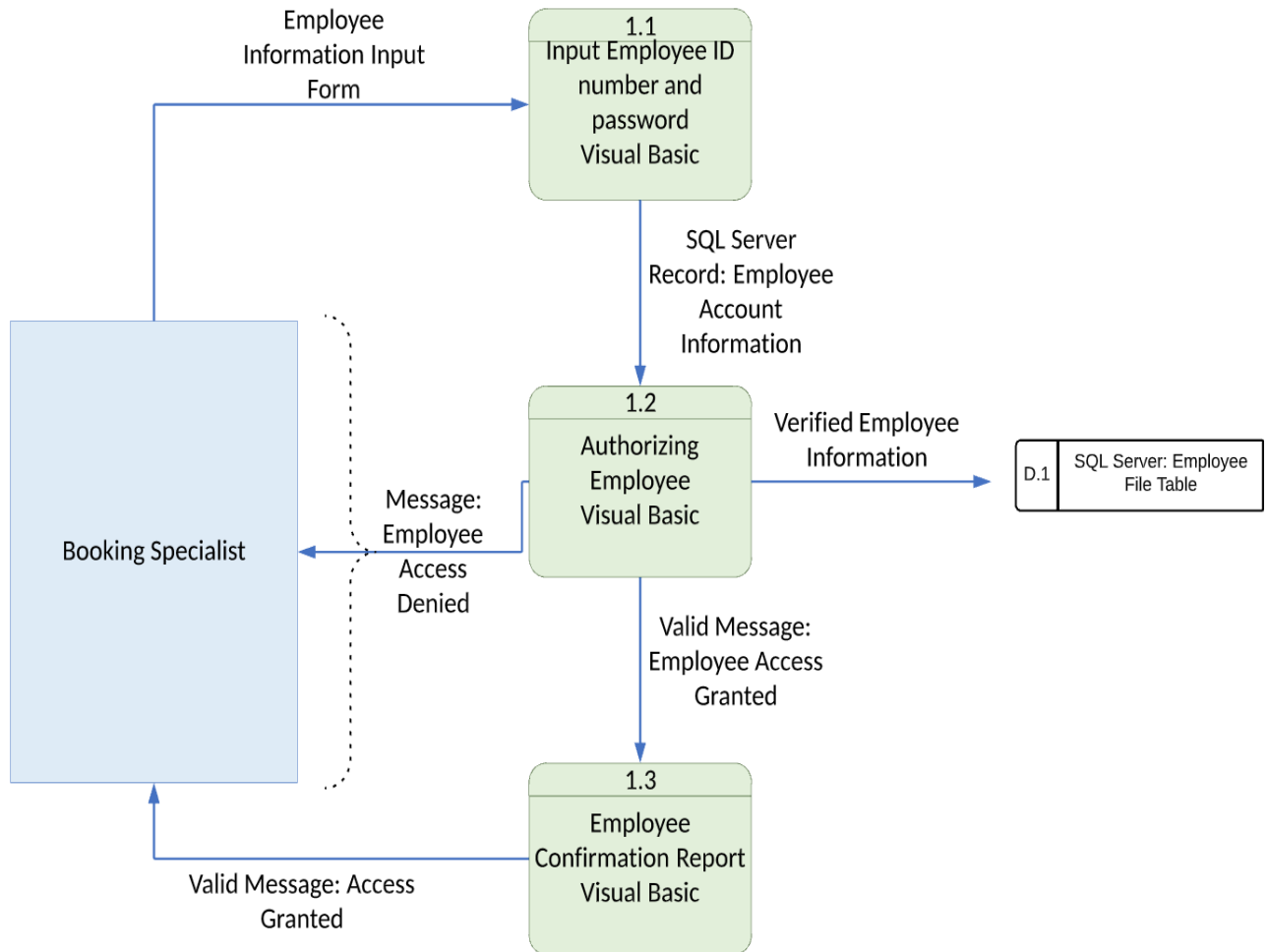


## Level 0 Diagram

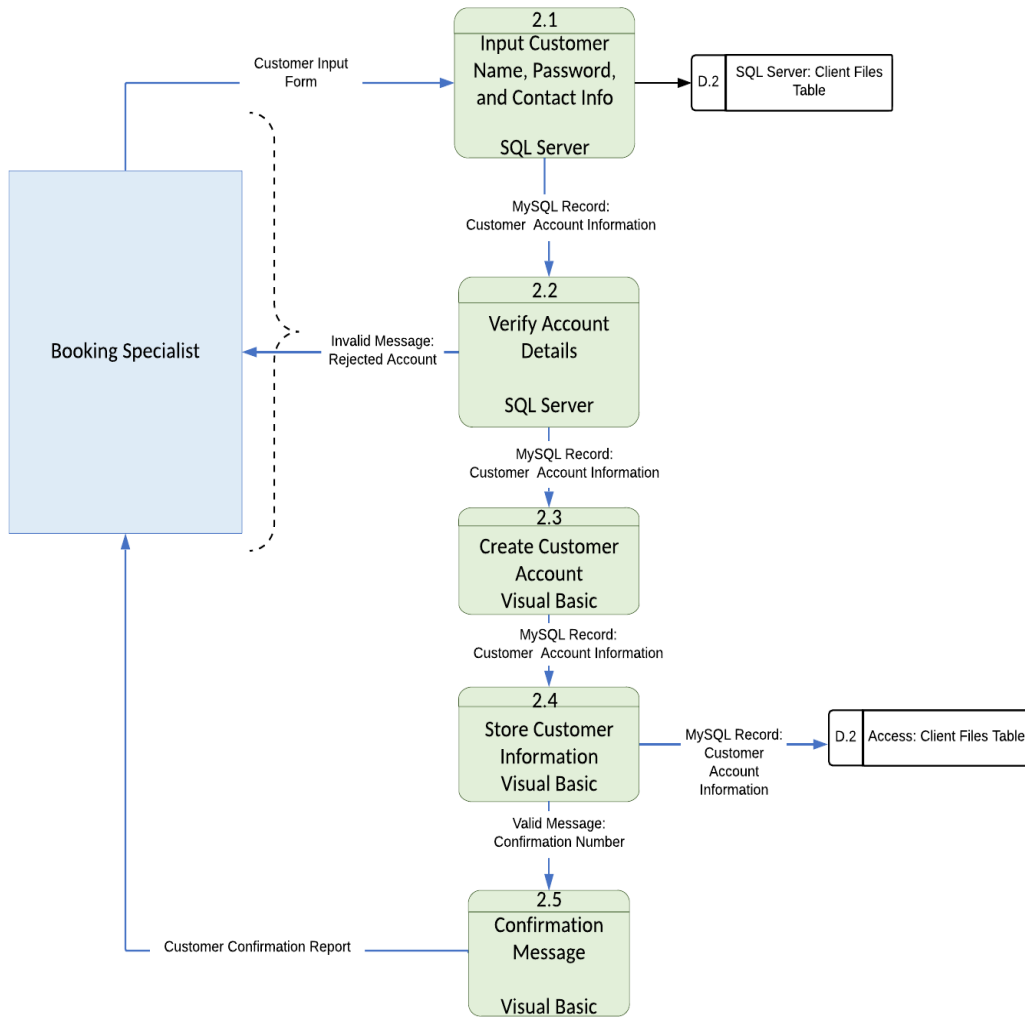




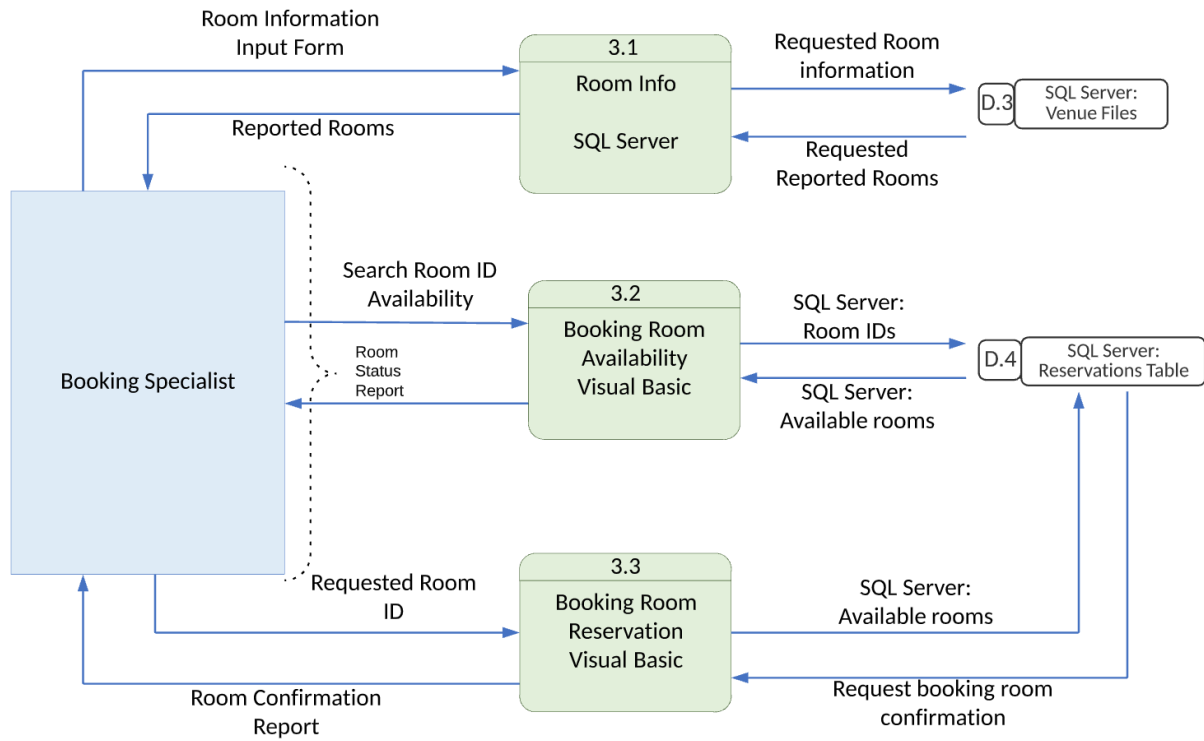
## Level 1 Process 1



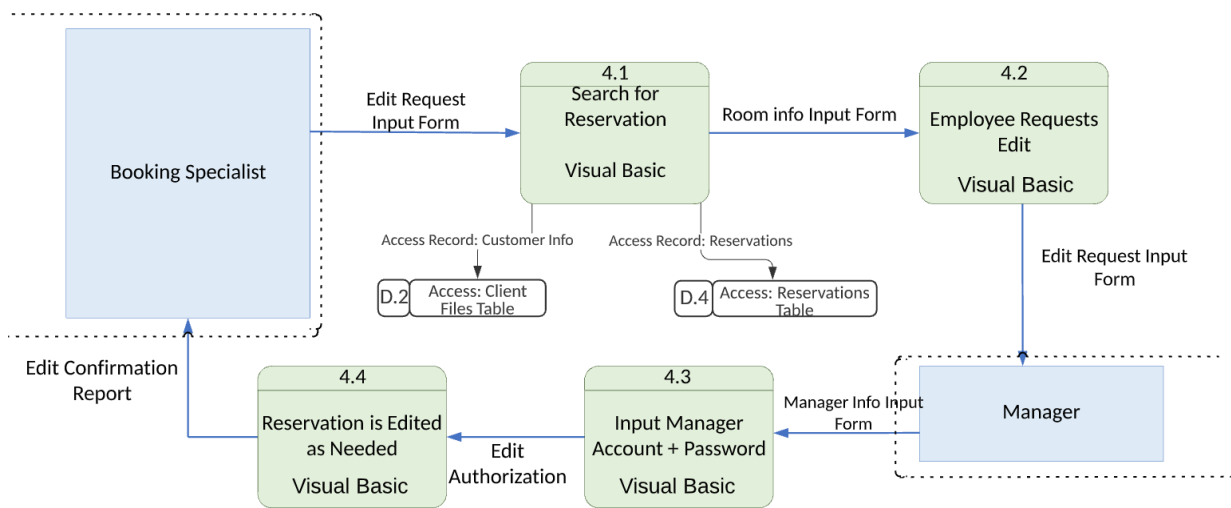
## Level 1 Process 2



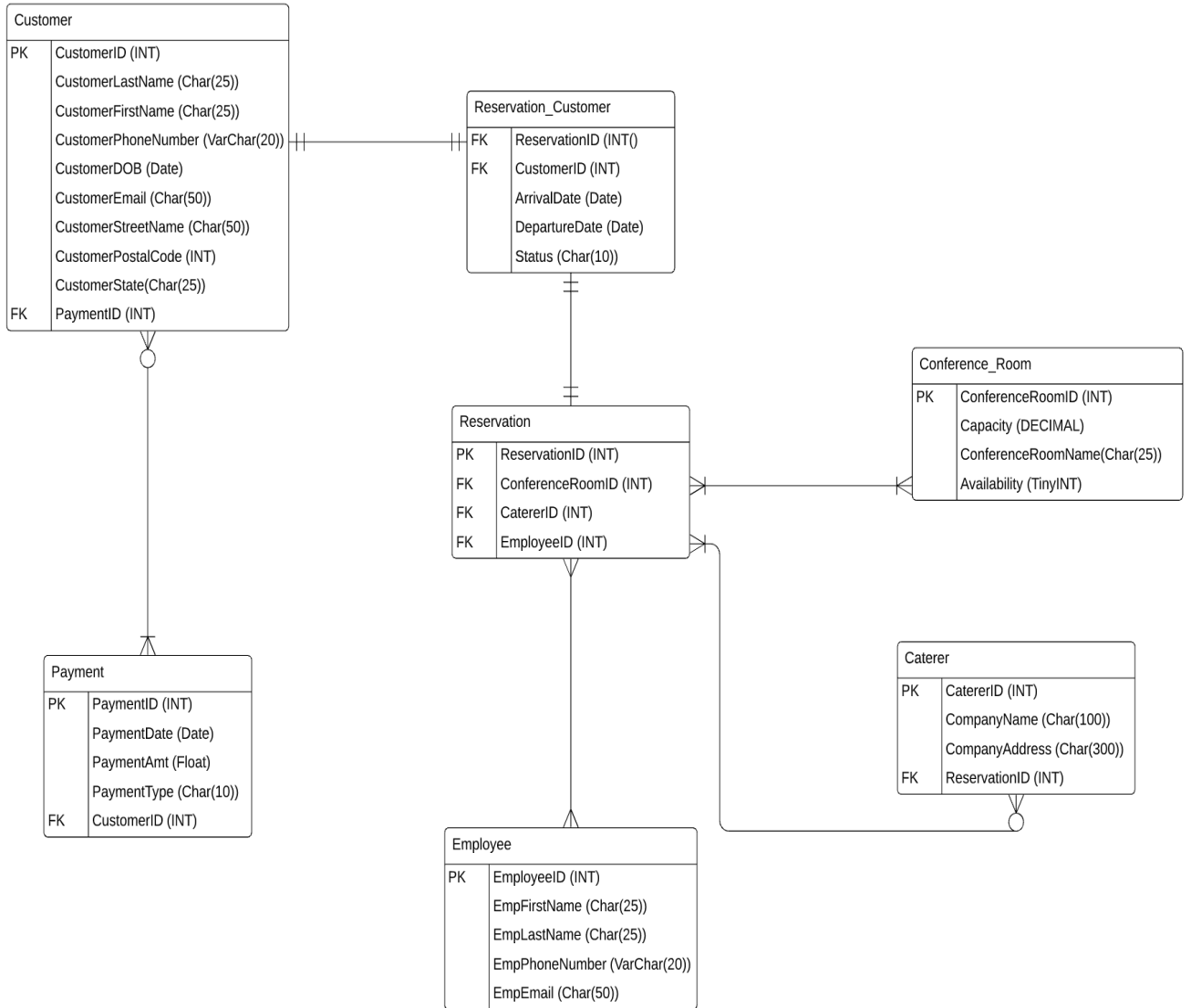
### Level 1 Process 3



### Level 1 Process 4



## Physical Data Model

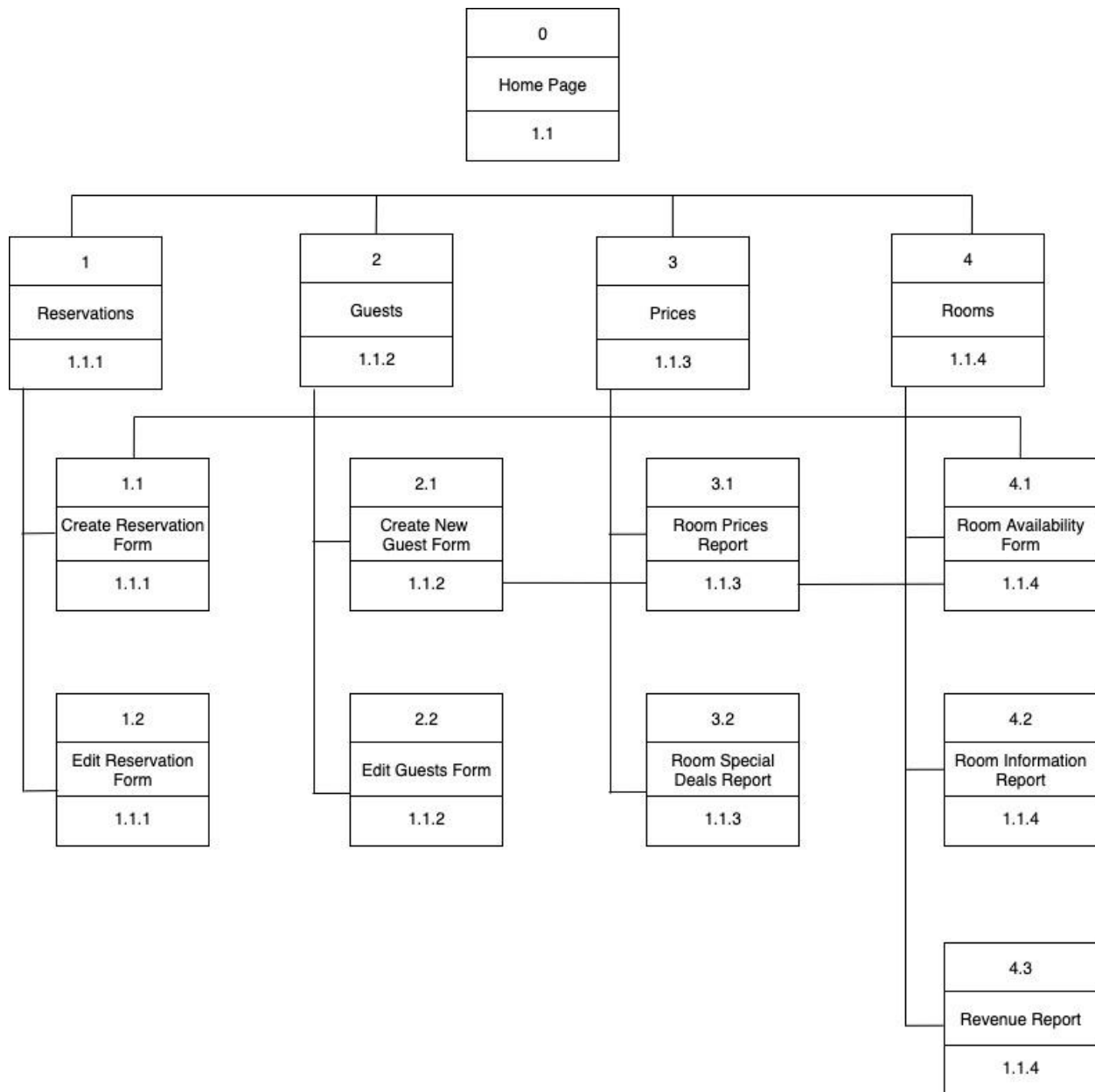




### Hardware-Software Specification

	<b>Standard Client</b>	<b>Standard Application Server</b>	<b>Standard Database Server</b>
<b>Operating System</b>	Windows 10 Pro	Linux	Linux
<b>Special Software</b>		Microsoft IIS	Microsoft SQL Server
<b>Hardware</b>	<ul style="list-style-type: none"><li>• Intel Core i5-7500T</li><li>• Dell P Series 24” Screen S922 LED-Lit Monitor Black</li><li>• Dell OptiPlex 3050 Micro</li></ul>	IBM Power System S922	IBM Power System S922
<b>Network</b>	Always on, Broadband preferred	Dual 100 Mbps Ethernet	Dual 100 Mbps Ethernet

## User Interface



SELECT  
ROOM & DATE

GUEST ACCOUNT


PAYMENT

CONFIRMATION


## PAYMENT METHOD

### PAYMENT DETAILS

TYPE OF CARD

Type of Card 

CARD NUMBER

Card Number 

EXPIRATION DATE

Month  Year 

NAME ON CARD

Name on Card

CVC

CVC  

### BILLING INFO

STREET

Street

CITY

City

POSTCODE

Postcode

COUNTRY

Country 

CONTINUE



RESERVATIONS

GUESTS

PRICES

ROOMS

Jaime B

Search...

- SELECT ROOM & DATE
- GUEST ACCOUNT
- PAYMENT
- CONFIRMATION

### CHECK AVAILABILITY

ROOM TYPE:

DATE:

ROOM	DATE	STATUS	RESERVE
ROOM 123	April 1, 2020	OPEN	<input type="checkbox"/> RESERVE
ROOM 678	April 1, 2020	OPEN	<input type="checkbox"/> RESERVE
ROOM 456	April 1, 2020	OPEN	<input type="checkbox"/> RESERVE
ROOM 789	April 1, 2020	OPEN	<input checked="" type="checkbox"/> RESERVE

CONTINUE SEARCHING

RESERVE



## Appendix

### **Interview Notes Approved by: Jaime Bradson**

**Person Interviewed:** Jaime Bradson

**Project Sponsor:** Jaime Bradson, Hotel Manager

**Interviewer:** April Valdez, Giselle Correa, Keti Lin, Rahul Ahir, Irving Camacho, and Kenneth Lee

**Purpose of Interview:**

- Understanding the current system of booking the conference rooms to design new software to utilize them effectively.
- Set the non-functional and functional system requirements.
- Ask for any clarifications that could have been overlooked.

**Summary of Interview:**

- The client wants to implement software to replace their current system of manually booking appointments. This is to ensure we can utilize the conference rooms effectively.
- The new software needs to have:
  - Customer information (IE: Name, email, what organization they belong to) as well as catering information.
  - Employees and managers need their own user accounts.
- Reports on which rooms are being rented or not, for marketing purposes.
- Only booking agents can make appointments, and only managers can change them.
- Six months after implementation, management will hire a booking specialist at \$40,000 annually, and an assistant at \$30,000 annually.
- We will also establish an expense account of \$5,000 for any miscellaneous charges.

**Open Items:**

- For any additional questions, set a follow-up interview with Jaime Bradson.
- Take into account the added operational costs that will be added 6 months after the software is implemented.


**Detailed Notes:** See attached transcript.

**Additional Questions:**

- When are additional payments able to be made after the first deposit?
- What are the cancelling policies in regards to sending payments back to organizations?

### Notes

1. What information is currently in your booking process?  
**Name, date, organization name.**
2. What type of client information do you need the system to store? Name, Date, Time, Payment Paid?  
**Name, date, total cost of everything, how much has been paid, contact information, organization name.**  
**We also need to keep track of individual rooms with room size alongside the fees (around 75-100 dollars) and any discounts if multiple rooms are being booked.**
3. Why was the past consultant not able to deliver? Is this due to time-constraints or are the requirements too complex?  
**Can not disclose.**
4. Do you want to store customer data? (for a period of time or indefinitely?)  
**Customer data will be stored indefinitely.**
5. Should each employee have their own account?  
**Yes.**
6. Should the system automatically save each time an update from an employee happens, and see which employee updated last?  
**The system will automatically save and have which I.D it was that did the change.**
7. What authorization levels do you want in the system? Should employees and the managers have different account features? I.E. employees can look at customer data but cannot see how many were booked in the month.  
**Every employee will have an I.D and password to access the system, but managers will be able to access the changes.**
8. Who is going to do the booking? Who is going to be authorized to cancel?  
**The employees will handle the booking, not the customers. If there has to be any changes or cancelations, the manager will handle those updates.**
9. Did you want every computer and the system to run on Windows 10?  
**Every computer and system will run on Windows 10.**
10. Will the system run all day, everyday, or only during working hours?



**The system will be available everyday at all times, but mostly will only be used during working hours unless there is an emergency.**

11. Who will deal with changing prices in the system?

**Any changes will be made by the manager that will confirm the change.**

12. What kind of security should be implemented or what security concerns you have? (I.E. should there be a system password?)

**Security is to include an I.D and password for every single employee that is accessing the system including the manager. We are recording customer information such as names and contact information, but not things such as credit card information.**

13. What account features can the managers see to measure performance? I.E. How many appointments have been set by each employee?

**Not worried about performance, but more of which rooms are rented or not. With that information, then figure out marketing strategies to try to improve.**

14. Are we allowed to use test users and if so, how much funding would we get for this?

**At this point, it is just \$40,000.**

15. How would the color scheme be?

**Does not matter, as long as it is user-friendly and works.**



## **Hardware and Software Specification Cost**

### **Estimated Cost of Each Piece of Hardware:**

1. Dell P Series 24" Screen LED-Lit Monitor Black (P2419H): \$426 (2 of them)
2. Dell OptiPlex 3050 Micro: \$504 (2 of them) \$1,008
3. Intel Core i5-7500T (2 of them) \$238
4. IBM Power System S922 \$1,690

**Estimated Total Cost of Hardware: \$3,362.00**

### **Estimated Cost of Each Piece of Software:**

1. Windows 10 Pro (2 of them) \$119.98
2. Linux \$399.98
3. Microsoft IIS \$500.00
4. Microsoft SQL \$599.99

**Estimated Total Cost of Software: \$1,619.95**