

Project Phase 1 Submission

Software Engineering, SE 3354-002

Submitted By:

Le Ba Vu

Owolabi Legunsen

Mabruk Zatout

Clay Scott

9/27/2010

SECTION 1: USE CASE DESCRIPTIONS

Use Case UC1: Make Reservations

Scope: Hotel Reservation Application

Level: User goal

Primary Actor: Front Desk

Secondary Actor: Online Site

Stakeholders and Interests:

- Front Desk: Wants easy room availability status
- Online System: Wants immediate accurate room status and pricing
- Room Service: Wants room service request prior to check in
- Booking Employee: Wants easy booking, checking in/out, and easy payment options
- Company: Wants to accurately record transactions and satisfy guest special requests
- Manager: Wants to be able to quickly perform override operations, credit card refunds
- Government Tax Agencies: want to collect tax from every sale
- Payment Authorization Service: Wants to receive digital authorization requests in the correct format

Preconditions: Room status is up to date and list of available rooms are provided with prices

Success Guarantee: Price is calculated, credit card info and length of stay is recorded, room is booked

Postconditions: Room status is updated

Extension Points: Cancel Reservation, Update Reservation

Main Success Scenario:

Actor Action	System Response
Step 1. Guest calls hotel for rooms availability status for duration of stay	Step 3. System returns prices for room plans
Step 2. Front desk searches guest price types of rooms available	Step 4. System offers special requests or promotions
Step 5. Guest confirms room and submit dates of checking in and checking out	Step 6. System records guest's name and contact information
Step 9. Guest submits credit card information required for reservation	Step 7. Discounts are applied to total if valid
Step 12. Guest is given confirmation number for transaction	Step 8. Total price is calculated
Step 13. Room is booked for check in and checkout dates	Step 9. Credit card authorization and validation is checked
Step 15. Room service is notified of any special requests	Step 10. Deposit amount is charged to credit card
	Step 11. Confirmation number is generated transaction
	Step 14. Room status is updated in system

	Step 16. Email system sends copy of receipt generated
--	---

Extensions:

1a. Guest reserves rooms online:

1. Guest checks the website and input checking in/out dates
2. List of prices of rooms available are displayed
3. Guest selects rooms and check in and checkout dates
4. Website offers special promotions and special requests
5. Guest inputs contact information
6. Total is calculated and discounts are applied if valid
7. Guest confirms reservation by providing credit card (mandatory)
8. System checks credit card authorization and validity
9. Confirmation number and receipt is displayed
10. Email system sends copy of receipt generated

1b. Guest makes a reservation but never shows up:

1. System notifies front desk that guest has not checked in yet.
2. Reservation information is pulled up by front desk.
3. Front Desk calls phone number on record to confirm cancelation with guest.
4. If there is no answer (after two attempts) or cancelation confirmed, then begin cancelation process.
5. Penalties are calculated.
6. Refund any payments made over the penalty amount.
7. The reservation is canceled and room status is updated.
8. Email system sends notification to guest

Use Case 2 UC2: Find Room

Scope: Hotel Management Application

Level: User Goal

Primary Actor: Front Desk

Secondary Actor: Website Search

Stakeholders and Interests:

- Front Desk Clerk: Wants to find available rooms, wants to check status of room
- Online System: Provides online room status for guests
- Room Service: Find vacant rooms to clean and maintain, and to deliver VIP requests
- Manager: Respond to client inquiries

Preconditions: Room status is up to date and list of vacant rooms are provided

Success Guarantee: Room status is available

Postconditions: Update room status after maintenance and record log

Main Success Scenario:

Actor Action	System Response
Step 1. Front desk checks system for status of rooms	Step 2. System returns list of rooms available
	Step 3. System returns housekeeping status
	Step 4. System updates room status if necessary

Extensions:

- 1a. Guest searches rooms online
 1. Guest checks room status on site
 2. Guest provide price and duration of stay or special preferences
 3. System provides room plans and services
 4. Guest selects rooms
- 1b. Housekeeping checks rooms to clean
 1. Housekeeping checks room status of vacant rooms
 2. Housekeeping updates room status after maintenance
- 1c.
 1. Room service searches for client's room to deliver goods
 2. Room service updates system job as finished
- 1d. Management needs to locate rooms
 1. Manager searches for client's room and complaint or special requests
 2. Manager respond to complaint and update status

Use Case UC3: Check Guest In and Out

Scope: Hotel Management Application

Level: User Goal

Primary Actor: Front Desk

Secondary Actor: Check out system

Stakeholders and Interests:

- Front Desk Clerk: Wants to check guests in and out
- Check out System: Provides auto check out for guests
- Room Service: Find vacant rooms to clean and maintain
- Manager: Respond to room damage complaints

Preconditions: Room status is up to date and vacancy and maintenance is confirmed

Success Guarantee: Guest checks in accurately

Postconditions: Guest checks out accurately

Main Success Scenario:

Actor Action	System Response
Step 1. Guest provides form of identification	Step 2. System returns guest profile
Step 3. Front desk confirms ID and required deposits or credit card authorizations	Step 4. Systems activate keycard
	Step 5. Systems checks guest in

Extensions:

- 3a. Guest check out at front desk
 5. Guest checks out by returning keycard
 6. System confirms room vacancy
 7. System deactivates keycard
 8. System flags room ready for maintenance to clean
 9. System checks guest out
- 3b. Guest checks out by returning key card
 1. Systems locates guest profile
 2. System deactivates room keycard
 3. System flag room as ready for maintenance
 4. System checks guest out
 5. Update room database
- 4c. System auto checks guest out after grace period of duration of stay is exceeded
 1. System checks if guest checks out yet
 2. System confirms room ready to auto check out
 3. System deactivates keycard
 4. System flag room as ready for maintenance
 5. System checks guest out

Use Case UC4: Print Bill

Scope: Hotel Management Application

Level: User Goal

Primary Actor: POS System

Secondary Actor: Front Desk and Management

Stakeholders and Interests:

- POS System: Wants to generate total guests bill
- Front Desk Clerk: Wants to view guests bill
- Management: Wants to generate revenue reports
- Tax Calculating Agency: Wants to calculate tax from sales

Preconditions: Guest bills are current

Success Guarantee: Guest bills subtotal and total are calculated and generated

Postconditions: Receipts for transactions are generated and submitted to guest and system logs

Main Success Scenario:

Actor Response	System Response
Step 1. Clerk searches guest info	Step 2. POS system generates subtotal for all guest activities and charges
	Step 3. POS System calculates discounts
	Step 4. System calculates tax
	Step 5. Bill is generated
	Step 6. Charges are authorized and receipts are generated and transmitted to required parties

Extensions:

- 5a. Management wants to view transactions
 - 10. Management enters search for period
 - 11. System provides all transactions searched for
 - 12. System generates required reports
 - 13. System logs activity of report
- 6a. Tax Calculation reports are searched
 - 1. System generates report
 - 2. System logs current activity

Use Case UC5: Store Vehicle Information

Scope: Hotel Management Application

Level: User Goal

Primary Actor: Vehicle Database System

Secondary Actor: Valet Parking, Front Desk and Management

Stakeholders and Interests:

- Valet Parking: Wants to locate vehicle in parking
- POS System: Wants to store vehicle information
- Front Desk Clerk: Wants to enter or search for guest vehicle
- Management: Wants to view or modify guest vehicles

Preconditions: Vehicle information is present

Success Guarantee: Vehicle information is stored or retrieved

Postconditions: Vehicle database is updated

Main Success Scenario:

Actor Action	System Response
Step 1. Guest present vehicle information	Step 3. System records vehicle information into guest's database record
Step 2. Front desk searches guest's records	Step 4. System confirms info with valet if necessary
Step 6. Front desk confirms database update	Step 5. System takes saves record of name, date, license plate, VIN, vehicle make, model, year, and color
	Step 7. Ticket is generated if guest valets the vehicle

Extensions:

- 1a. Guest picks up vehicle from valet
 14. Guest presents valet ticket
 15. Valet locates vehicle in database
 16. Vehicle is returned to guest
 17. System checks out vehicle in database
- 2a. Management needs to search if vehicle belonged to any guests
 1. Manager provides code authorization for search
 2. Management searches if vehicle is registered to any guests in the database
 3. Management searches by license plate, VIN, make, model, or range of possible year
 4. d. Management updates system if car is going to be moved or towed

Use Case UC6: Create Guest Profile

Scope: Hotel Management Application

Level: User Goal

Primary Actor: Front Desk

Secondary Actor: Online Site

Stakeholders and Interests:

- POS System: Wants to store guest profile accurately
- Front Desk: Wants to create or modify guest profiles efficiently
- Online Site: Wants to provide easy profiles for guests registering online

Preconditions: Guest information is provided

Success Guarantee: Guest profile is

Postconditions: Guest profile is created or modified

Main Success Scenario:

Actor Action	System Response
Step 1. Guest present proper form of identifications	Step 3. System records guest name, date of birth, address, telephone number, emergency contacts, and duration of stay
Step 2. Front desk confirms guest with picture ID	Step 5. Registration information is generated for bill
Step 4. Front desk confirms profile created by registering credit card hold for guest profile	Step 6. System saves and update guest database

Extensions:

- 1a. Guest creates profile online site
 1. Guest enters name, date of birth, address, telephone number, emergency contacts, and duration of stay
 2. Guest confirms profile created with mandatory credit card information hold
 3. Guest registration information is generated into database
 4. Guest is presented ticket information for bill
- 6a. Front desk or site search for previous account
 18. Front desk or guest searches to see if previous guest information is already stored in database
 19. Guest presents last/first name, date of birth, telephone number, address, or previous credit card that was used
 - i. if profile is located, continue to use previous record or modify necessary changes
 - ii. if profile is not located, continue to create new profile
 20. System confirms any changes made to database

Use Case UC7: Messaging and Email System

Scope: Hotel Management Application

Level: User Goal

Primary Actor: Email Messaging System

Secondary Actor: Front Desk

Stakeholders and Interests:

- POS System: Wants to generate ticket information to be emailed to guest
- Front Desk: Wants to email guest messages any specials or promotions
- Online Site: Wants to generate guest email list

Preconditions: Guest email is provided

Success Guarantee: Ticket is generated/promotions are and emailed to guest

Postconditions: Guest email is recorded and emails are sent

Main Success Scenario:

Actor Action	System Response
Step 1. Guest provides front desk email address	Step 3. System records email information into system database
Step 2. Front desk pulls up guest from database	Step 4. After ticket information is generated, transaction email is sent to guest
	Step 5. Email address is stored into database unless guest refuse action

Extensions:

- 5a. Systems generate email list of previous guests
 1. System generate email list based on schedule or promotions
 2. Specials and promotions are generated for guests
 3. Email is sent to list generated
- 5b. Guest wants to locate email of another guest
 1. Guest searches system by name or guest room
 - i. if found, guest emails by hotel intranet email system
 - ii. if not found, system ends search or repeat modified searches

Use Case UC8: Cancel Reservations

Scope: Hotel Management Application

Level: User Goal

Primary Actor: Front Desk

Secondary Actor: Management, Online Site

Stakeholders and Interests:

- POS System: Wants to cancel or modify reservations
- Front Desk: Wants to quickly and accurately cancel/modify reservations
- Online Site: Wants to locate and confirm guest properly and cancel/modify reservations
- Management: Wants to cancel reservations or refund valid fees to guest

Preconditions: Guest identification is provided

Success Guarantee: Reservation cancelled/modified

Postconditions: System database is updated

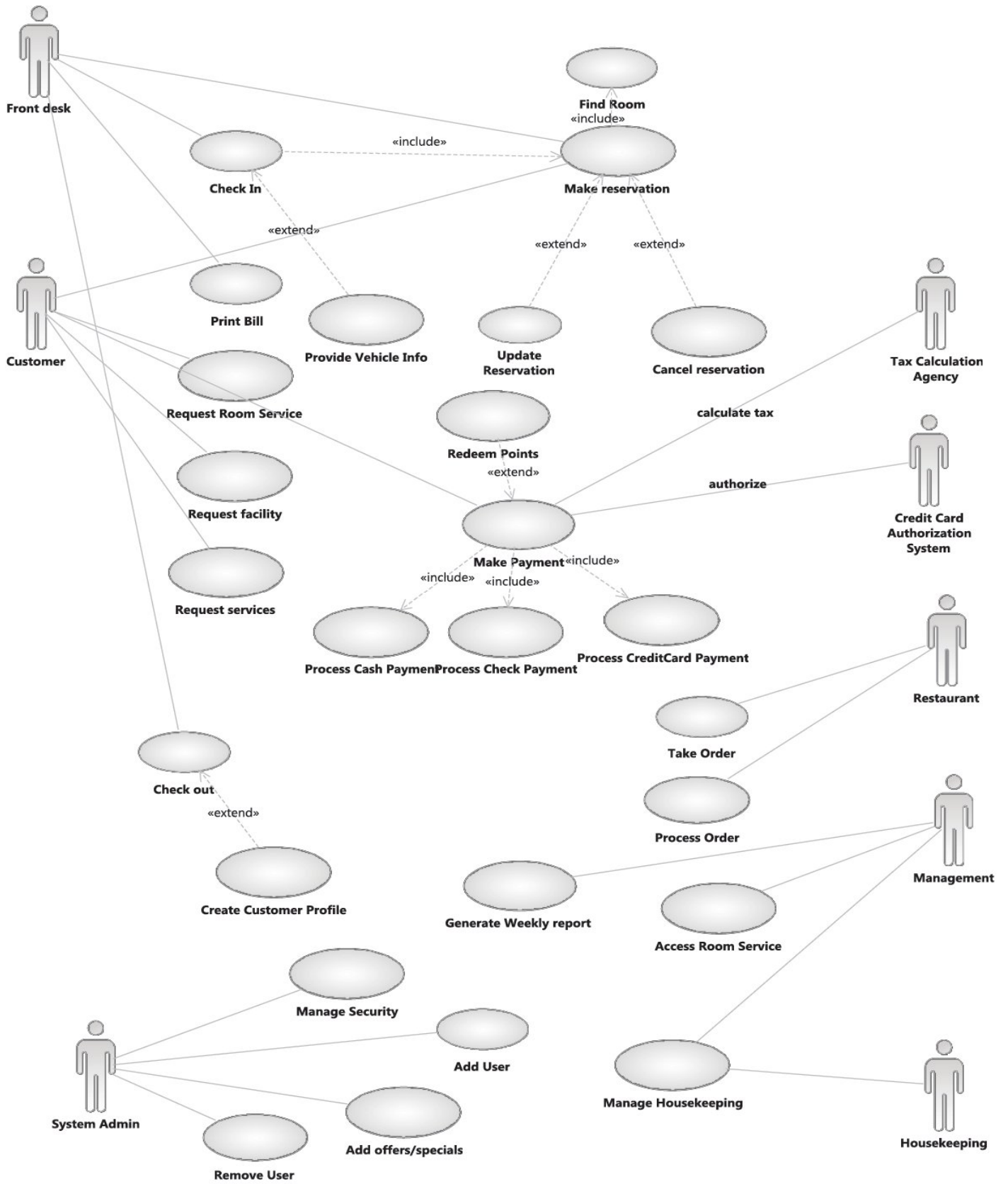
Main Success Scenario:

Actor Action	System Response
Step 1. Guest provides front desk proper form of identification	Step 3. Penalties are calculated if necessary
Step 2. Front desk searches system and confirms cancellation	Step 4. Room status is updated in system
	Step 5. Email is generated and sent to guest

Extensions:

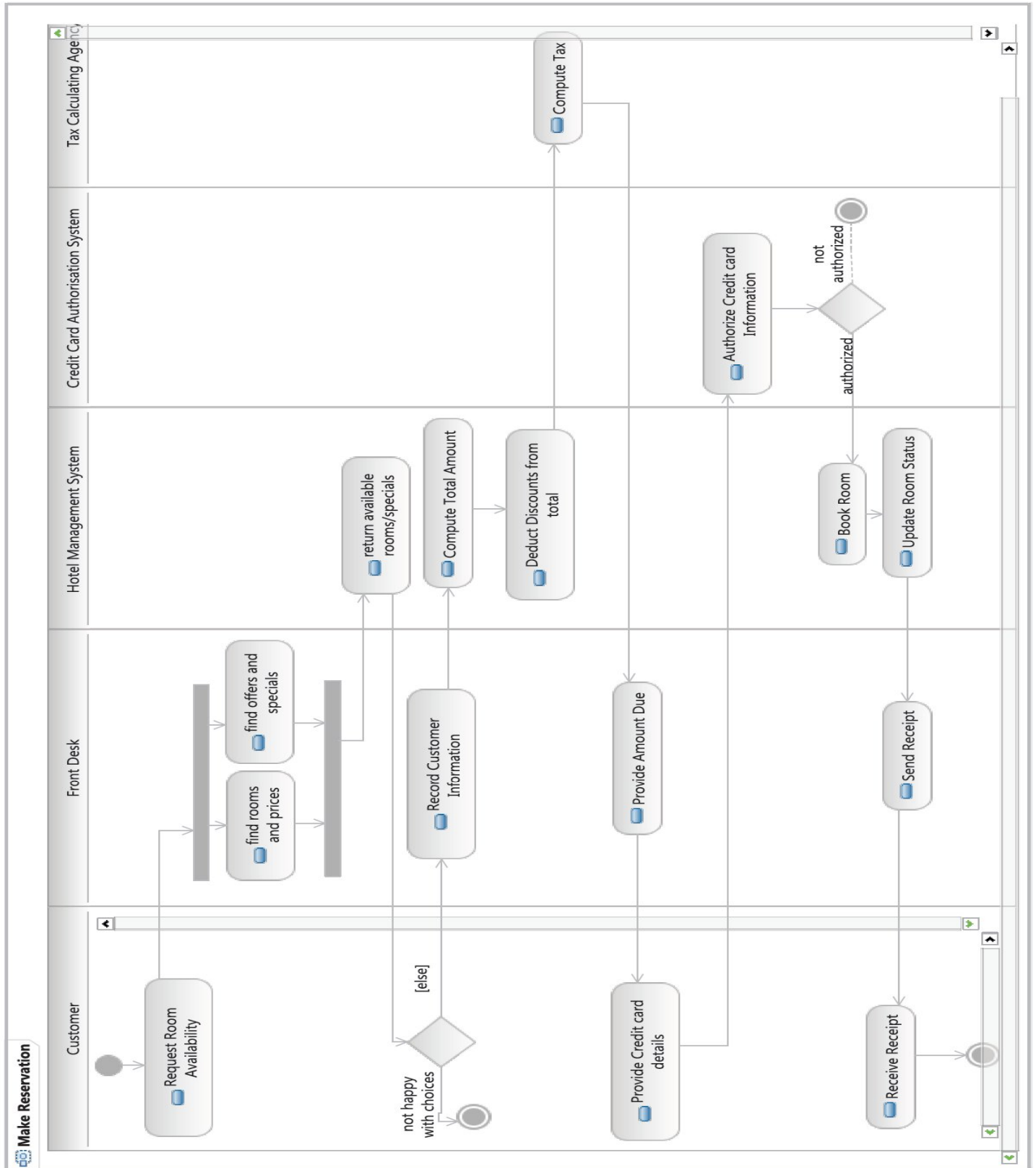
- 2a. Guest cancels reservation online
 - 1. Guest provides identification and ticket information
 - 2. Penalties are calculated if necessary
 - 3. Room status is updated in system
 - 4. Email is generated and sent to guest
- 2b. Guest cancels reservation over phone
 - 1. Guest provides identification and ticket information
 - 2. Penalties are calculated if necessary
 - 3. Room status is updated in system
 - 4. Email is generated and sent to guest
- 3a. Management wants to refund total deposit to guest
 - 1. Management checks system for reservation
 - 2. Management checks cancellation rules to see if applies
 - i. Management enters cancellation code to override refund rules in system
 - 3. Refund amount is calculated
 - 4. Amount is refunded and POS system is modified

SECTION 2: USE CASE DIAGRAM



SECTION 3: ACTIVITY DIAGRAMS:

Activity Diagram for MakeReservation use case



SECTION 4: FILTERED AND NON-FILTERED LIST OF NOUN AND VERB PHRASES FROM THE USE CASE DESCRIPTIONS

Non Filtered Noun List
Hotel Reservation Application
Front Desk
Online Site
room availability status
room status
room
online system
room service
employee
payment options
company
transactions
special request
manager
override operations
credit card
refund
government tax agencies
tax
sale
payment authorization service
authorization requests
list of available rooms
prices
credit card info
hotel
promotions
customer
customer's name
contact information
discount
total price
reservation
credit card authorization and validation
deposit
confirmation number
check in and checkout dates
system
email system
receipt
website
list of room prices
reservation information
penalties
front desk clerk
vacant rooms

manager
client inquiries
housekeeping status
client inquiries
housekeeping
management
complaint
system job
check out system
room damage
identification
keycard
guest
guest profile
bill
POS system
revenue reports
Tax calculating agency
system logs
guest activities
search
reports
vehicle information
vehicle database system
valet
vehicle
parking lot
valet ticket
code authorization for vehicle search
license plate
VIN
make
model
range of possible year
customer profile
guest name
guest date of birth
guest address
guest telephone number
guest emergency contacts
credit card hold
email messaging system
email messages
guest email list
cancel reservation

FILTERED NOUN LIST

Hotel Reservation Application

Front Desk

Website

room status

system

room service

employee

payment options

transaction

special request

manager

override operations

credit card

refund

government tax agencies

tax

payment authorization service

room list

prices

hotel

customer

contact information

discount

reservation

deposit

confirmation number

check in and checkout dates

email system

receipt

penalties

client inquiries

housekeeping

system job

check out system

room damage

identification

keycard

bill

guest

POS system

system logs

guest activities

search

reports

vehicle information

vehicle database system

valet

parking lot
valet ticket
code authorization for vehicle search
customer profile
credit card hold
email messaging system
email messages
guest email list

SECTION 5: DOMAIN MODEL

