Yasir Gulzar
Mariam Butt
Introduction

As the motel business moves increasingly towards a direct online reservation sales model, removing the middleman in order to increase profitability while retaining customer service levels, a professional approach to online marketing is required.

Being one of the several motels in the fast growing tourist region of Orillia and Barrie, Aashiq Enterprises is trying to maximize business profits by providing tourists a safe, comfortable and enjoyable stay at their chain of motels.

Guests of the Orillia Motel, Barrie Motel and the Paradise Inn have choices of rooms and services offered by the motel and neighboring businesses. Services offered by neighboring business such as Casino Rama, lake cruises and sightseeing are facilitated by the motel.

Through interviews with the owner of the business, key employees, and the general public that visit these motels, TCI was able to attain an understanding how the day-to-day operations were carried out, the problems that existed with the current system, and what needed to be done about these problems. Interviewees were encouraged to talk openly about any type of requirement that they could have, both in today’s environment as well as five to ten years down the line. To simulate conversation, interviewees were given a list of questions in areas pertaining to their specific job requirements. These questionnaires, the list of interviewees and the summary of the interviewee comments are included in Appendix D.

The requirements analysis in this report define the needs that must be met for the successful deployment and use of online booking and reservation. The requirements take the users’ comments as presented in the interview and translate them to measurable and definable business needs. This will allow TCI to develop a comprehensive online reservations and bookings design system.
Analysis of the Current System

The current bookings system for Aashiq Enterprises is completely paper-based. All three motels follow the same system and there exists a manager for each one. His job is to supervise the motel day-to-day operations. The current booking system consists of the following departments or portions:

1. Reception/Hospitality:
   This person is responsible for checking in and checking out a customer and making reservations. Reservations can be made either on the phone or in person. Customers have the option to pay cash or by credit card.

2. Accounts:
   This person is responsible for calculating customer refunds and ensuring they reach the customer on time. Apart from issuing refunds, the Accounts department is also responsible for issuing commission cheques to referring travel agents.

3. Travel Agents:
   A travel agent books rooms and services on behalf of the customers by phoning the respective motel. For every night spent at one of the motels at Aashiq Enterprises by the customer, the travel agent earns 10% commission.

Scenario 1:
A customer calls one of the motels and requests a room and a service. This call is handled by the receptionist who checks in her paper based diary for vacancy. If there is a vacancy, the customer is given a confirmation number after a credit card number is supplied for both the room and services requested.

Scenario 2:
A customer walks into one of the three motels and requests a room and service. This is handled by the receptionist who again checks in her paper based diary for vacancy. If there is a vacancy, the customer pays cash or by credit card, and the customer receives his/her key to the room.

Scenario 3:
A customer plans to stop over in Orillia or Barrie and visits his/her local travel agent for arrangement of accommodation. The travel agent has a list of motels in that area and rates for each one. The travel agent requests a motel that fits the needs of the customer and if it happens to be the one of the three owned by Aashiq Enterprises, the agent makes a phone call to the receptionist who checks for vacancy in her paper based diary and confirms a room and service if there exists vacancy. She also notes down the name and address of the travel agent and sends a note to the accounts department who have to issue a cheque that amounts to 10% of the total bill.
Problems with the Current System

The entire booking system of Aashiq Enterprises is paper-based and this limits the revenue generating operations of the motels. Motels cannot take the full advantage of bookings through travel agents. Revenue would be increased if the motels started to advertise monthly or season specials. To do this, they need to get a hold of the target market – information that the motels do not possess.

Customers can only book in advance by phone which can prove to be a hassle. Some people are just passing by and want to stop over in a particular city. In this case, they don’t have a list of motels in that area.

The receptionist can only book a room for the motel that the customer calls, since the receptionist does not know anything about the vacancies of the other two motels.

Travel agents don’t always have the latest rates and promotional offers at the motel. They are also not aware of any special attractions nearby. They might be hesitant to recommend a motel to their customer.

There is no solid way to advertise the motel’s special rates or events in the neighbouring area. The motels cannot reach previous customers through mailing since no record of them is kept apart from on paper.

When a refund request is made, the receptionist makes a note of it on her notepad. If she misplaces this notepad, it will cause the customer undue hassle and the customer will be hesitant to come to the motel the next time he/she is in town visiting.

When a request for a commission is made, the receptionist makes a note of it on her notepad. If she misplaces this notepad, it will cause the travel agent undue hassle and the travel agency will be hesitant to recommend the motel to another customer.
Objectives for New System

After determining what problems Aashiq Enterprises was facing, we discussed with Mr. Aashiq Khan, managers of the motels, and other users of the system what objectives were the most important to them for improving the system. This was done with a series of interviews (see Appendix C).

From the response we got from the interviews, it was quite evident that the paper-based booking procedures of the motel were not maximizing business. There was a definite need to computerize the bookings system. This would in turn increase the efficiency of the receptionist, help develop a better relationship with travel agents and ultimately attract more customers to the motels.
Analysis of the New System

TCI proposed a new web-based bookings system to overcome many of the problems described above. Although going from completely paper-based to a web-based booking system would be a great leap forward, there would still be some creases that would need ironing out as far as the customers and end users are concerned. A web-based booking system was the way to go, but there were still some things that could be made better.

TCI wanted to propose a complete solution, one that will be useful now, and one that can adapt to the growing needs of the business five to ten years in the future. We conducted interviews with ten people belonging to different age groups (see Appendix D). They included people with little experience at using the Internet for shopping, to people who were Internet shopping buffs. The summary of the questionnaires can also be found in Appendix D.

The new web-based bookings system will involve:

1. The construction of a professional web-site that can be seen as two major parts:
   a. The bookings section
   b. The graphics interface (to be designed by a third party contractor)

2. Digitizing the paper-based bookings procedure.

3. Developing an online database web application that allows the customer and travel agent records to be fetched and printed if required.

The creation of an online web-site will permit the customers to make reservations in real-time. The motels of Aashiq Enterprises will be able to maintain up-to-date rates and availability. The interface will include rate and availability updates, automated processing of new reservations, reservation modifications, and cancellations.

The database will be consistently updated, by adding new customer records and calculating commissions for travel agents. A security login will be in place to allow proper access to materials by the receptionist at each motel and travel agent.

Receptionists can make reservations and book services, cancel reservations and services, view the customer and travel agents database, and print out address labels for refund, advertising and commission purposes.

Travel agents can make reservations and book services, cancel reservations and services on the customer’s behalf. They earn a 10% commission for each reservation made.

Customers can make reservations and book services, cancel reservations and services, make changes to their reservations and services, and make payments via credit card.

All three users of the system can view in real-time the availability of rooms and services.

The interface with TCI’s booking system will allow Aashiq Enterprises to maintain up-to-date rates and availability, and let consumers make real-time reservations. The interface will include rate and availability updates, automated processing of new reservations, reservation modifications, and cancellations.
The new web-based bookings system will:

1. Allow Aashiq Enterprises maintain up-to-date rates and availability of rooms and services.
2. Allow Aashiq Enterprises to advertise to their target audience in a cost effective manner by studying the trends and stats generated by the system.
3. Allow Aashiq Enterprises to retain the full control of their content and minimize time spent on day-to-day operations through simple web-based updating through the browser.
4. Allow customers to make bookings for rooms and services online in real-time.
5. Allow travel agents to make bookings for rooms and services online in real-time on behalf of customers.
Non Functional Requirements

System requirements and their associated specifications need to define not only what the system is required
to do but also any constraints on the system’s operations. Qualification of how the system must do it or any
other constraints on system design, procurement or operation are known as non-functional requirements. A
few of the non-functional requirements of the booking system are listed below:

Interface Requirements

The interface is a web-based resource that facilitates booking rooms and services online. Booking can be
done by both customers and travel agents. The interface is a user-friendly environment so that it is easy to
use. There will be a section for Frequently Asked Questions (FAQs). The system acts as an interface for
booking and cancelling rooms and services offered by the motels.

The interface will be viewable through any web-browser with minimum requirements being Internet
Explorer 2.0 or Netscape Communicator 4.0. The online booking sections of the interface can only be used
with 128-bit SSL encryption, the most secure encryption method generally available.

Performance Requirements

Time/Space Bounds & Efficiency:

The system is expected to run 24 hours a day, 7 days a week. At any given point in time, the system will be
able to handle 10 users simultaneously. Storage space is not a major concern as drive space on the server is
expandable and is cheap.

Reliability:

The interface is online and can easily be backed up and updated periodically. Backups of the database are
done once a week onto a writable CD. In case of system upgrading, the downtime of the system cannot be
more than 1% of the total running time. In the implementation and testing part of the system, the downtime
will be considerably more.

Security:

The online booking portion of the system uses 128-bit SSL encryption. This reduces the possibility of
malicious hacker activity. The Receptionist and the Travel Agents have their user names and passwords.
Both of them have different levels of access.

Survivability:

In case of an unexpected event, the system switches to a backup system. This backup system does not have
extra functionalities, rather it can support the basic functions of the system.

Operating Requirements

The system will run on a server connected to a database of files that contain information pertaining to the
customers and travel agents. The server will be situated in the office of the system administrator at the
Orillia Motel.

Since the system is web-based and user-friendly, there will be minimal training involved to familiarize the
managers, receptionist and travel agents. The users of the system must have experience using the Internet
to maximize benefit from it.
There are no physical constraints on the system since all the equipment being used is small. Since backups will be made on tape drives, there is a possibility that the tapes start consuming too much space. This can be handled by keeping only the latest snapshot of the system.

**Platform Requirements**

**Memory Requirements:**

Memory should not be a problem and in the event that it is, the hardware is upgradeable.

**Disk Space Requirements:**

Disk space is an issue that is almost non-existent since there will not be much to store on the disk and secondly because disk expansion is cheap if the need arises.

**Operating System Requirements:**

The system should be able to support all sorts of operating systems as long as they meet the web-browser requirements.

**CPU Requirements:**

The *minimum* CPU requirement for a travel agent, customer or receptionist is a 486 DX-4, 16MB RAM, 14.4 K modem.

The *recommended* CPU requirement for a travel agent, customer or receptionist is a Pentium II, 75MHz, 32MB RAM, 56K modem.

The *recommended* CPU requirement for the server is Pentium III 933MHz, 128MB RAM.

**Peripheral Requirements:**

All printing must be done through a laser printer for both quality and speed. We recommend Hewlett Packard’s Laserjet 4050n printers.

**Network/Internet Requirements:**

The connection that is used by the receptionist, the travel agent and the system administrator should be an ISDN, Cable, or ADSL for fast processing of bookings. The customer can have a slow connection, but this might cause the server to timeout when it is validating information.

**Back-up Requirements:**

Symantec Ghost 6.5™ will be used to take partition snapshots of the system on a weekly basis. These snapshots will be stored on a re-writable CD. This facilitates fast, easy recovery in case of hard disk or system failures. The snapshot is taken once every three days and kept locally on the server. Then, once a week, the system administrator stores these snapshots on a CD.

**Lifecycle Requirements**

**Quality of the Design:**

The majority of the program will be web-based and thus coded using tried and trusted programming languages. As a result, upgrading and enhanceability will not be a problem for future evolution of the system. The system also takes into account deleting unneeded data records and this saves hard drive space.
Managing the system will be simple, since the systems’ software will allow administration to update the system easily.

Limits on Development:

The development time for the system is 2 months. This completion of this project at the end of two months suited the owner of the motels since it is just in time for the busy season of Spring.

Economic Requirements
The operational costs of both the current system and the proposed system are shown in Appendix A. For the new system, there is also a development cost included with the new system. What the charts do not show however is the increased efficiency in the motels and the business it will attract from advertising and the new customer base from travel agents.

Human Factors

TCI is a team that is compromised of individuals that possess a fair bit of knowledge of human factors. We understand how important it is to address human factors such as user-friendliness. Since we will be aiding in the development of the software, we will be keeping in mind that the users of the system are not necessarily experts in using computers. The system will be designed in such a way that is pleasing to the eye but at the same time ensure that it is not overloaded with huge graphics. This reduces the download time and subsequently increases the enjoyment in using the system.

Testability

It is TCI’s aim to deliver a system on time and that conforms to the specifications stated. This can only be done by testing the system thoroughly. We will ensure that the system is usable prior to introducing it to the general users. This will show that the system works properly and will determine if it needs some extra functionalities that have been missed during the specification.

TCI will be selecting test users at random and will be observing them when they are using the system and at the same time accepting feedback to make improvements to the system.
Functional Requirements

Description of Use Cases from each Actor’s Perspective

Please see the Use case diagrams attached in Appendix G

Actor 1: Customer

Use cases:
- Book room
- Make payment
- Book service
- Cancel room
- Cancel service
- Receive advert
- Receive refund

Description: The customer can book a room online, on-phone or in person. In order for this to be possible, he/she must first make the payment. The customer can also cancel the room reserved provided it is done three days before the check-in date, otherwise, 100% refund is not received. Similarly, the customer can book a service or cancel a service and receive refund accordingly. Customers also receive advertisement occasionally notifying them of the special deals and offers at the motel.

Actor 2: Travel Agent

Use Cases:
- Login
- Book room
- Book service
- Cancel room
- Cancel service
- Receive advert
- Receive commission

Description: This actor provides another means for the customers to make reservations at the motel. These agents may send customers to any of the three motels, owned by Mr. Khan, best suiting the client’s needs. Each travel agent has a unique login and password. Once the travel agent is logged into the system, he/she can book a room or service, cancel a room or service on behalf of the customer’s demands. The travel agent also receives advertisements to assist him/her in promoting the motel’s services to the public. The agent also receives commission at a fixed rate for every client that he/she sends to the motel.

Actor 3: Receptionist

Use Cases:
- Login
- Book room
- Book service
- Cancel room
- Cancel service
- Send advert
- Refund payment
- Pay commission
Description: Each of the three motels has a receptionist who has a unique login and password. Similar to travel agents, every receptionist has to be logged into the system to make reservations and cancellations at any of the three motels. The main duties of the receptionist is to send advertisements to the customers and agents, refund payment and pay commission.
Description of each Use Case from the Use Case Diagram

**Login**
The travel agents and receptionist require to login into the system before they can do anything (ie. make reservations, cancel reservations).

**Check vacancy**
Checks room vacancy in the motel.

**Make payment**
The customer makes payment for the reservation before it can be approved.

**Book room**
Once the travel agents and receptionist are logged into the system, they can book a room. However, customers need not login before; they have direct access to this transaction. The vacancy is checked, and once the payment is validated, the reservation is confirmed. The customer is added to the database and the vacancy is updated.

**Book service**
Once the travel agents and receptionist are logged into the system, they can book a service. However, customers need not login before; they have direct access to this transaction. The vacancy is checked, and once the payment is validated, the service is confirmed. The service vacancy is updated.

**Cancel room / Cancel service**
Once the travel agents and receptionist are logged into the system, they can book a service. However, customers need not login before; they have direct access to this transaction. The cancellation of a room requires to update vacancy in the motel.

**Find address**
Searches through the database to find the address.

**Print address label**
The address labels are printed for mailing purposes.

**Send advert**
Once the receptionist is logged into the system he/she finds and prints the address of the agents and customers, and mails them the promotional offers.

**Receive advert**
The customer can receive an advertisement from the motel through mail, regarding their special deals and offers.

**Refund payment**
Once the receptionist is logged into the system he/she finds and prints the address of the customers who require a refund and mails them the refunds.

**Receive refund**
The customer can receive a refund from the motel through mail due to a cancellation request.

**Pay commission**
Once the receptionist is logged into the system he/she finds and prints the address of the agents who require a commission and mails them the commission payment

**Receive commission**
The agents can receive commission from the motel through mail.
Description of Class Diagrams

Please see the Class diagrams attached in Appendix H

Description of Class Diagrams:

Class: **Client**

Description: This will allow access to all the information pertaining to a single client. This is a parent class and it has two subclasses, The TravelAgent class and the Customer class. All information required to access a client would be present in this class. This means that identification and name will be present in the class.

Subclasses of Client: **TravelAgent, Customer**

Description: The subclasses of Client correspond to the two type of clients the motels can have, namely travel agents and customers.

The TravelAgent class has a agent name, an ID, and a customer ID, and a commission associated with it. The TravelAgent object has access to its commission and address.

The Customer class has a customer name, an ID and a booking associated with it. If a customer makes a booking through a travel agent, it has an agentID associated with it. A customer object has access to its ID, name, address and can set its reservation status.

Class: **AgentBroker**

Description: The AgentBroker class with the information given to it will retrieve all the details that pertain to the travel agent from the database and instantiates an object of TravelAgent. After doing so, the details will be available for the user to see, change, and remove any information.

Class: **CustomerBroker**

Description: The CustomerBroker class with the information given to it will retrieve all the details that pertain to the customer from the database and instantiates an object of Customer. After doing so, the details will be available for the user to see, change, and remove any information.

Class: **Address**

Description: The Address class holds address objects. Address objects have an apartment number, a street name, a city, a country, a postal code, and a province. All the aforementioned attributes are strings. Every Customer and TravelAgent object has an address.

Class: **Motel**

Description: The Motel class is in the physical sense, the actual motel. It handles all the events pertaining to the actual motel. These events include advertising, calculating and printing refunds, calculating, and paying and printing commissions to travel agents.

Class: **Reservation**

Description: The Reservation class contains information about a single reservation. Since each reservation involves a room booking and sometimes service booking, this data will be present in this class. Furthermore, the class includes information about the total payment, and the check in and check-out date. A Client can have any number of reservations as demonstrated by the multiplicity relationship shown in the diagram.
Class: **Room**

Description: The Room class contains information about a particular room at the motel. A room has a room number and an indication if it is vacant or not, and the customer ID of the guest residing in the room. A room can have one reservation as shown by multiplicity in the diagram.

Class: **RoomBroker**

Description: The RoomBroker class with the information given to it will retrieve all the details that pertain to the room from the database and instantiates an object of Room. After doing so, the details will be available for the user to manipulate the information about the room such as checking for vacancy and doing the appropriate when a room is vacated.

Class: **Service**

Description: The Service class contains information about a particular service offered by the motel. A service has an ID, which associates it with a customer, and a time at which the service starts.

Class: **ServiceBroker**

Description: The ServiceBroker class with the information given to it will retrieve all the details that pertain to the service from the database and instantiates an object of Service. After doing so, the details will be available for the user to manipulate the information about the service.

Class: **Refund**

Description: The Refund class contains information about a particular refund to a customer. A refund has a customer ID and an amount associated to it.

Class: **RefundBroker**

Description: The RefundBroker class with the information given to it will retrieve all the details that pertain to the refunds from the database and instantiates an object of Refund. After doing so, the details will be available for the user to manipulate the information about the refund.
Sequence Diagram Descriptions

Please see the Sequence diagrams attached in Appendix I

Requesting a reservation

When a customer requests a reservation, an object of type Customer is instantiated by the Customer Broker. The Room Broker object is then called to search the room database for a vacant room through the function call of checkRoomVacancy(). If a vacant room is found in the database, it is then instantiated so that its’ status can be changed to ‘not vacant’ and that room object is then dematerialized back into the room database, keeping it up-to-date.

If a room is booked and a customer requests a service then the Service Broker object is called to search the service database for a vacant service in a similar manner as discussed above. If the service requested is available then its’ status is changed to ‘not vacant’ and dematerialized back into the service database in a similar fashion as above.

If either of the room or service were not available then the status of the reservation requested is updated through the function call setReservationStatus(). This enables the customer to be notified if their request was confirmed or not. If the request was not confirmed, the customer has the option to try other rooms and services or maybe make a reservation at a later time.

Cancel a reservation

When a request to cancel a reservation is made, the reservation object calls findRoom(), in the RoomBroker class, to search for the room which was reserved in the room database. An object of that room is instantiated so that its’ status can be changed to ‘vacant’ and that room object is then dematerialized back to the room database.

If the reservation contained a service request then that request must also be cancelled. This is done in a similar manner as above. The function findService() in the ServiceBroker class is called which searches for that service in the service database. An object of that service is instantiated so that its’ status can be changed to ‘vacant’ and that service object is then dematerialized back to the service database.

Upon a cancellation of a reservation, the customer requires a refund for his/her payment. Hence, the a call of the function, calculateRefund() in the RefundBroker class, instantiates a Refund object and dematerializes it back to the refund database.

If the customer through a travel agent requested that reservation then the commission on that reservation needs to be cancelled also. This is accomplished by receiving the agent’s id, to know which agent referred the customer. Then that id is searched for in the commission database. When found, a TravelAgent object is instantiated so that changes to it can be made. The commission for that agent on that customer is set to zero and the TravelAgent object is then written back to the commission database.

Sending Refunds

A refund database is kept up-to-date upon every cancellation. At the end of every month, the database is read through and cheques of that amount are issued to the respective customer. The function calculateRefund() of the RefundBroker class is called. This function instantiates an object of each record in the file. From the object the amount and the customer id is extracted. The customer id is necessary in
retrieving the address of the customer from the customer database which is done by the CustomerBroker. After retrieving the necessary information a refund report is printed and the database is cleared.

**Sending Advertisements**

When the motel decides to send advertisements to its customer, they require their mailing addresses. This is done by the CustomerBroker class which calls a function, getAddress(), on each customer object in the database.

**Sending Commission**

The commission database is kept up-to-date. The motel sends out commission cheques at the end of every month. The commission database requires to be sorted and then the commission for each agent for that month are calculated. The Motel class has a function calculateTotalCommission() which calculates the total commission for the agent and calls a function, getAddress(), to retrieve the agent’s address for mailing purposes.
State Diagrams Descriptions

Please see the State diagrams attached in Appendix J

**State Diagram for TravelAgent object**

The TravelAgent class contains information about its customer, from whom the information regarding their reservation can be obtained.

The initial state for the travel agent is **waiting**. There are two possible ways that can result to the **checking** state. If no service was requested, then the object immediately goes into the checking state by a function call to checkRoomVacancy(), which attempts to locate a vacant room. However, if a service was requested, then the service vacancy is also checked by, checkServiceVacancy(), only if a vacant room was located. If no vacant room was found then the object just resumes its initial state which is waiting. After the **checking** state, the object goes into the **updating** and the commission for that travel agent is set. Finally the object goes back to its initial state which is **waiting**.

**State Diagram for Service object**

The Service class contains information about the customer who ordered the service.

The initial state for the service object is **waiting**. There are two possible ways that can result to the **active** state. If the customer wishes to add a service then the function addService() is called, otherwise the cancelService() is called upon wishing to cancel a service(). The vacancy is checked and if vacant then the object goes into the **vacant** state, otherwise it goes into the **not vacant** state. After reaching the vacant state, the object goes into an updated state where the object is updated. Then the object’s work is completed and it becomes inactive. If the object reaches the active state by a cancellation call, then the object becomes **vacant** by a vacateService() function call. The object becomes inactive at this stage.

**State Diagram for Reservation object**

The Reservation class contains information about a single reservation. Since each reservation involves a room and service (if required), this data will be present in this class. Other specific data about who made the reservation will also be available in this class.

The initial state for the service object is **waiting**. There are two possible ways that can result to the **searching** state. If the customer wishes to make a reservation then the function requestReservation() is called, otherwise the cancelReservation() is called upon wishing to cancel a reservation().

If no service was requested, then the object immediately goes into the checking state by a function call to checkRoomVacancy(), which attempts to locating a vacant room. However, if a service was requested, then the service vacancy is also checked by, checkServiceVacancy(), only if a vacant room was located. If no vacant room was found then the object goes into **not vacant** state, otherwise if the reservation was made through a travel agent, then the commission is set and the object becomes **updated**. If the reservation becomes inactive by a call to cancelReservation(), then the room is vacated along with the services requested and the reservation object becomes cancelled. Then, the reservation updates the commission for the agent and calculates the refund and reaches the **Done** state.

After the **checking** state, the object has a possibility of going into the **updating** state if that reservation was made through a travel agent. If so, then the commission for that travel agent is set and the reservation object becomes inactive.
## Appendix A – Operational Cost of Current System

<table>
<thead>
<tr>
<th>OPERATION</th>
<th>OPERATIONAL COST</th>
</tr>
</thead>
<tbody>
<tr>
<td>Receptionist time spent on booking reservations in person</td>
<td>$20,000 * 3 employees = $60,000</td>
</tr>
<tr>
<td>Accounts time spent on calculating refunds and commissions for customers and travel agents respectively and mailing them out</td>
<td>$40,000 * 3 employees = $120,000</td>
</tr>
<tr>
<td>Total Cost</td>
<td>$180,000</td>
</tr>
</tbody>
</table>
## Appendix B – Comparison of minimal cost of current system and proposed

<table>
<thead>
<tr>
<th>System Type</th>
<th>Development Cost</th>
<th>Operational Cost</th>
<th>Total Cost</th>
<th>Diff from current system</th>
</tr>
</thead>
<tbody>
<tr>
<td>Current System</td>
<td>-</td>
<td>$180,000</td>
<td>$180,000</td>
<td>N/A</td>
</tr>
<tr>
<td>New Web-based system</td>
<td>$10,000</td>
<td>$150,000</td>
<td>$160,000</td>
<td>$10,000 less</td>
</tr>
</tbody>
</table>
Appendix C – Internal and External Meetings

Group Meeting 1:

Meeting called on February 19th, 2001 at 4PM

Purpose : To decide on how we were going to continue with the project with regards to the second assignment.

Details : We met and discussed if it was a good idea to continue with the system that we had done the feasibility study on. Our TA, Shun Zhaou explained to us why we should not continue with the problem that we had set out to tackle.

Taking into account our TA’s advice as well as our own judgement, we decided to switch our system to Uzma’s original idea, the motel chain owned by Aashiq Khan in Orillia.

It was decided that Uzma would contact Mr. Aashiq Khan ASAP and ask him for his assistance.

We set out dates and times when all of us could meet.

We prepared an agenda for the meeting with Mr. Aashiq Khan with our goals and objectives so that we would not leave out any points and to present ourselves as professionals.

Meeting 1 with Client :

Meeting on February 21th, 2001 at 12:00PM

Representatives from TCI : Yasir Gulzar, Senior Consultant
Mariam Butt, Director
Uzma Zafar, Systems Analyst

Representatives from Aashiq Enterprises : Aashiq Khan, Owner
Susan Miller, Receptionist

Purpose: To get a general idea of the information systems at Aashiq Enterprises and to discuss what kinds of current problems Aashiq Enterprises is faced with.

Details: We explained our project requirements to Aashiq and asked if Aashiq Enterprises had a problem at his particular office. Mr. Aashiq explained his bookings systems and how it failed to achieve the results he expected when he first got into the business.

Since travelling to Orillia was not an easy task for TCI, we asked if we could also speak to the receptionist at the motel. We obtained some information on what the tasks of the receptionist included.
**Group Meeting 2:**

Meeting called on February 22nd, 2001 at 4PM

**Purpose:** Brainstorm and formulates solutions to Aashiq Enterprises’ problems.

**Details:** We sat down and decided that business could be bettered if there was a web-based system of booking introduced. Currently, the only way a customer could book a room was either on the phone or in person. This also created a lot more work for the receptionist.

Deploying a web-based booking system, Aashiq Enterprises could also advertise to their customers more efficiently and effectively.

We decided it would be a good idea to deal with the front-office system as opposed to the back-office and that it would be easier to use for both the receptionist, the customers, the travel agents and the owner, Mr. Aashiq Khan.

**Meeting 2 with Client:**

Meeting on February 23rd, 2001 at 12:00PM

Representatives from TCI: Yasir Gulzar, Senior Consultant
Mariam Butt, Director
Uzma Zafar, Systems Analyst

Representatives from Aashiq Enterprises: Aashiq Khan, Owner
Susan Miller, Receptionist

**Purpose:** To present our proposal of the new system to Mr. Aashiq Khan and to get a clearly identify other desirable functionalities.

**Details:** We proposed our web-based bookings system to Mr. Aashiq Khan in further detail with ball-park figures. We also mentioned some ideas that he might be interested in that could possibly increase sales such as advertising on a periodic basis to a previous customer by managing a customer relations database.

**Group Meeting 3:**

Meeting called on February 26th, 2001 at 4PM

**Purpose:** To workout the finer details of the system and iron out any uncertainties about how things were going to be done.

**Details:** This was a very vital group meeting. At this meeting we discussed how we were going to actually design the system with regards to the different use cases, classes, sequence diagrams and state diagrams.

The actors of the system were clearly identified and the use cases of the actors were also noted. The appropriate associations were also noted.

From the use case diagrams, we identified the classes, their attributes and the operations they would support.

Next came the sequence diagrams. The sequence diagrams shows the sequence of the messages.
The last of our UML diagrams included the creation of the state diagrams. State diagrams show the behavior of each class. The states and state transitions were also noted. State transitions have associated conditions and actions.

**Group Meeting 4:**

Meeting called on March 2\textsuperscript{nd}, 2001 at 4PM

Purpose : To see the progress of each group member and to help each other out with confusions on their respective parts of the project.

Details : All of us sat down with our work and discussed it with each other. We discussed the problems each of us was facing and tried to solve them together. We were quite successful at solving more or less all the problems.

There were also some changes that came about with the classes and state diagrams. This also turned out to be a very important meeting. By the next meeting, we were to sit down and compile all our work.

**Group Meeting 5:**

Meeting called on March 4\textsuperscript{th}, 2001 at 10AM

Purpose : Compile the requirements analysis.

Details : We met up, early in the morning, at Uzma’s place to put the report together.
Appendix D – Questionnaires and Summary

These interviews were conducted with ten people belonging to different age groups. They included people with little experience at using the Internet for shopping, to people who were Internet shopping buffs. The following questions were asked in order:

? How do you usually make a reservation for a motel?
? What factors are most important to you? (Price, motel, services offered)
? How likely are you to book a room and/or service online?
? How many times were you actually able to find the deal that you wanted, from an online booking system?
? What do you think is the most important factor that limits the usability of online booking systems?
? What features do you think should be added to online booking systems to make them more useful?
? How confident are you that you are getting what you expected when you book a room/service online?

From these interviews, the following important points emerged:

Most online booking systems do not enjoy a high level of confidence from the users; most users see these systems as manipulative and unreasonable. Also, most users feel that although they do consult these booking systems for the sake of comparison, they are never able to get the best deal online and they end up showing up in person. The success rate of these systems to fetch good prices for the users seems to be dismally low.

Current online booking systems require users to fill out lengthy forms and ask various questions about personal preferences etc., before allowing the users access to use the system. The system may not be able to get/provide the user with the desired room, and so all the time used to fill out the forms is wasted.

Online booking do not provide real time update of travel information. Each booking should have a unique identification. Users should be able to check online if their booking has been confirmed, in case they were placed on a waiting list.

Many people have never used an online motel booking system but are open to the idea if it were to become easy to use. Some people are more comfortable with giving their credit card number on the phone than online.
Appendix E – Interview with the Owner Regarding Marketing

The owner of the company, Aashiq Khan was interviewed by TCI about the current marketing strategies he was implementing. Following are a list of the questions asked:

? Do you know where high potential non-users are?
? do you know the demographics and lifestyle profiles of your guests and how to reach them?
? Are you tracking all promotions to measure conversions from all inquiries to bookings?
? Do you know how to increase the response from your direct mailings?
? Can you easily access the marketing information you need day to day?

From this interview, we found out that Aashiq Enterprises needed to advertise and market themselves and their services.

Mr. Aashiq Khan agreed that advertising was important but he did not know what the target market was and how to reach it.
Appendix F – Our Contacts at Aashiq Enterprises

**Aashiq Khan**
Owner
Aashiq Enterprises

Tel: 1-705-467-7448
Email: aashikk@hotmail.com

**Susan Miller**
Receptionist
Aashiq Enterprises, Orillia Motel

Tel: 1-705-467-7449
Email: susan_miller@hotmail.com