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ITS470 – OBJECT ORIENTED REQUIREMENTS ANALYSIS

Software Requirements Specification

SEMESTER OCT 2020 – FEB 2021

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Version: 3.0
Due Date: 17 JULY 2021

Contents

CONTENTS	2
REVISIONS	3
1 INTRODUCTION	1
1.0 DOCUMENT PURPOSE	1
1.1 PRODUCT SCOPE	2
1.2 INTENDED AUDIENCE AND DOCUMENT OVERVIEW	3
1.3 DEFINITIONS, ACRONYMS AND ABBREVIATIONS	3
1.4 DOCUMENT CONVENTIONS	4
1.5 REFERENCES AND ACKNOWLEDGMENTS	4
2 OVERALL DESCRIPTION	5
2.0 PRODUCT PERSPECTIVE	5
2.1 PRODUCT FUNCTIONALITY	6
2.2 USERS AND CHARACTERISTICS	7
2.3 OPERATING ENVIRONMENT	9
2.4 DESIGN AND IMPLEMENTATION CONSTRAINTS	9
2.5 USER DOCUMENTATION	10
2.6 ASSUMPTIONS AND DEPENDENCIES	10
3 SYSTEM FEATURES	11
3.1 USE CASE DIAGRAM	11
3.2 USE CASE DESCRIPTION	12
4 OTHER NON-FUNCTIONAL REQUIREMENTS	46
4.1 PERFORMANCE REQUIREMENTS	46
4.2 SAFETY AND SECURITY REQUIREMENTS	47
4.3 SOFTWARE QUALITY ATTRIBUTES	48
APPENDIX A – REQUIREMENT MODELS	50
1. BUSINESS ACTIVITY DIAGRAM	50
2. CLASS DIAGRAM	62
3. SYSTEM SEQUENCE DIAGRAM	63
APPENDIX B - GROUP LOG	66

Revisions

Version	Primary Author(s)	Description of Version	Date Completed
V 1.0	Ameera Iman Binti Hassan	This revision contents introduction about the systems,overall description,system feature,other non functional requirement and requirement models.	15/07/2020
V 2.0	Ameera Iman Binti Hassan	This revision removes feedback features, changes manager and staff's responsibilities and makes changes to use case diagram and description and domain class diagram.	29/10/2020
V 3.0	Ameera Iman Binti Hassan	This revision amends the recursive staff in the system and removes the yearly sales.	30/04/2021

1 Introduction

1.0 Document Purpose

The purpose of this document is to provide a detailed description of the requirement for online Homestay Management System (HMS). This *Software Requirement Specification* will allow a full understanding of what is to be expected from the newly introduced system to be built and it also gives a full/overall flow on how the system will work. The system's clear understanding and well-function will enable the best fit software to be developed for the end user and will be used for the development of the project's future phases. This SRS will lay the basis for Pilot's members using the SRS to fully understand the expectations for the construction of the software. The stakeholder can look into the SRS to put any comment if the requirement matches up to their expectations. When there are any changes needed to be made, this SRS will be updated and the Pilot's members will meet their demand.

1.1 Product Scope

First and foremost, the HMS that will be implemented for NurHomestay company to automate the homestay major operations. The Online Reservation Program (ORP) is structured to keep track of house reservations and verify house availability. There are three Nur Homestay end users which are staff and customers. The customer can register themselves and use the system feature to their convenience. The staff have two different roles. Those roles as staff can only manage the homestay and reservation details while the manager oversees the staff activity. Furthermore, a check-in and check-out program to keep track of customer day in and out information. Only staff can access the schedule management which is based on date reservation and contains customer and reservation details.. NurHomestay System will use different login functions to keep restrictions for each End User.

The purpose of the automated homestay management program is to optimize the homestay day-to-day operation. The program should be able to provide several things in a fast way to take care of the customers. This software will be used to overcome those drawbacks as a solution to the large amount of file handling that is happening at the homestay. Safety, user-friendliness and most importantly information retrieval efficiency are some advantages that the development team will be presenting with this system. The system will be user-friendly, easy to use, easy to recover errors and have a high overall satisfaction for the end-user.

Lastly, this program is to help improve and ease operations involved in NurHomestay such as customer booking, homestay and staff management. From these available helpful features, the homestay can increase its profit and attention to attract more customers in the future.

1.2 Intended Audience and Document Overview

The target audience of the document would be the project manager, system analyst, programmer and other team project members with the intention of referencing and reviewing the document's details. The document is to describe the specifications of the project and the approaches that have been implemented. In the end, the document will have a good picture of the structure that is being designed. Hence, this document can be used as a reference to understand the flow of the system. Several modeling have been described in the documentation including Use Case Diagram, Use Case Description, Activity Diagram, Domain Class Diagram and System Sequence Diagram. Sequence of this *Software Requirement Specification* is by reading the introduction to understand the purpose of this document and scope of the product. Second, the Overall Description is to understand the product perspective, product functionality, design and implementation that are used in this system. Moreover, the third step is to read System features. This section contains a use case diagram and use case description in order to understand the system feature and function. The fourth step is to read Other non-functional requirements to help understand safety and security requirements, performance and software quality attributes. The last step is to read the requirement diagram. This section contains business activity diagrams, class diagrams, system sequence diagrams to help a better understanding of the sequence of the system, how the system processes and what the system will do.

1.3 Definitions, Acronyms and Abbreviations

Table 1 Acronyms

Acronyms	Definition
SRS	<i>Software Requirement Specification</i>
ORP	<i>Online Reservation Program</i>
SSD	<i>System Sequence Diagram</i>
UCD	<i>Use Case Diagram</i>
DCD	<i>Domain Class Diagram</i>
AD	<i>Activity Diagram</i>

1.4 Document Conventions

The paper is prepared using Microsoft Word 2019 and uses the font style 'Arial.' The set font size used to format this text is 11 pt with a 1.5 line spacing. This used the bold property to establish the headings of the text. Italic will be used for comments. UML diagrams have been developed in compliance with UML 2.0 specifications. Standard IEEE template is a template used to organize the appearance and flow of the document.

1.5 References and Acknowledgments

Website

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2 Overall Description

2.1 Product Perspective

NurHomestay Booking System is a new system that is being developed to replace the current system which is only a manual system. This booking system is created essentially to assist staff in booking management also to make it more systematic and efficient. As for the customer, with the existence of this new booking system, they can place their booking at a time that is most convenient for them. Using an online booking system, they can make their booking at any time of day or night, without having to worry if it's within business hours or not.

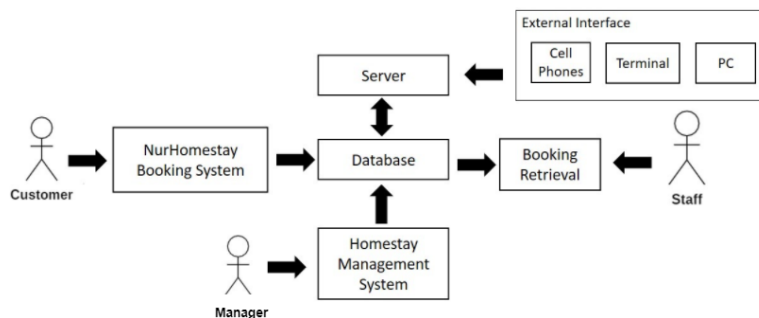


Diagram 1 Overview Diagram of NurHomestay Booking System

The structure of the system can be divided into 3 main logical components:

1. NurHomestay Booking System

Provides the functionality for customers to place their order and supply necessary details.

2. Homestay Management System

Allows the manager to control what can be ordered by the customers.

3. Booking Retrieval System

Allows homestay staff to keep track of all booking that has been placed. This component takes care of booking retrieval and displaying booking information.

2.2 Product Functionality

NurHomestay Booking System would have the following basic functions:

Customer Subsystem

This system provides the functionality for customer to book homestay, must be provided the following functionality:

- Register, view and update customer account
- Search homestay include add booking
- View branch homestay
- View, update and cancel booking
- Make payment

Staff Subsystem

This system provides the functionality for staff to manage homestay booking, as provided in the below:

Role: Staff

- View and update staff accountcreate
- View schedule homestay include view reservation and customer details
- View, update, create and delete branch homestay details
- View, update and cancel booking
- Refund customer money

Role: Manager

- Create, view and delete staff profile
- Create, view, update and delete branch details
- Refund customer money

2.3 Users and Characteristics

Users and characteristics describe more about three types of users which include manager, Staff and Customer. The table below shows the difference of characteristics, frequency of use, subset of product functions used, technical expertise, security or privilege levels, educational level, or experience.

Table 2 : User Classes and Characteristics

User	Customer	Staff Role: Staff	Staff Role: Manager
Characteristics	Visitors that are able to see the service lists by the system also can be the member of the system by doing the registration.	Handle customer reservation and manage homestay	<p>→ Person that will maintain and update the system.</p> <p>→ Spend comparatively lesser time than others on the system which usually they would access the system when they are required to make reports or something else.</p>
Frequency of use	High frequency	High frequency	High frequency
Subset of product functions used	Customer Account, Payment, Reservation, Homestay	Staff Account, Payment, Reservation, Homestay	Staff Account, Payment, Homestay, Reservation

Technical expertise	No technical expertise needed.	Immediate technical expertise. Most of them would need to be computer literate to understand the working of the system and know how to use it efficiently.	High technical expertise. Manager should be well aware of all the system functionalities.
Security or privilege levels	Can access to the system using their username and password from the registration they made.	Access to the system through the login process by using staff ID and password given by management.	Access to the system through the login process by using username and password registered by themselves.
Educational level	No educational level needed.	They should have experience in this area with a minimum diploma in Information Technology or have knowledge in computer skills.	They should have experience and with a minimum Bachelor in Information Technology or Computer Science. It is a value added when you have a professional certification.
Experience	They know how to use the website or else they can refer to the user manual that has been provided.	They should know the basic skills such as good communication skills, be able to work in a team and even if they have no experience in the system operation, it's not a problem.	Experience in handling systems of domains. Manager should be able to quickly and correctly diagnose the errors and also must figure out what is wrong and how best it can be fixed in a small amount of time.

2.4 Operating Environment

Table 3 : Operating environment used in the project development

Items	Description
Operating System	<ul style="list-style-type: none">• Windows 10
Tools	<ul style="list-style-type: none">• Microsoft Office 2013• Google Docs• starUML• Xampp• Any latest Web Browser. (Preferably, Mozilla Firefox, Google chrome)• Sublime• Oracle
Database	<ul style="list-style-type: none">• ORACLE
Language	<ul style="list-style-type: none">• HTML• CSS
Server	<ul style="list-style-type: none">• Localhost

2.5 Design and Implementation Constraints

1. Hardware Constraints

- a) Not enough memory storage.
- b) Internet modem is not supported at a certain time.

2. Software Constraints

- a) Strong network connections are required for certain software.
- b) Lack of knowledge and skills on tools.
- c) Development tools are not stable and reliable.

3. Schedule and Resource Constraints

- a) Expect to finish this SRS document within 4 months with distractions in between due to the time demanded by other courses.

2.6 User Documentation

User documentation used is user manual. It will be delivered in pdf format as users can download it online and view it offline. The User Manual should give the customer a good understanding about how to communicate with the program. It will be written in a simple, understandable language that conceals the inner complexity of the system.

2.7 Assumptions and Dependencies

Assumptions and dependencies are described below:

- The developed system will work correctly with the online payment that allows real-time debiting of customer's internet banking accounts of multiple banks.
- Assume that our project team has been finalized and no new member will be joined, or a present member will never leave the group in the middle of the project.
- There are no requirement changes during the system development process which is the time duration and cost are depending on the current requirement.
- Assume that all the requirements are correct and meet the needs.
- Since the NurHomestay Booking System is only accessible through the Internet, it is assumed that the end user has a connection to the Internet. It is also assumed that the user has a web browser able to display the website.

3 System Features

3.1 USE CASE DIAGRAM



Diagram 2 UCD for NurHomestay Booking System

3.2 USE CASE DESCRIPTION

3.2.1 UCD001 Register Customer Account

Use Case ID:	UCD001		
Use Case Name:	Register customer account		
Created By:	Ain Nurina	Last Updated By:	Ameera Iman
Date Created:	15/06/2020	Date Last Updated:	30/04/2021

Actor:	Customer
Description:	The system should allow the online customer to register an account by entering basic information.
Preconditions:	1. Customer information must be available.
Postconditions:	1. Customer details must be saved.
Priority:	High
Frequency of Use:	High

Normal Course of Events:	Actor	System
	<p>Customer</p> <p>1. Customer visits the website and clicks 'sign up now'.</p> <p>2. Customer enters their details into the registration form and clicks 'Register'.</p>	<p>1.1 System redirects to the 'register account' page.</p> <p>1.2 System will display form for customer to insert details</p> <p>2.1 System accepts data and redirects users to the login page.</p>
Alternative Courses:	<p>1. If a customer clicks back, the system will be redirected to the login page.</p>	
Exceptions:	<p>2. If the customer does not enter username, the system will not be able to register an account.</p> <p>2. If the customer does not enter full name, the system will not be able to register an account.</p> <p>2. If the customer does not insert email, the system will not be able to register an account.</p> <p>2. If the customer does not enter password, the system will not be able to register an account.</p> <p>2. If the customer does not enter confirm password, the system will not be able to register an account.</p> <p>2. If the customer does not enter phone number, the system will not be able to register an account.</p> <p>2. If the customer does not insert address, the system will not be able to register an account.</p>	

	2. If the customer enters the wrong email format, the system will not be able to register an account.
Includes:	N/A
Special Requirements:	N/A
Assumptions:	N/A
Notes and Issues:	Customer details such as full name, username, contact number, email, address and password

3.2.2 UCD002 Update Customer Account

Use Case ID:	UCD002		
Use Case Name:	Update customer profile		
Created By:	Ain Nurina	Last Updated By:	Ameera Iman
Date Created:	15/06/2020	Date Last Updated:	30/04/2021

Actor:	Customer
Description:	The system should allow the customer to update their customer profile whenever they want.

Preconditions:	1. Customer must log in 2. The information about the customer details must be available	
Postconditions:	1. Customer's information is updated 2. System views customer profile with new details	
Priority:	Medium	
Frequency of Use:	Medium	
Normal Course of Events:	Actor	System
	1. Customer clicks 'update profile' or 'update password' on the profile menu. 2. Customer makes changes on the details and click button update	1.1 System provides customer with the form according to customer choices. 2.1 System triggered by the changes and saved it into the database. 2.2 System informs user that profile updated. 2.3 System displays customer information
Alternative Courses:	1. If customer clicks view, the system used the old details of customer	
Exceptions:	2.1 If the customer does not enter the current password, the system will not proceed to the next step.	

	2.1 If the customer inserts a mismatched new password and confirms the password, the system will not update customer details.
Includes:	N/A
Special Requirements:	N/A
Assumptions:	N/A
Notes and Issues:	Editable customer details such as full name, user name, contact number, address and password

3.2.3 UCD003 View Customer Profile

Use Case ID:	UCD003		
Use Case Name:	View customer profile		
Created By:	Ain Nurina	Last Updated By:	Ameera Iman
Date Created:	27/6/2020	Date Last Updated:	30/04/2021

Actor:	Customer and staff
Description:	The system should allow customer and staff to check customer's profile

Preconditions:	1. Customer and staff must login 2. The information about customer must available	
Postconditions:	1. Customer details displays	
Priority:	Low	
Frequency of Use:	Low	
Normal Course of Events:	Actor	System
	Customer 1. Customer clicks on profile at menu bar Staff 1. Staff clicks hyperlink at 'booked by' at the schedule page	1.1 System opens profile page 1.2 System display the information of their profile 1.1 System opens the customer profile by retrieve the id from the hyperlink 2.2 System displays it to the staff
Alternative Courses:	N/A	
Exceptions:	N/A	

Includes:	N/A
Special Requirements:	N/A
Assumptions:	N/A
Notes and Issues:	Customer details such as full name, username, contact number, email, address and password

3.2.4 UCD004 Search Homestay Availability

Use Case ID:	UCD004		
Use Case Name:	Search Homestay Availability		
Created By:	Ain Nurina	Last Updated By:	Ameera Iman
Date Created:	27/6/2020	Date Last Updated:	30/04/2021

Actor:	Customer
Description:	The system should allow customer to search about homestay that are available
Preconditions:	1. Homestay information must be exist

Postconditions:	1. System views the homestay based on the required searching	
Priority:	High	
Frequency of Use:	High	
Normal Course of Events:	Actor	System
	1. Customer fills in check in date and checkout date and clicks the check availability button.	1.1 System compares search details and system's data 1.2 System displays a list of homestays that are available to book. 1.3 If homestay is available, the system displays a list of homestay with a 'reserve button'.
Alternative Courses:	N/A	
Exceptions:	N/A	
Includes:	Add reservation	
Special Requirements:	N/A	
Assumptions:	1. Searching will limit the information about homestay.	

Notes and Issues:	Search details such as homestay name, location, check in date and time and check out date and time
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3.2.5 UCD005 View Branch Homestay

Use Case ID:	UCD005		
Use Case Name:	View Branch		
Created By:	Ain Nurina	Last Updated By:	Ameera Iman
Date Created:	27/6/2020	Date Last Updated:	30/04/2021

Actor:	Customer, Staff and Manager
Description:	The system should allow the customer, staff and manager to access homestay details.
Preconditions:	1. Homestay information must be available
Postconditions:	1. Homestay information is shown to customer, staff or manager
Priority:	Medium
Frequency of Use:	Medium

Normal Course of Events:	Actor	System
	<p>Customer and staff</p> <p>1. Customers are redirected to view homestay by clicking the branch homestay link.</p> <p>2. Customers view homestay details including images.</p>	<p>1.1 System redirects to the link</p> <p>1.2 System retrieves the homestay details and displays it.</p>
Alternative Courses:	N/A	
Exceptions:	N/A	
Includes:	N/A	
Special Requirements:	N/A	
Assumptions:	N/A	
Notes and Issues:	Homestay details such as name, image, address, description and price	

3.2.6 UCD006 Add Reservation

Use Case ID:	UCD006		
Use Case Name:	Add reservation		
Created By:	Ain Nurina	Last Updated By:	Nabil Naim
Date Created:	12/6/2020	Date Last Updated:	30/04/2021

Actor:	Customer
Description:	The system should allow customer to add reservation to stay in homestay during certain date and time
Preconditions:	1. Customer must log in before making a booking 2. Branch of the homestay must be available for reservation to access.
Postconditions:	1. Reservation details must be saved
Priority:	High
Frequency of Use:	High

Normal Course of Events:	Actor	System
	Customer 1. Customer view list of available homestay and click reserve button 2. Customer redirects to payment page.	1.1 System displays reservation details and calculates total payment.
Alternative Courses:	N/A	
Exceptions:	N/A	
Includes:	Make payment	
Special Requirements:	Check-in and check-out must be available	
Assumptions:	N/A	
Notes and Issues:	Reservation details such as check in time, check out time, total price, check in date, check out date, homestay id, and reservation date (current reservation date)	

3.2.7 UCD007 Update Reservation

Use Case ID:	UCD007		
Use Case Name:	Update Reservation		
Created By:	Ain Nurina	Last Updated By:	Nabil Naim
Date Created:	17/6/2020	Date Last Updated:	30/04/2021

Actor:	Customer	
Description:	The system should allow the customer and staff to make changes on the reservation before making a payment	
Preconditions:	1. Customers must login to access the old reservation. 2. Reservation details can be accessible.	
Postconditions:	1. New changes have been saved and set.	
Priority:	Medium	
Frequency of Use:	Medium	
Normal Course of Events:	Actor	System

	<p>1. A customer clicks the update button.</p> <p>2. The customer search available date</p> <p>3. Customer agree to change by click update button</p>	<p>1.1 System redirects customer to search available form</p> <p>2.1 System finds available date and redirects to update reservations details.</p> <p>3.1 System updated the new reservation</p> <p>3.2 System informs the user.</p>
Alternative Courses:	1. If customer clicks back, the system will go back to the reservation page	
Exceptions:	<p>2 If customer does not enter check-in date, the system will be able to search available date</p> <p>2 If customer does not enter check-in date, the system will be able to search available date</p> <p>2 If customer enters total days more than total reserved date, the system will be able to search available date</p>	
Includes:	N/A	
Special Requirements:	Updated date must be less or equal to the days from the previous date and it must be two weeks before check-in date.	
Assumptions:	N/A	
Notes and Issues:	Reservation details that can be updated only check in time and check out time.	

3.2.8 UCD008 View Reservation

Use Case ID:	UCD008		
Use Case Name:	View Reservation		
Created By:	Ain Nurina	Last Updated By:	Nabil Naim
Date Created:	27/6/2020	Date Last Updated:	30/04/2021

Actor:	Customer and staff
Description:	The system should allow customer and staff to request detailed of their reservation that has been booked
Preconditions:	1. Reservation already been made
Postconditions:	1. System retrieve the information about the reservation
Priority:	Medium
Frequency of Use:	Medium

Normal Course of Events:	Actor	System
	Customer and staff 1. Customer click on view reservation 2. Customer view the reservation details	1.1 System redirecting to view reservation page 1.2 System retrieve reservation page
Alternative Courses:	2. Customer click cancel button to go back to the reservation list.	
Exceptions:	N/A	
Includes:	N/A	
Special Requirements:	This page can be updated before making payment. Once a customer already makes payment, nothing can be changed.	
Assumptions:	N/A	
Notes and Issues:	Reservation details such as check in time, check out time, check in date, check out date, customer name and homestay id (reservation date remains unchanged)	

3.2.9 UCD009 Cancel Reservation

Use Case ID:	UCD009		
Use Case Name:	Cancel Reservation		
Created By:	Ain Nurina	Last Updated By:	Ameera Iman
Date Created:	27/6/2020	Date Last Updated:	03/05/2021

Actor:	Customer	
Description:	The system should allow the customer to cancel the reservation that already have been made by them	
Preconditions:	1. Reservation details that has been made by the customer	
Postconditions:	The reservation is cancelled	
Priority:	Low	
Frequency of Use:	Low	
Normal Course of Events:	Actor	System

	<p>1. The customer clicks 'Cancel Booking'</p> <p>2. The customer clicks 'Okay'.</p>	<p>1.1 System alerts customers with their cancelation.</p> <p>2.1 System removes the booking from database and return to the reservation page</p>
Alternative Courses:	If customer click back, customer will go back to previous page	
Exceptions:	N/A	
Includes:	N/A	
Special Requirements:	N/A	
Assumptions:	N/A	
Notes and Issues:	N/A	

3.2.10 UCD010 Make Payment

Use Case ID:	UCD010		
Use Case Name:	Make payment		
Created By:	Ain Nurina	Last Updated By:	Ameera Iman
Date Created:	17/6/2020	Date Last Updated:	04/05/2021

Actor:	Customer
Description:	The system should allow the customer to make payment of the reservation
Preconditions:	1. Reservation must be made before proceed to payment 2. Total price must be retrieve from database 3. 3 rd party subsystem system should be available
Postconditions:	1. System receives payment
Priority:	High
Frequency of Use:	High

Normal Course of proceedEvents:	Actor	System
	<p>Customer</p> <p>1. Customers choose method of payment and tick to "Agree to the terms and conditions"</p> <p>2. Customers click on the 'payment' Button.</p> <p>3. Customer redirect to view payment details for cash method or customer choose the type of bank and insert amount.</p> <p>3. Customer redirect to view payment details for online banking</p>	<p>1.1 System allows customers to pay.</p> <p>2.1 System triggered from the method chosen by the customer and redirecting to the page according to the type of payment made.</p> <p>2.2 System detects the cash method and sets the invoice number. System will redirect customer to payment details</p> <p>2.3 System detects the online banking method and uses 3rd party systems for transaction.</p> <p>3.1 System received number account and name of bank.</p> <p>3.2 System redirect to payment details</p>
Alternative Courses:	2. Customer clicks cancel button to redirect to home page.	

Exceptions:	1.If customer does not tick “Agree with terms and conditions.”, the system will not proceed to the next step. 3.If the customer does not enter bank account, the system will not proceed to the next step.
Includes:	3 rd party transaction system
Special Requirements:	Staff will receive payment cash methods by hand.
Assumptions:	N/A
Notes and Issues:	3 rd party transaction system which is payment gateway

3.2.11 UCD011 View User Profile

Use Case ID:	UCD012		
Use Case Name:	View user profile		
Created By:	Ain Nurina	Last Updated By:	Nabil Naim
Date Created:	19/6/2020	Date Last Updated:	30/04/2021

Actor:	Staff and Manager	
Description:	The system should allow the staff and manager to check their profile	
Preconditions:	1. Staff and manager must login 2. The information about staff must make available	
Postconditions:	1. Staff details displays	
Priority:	Low	
Frequency of Use:	Low	
Normal Course of Events:	Actor	System
	Staff 1. Staff clicks on profile at menu bar	1.1 System opens profile page 1.2 System retrieves the information of their profile
Alternative Courses:	N/A	
Exceptions:	N/A	

Includes:	N/A
Special Requirements:	N/A
Assumptions:	N/A
Notes and Issues:	Staff details such as name, phone number, address, email.

3.2.12 UCD012 Update User Profile

Use Case ID:	UCD013		
Use Case Name:	Update user profile		
Created By:	Ain Nurina	Last Updated By:	Nabil Naim
Date Created:	19/6/2020	Date Last Updated:	30/04/2021

Actor:	Staff
Description:	The system should allow the staff to update staff profiles whenever they want. The system triggered by the changes.
Preconditions:	1. Staff must log in

Includes:	N/A
Special Requirements:	N/A
Assumptions:	N/A
Notes and Issues	Staff details such as name, contact number, address, and password

3.2.13 UCD013 Create Staff Profile

Use Case ID:	UCD014		
Use Case Name:	Create staff profile		
Created By:	Nor Farahain Mohamed Omar	Last Updated By:	Ameera Iman
Date Created:	14/6/2020	Date Last Updated:	04/05/2021

Actor:	Manager	
Brief description:	The system should allow the manager added staff profile by adding their username and password to enter the system.	
Priority:	High	
Frequency of use:	High	
Preconditions:	1. Staff must be agree with the terms of policy 2. System must be connected to the network	
Postconditions:	Staff profile successfully saved.	
Normal Course of Events:	Actor	System
	1. Manager click add staff button 2. Manager insert all data and click submit	1.1 System display create staff profile form 2.1 System will redirect manager to staff list page

	3. Manager view list of staff	2.2 Display all list of staff
Alternative Courses:	2. If manager does not enter username, the system will not proceed to the next step. 2. If manager does not enter staff name, the system will not proceed to the next step. 2. If manager does not enter staff phone, the system will not proceed to the next step. 2. If manager does not enter staff email, the system will not proceed to the next step. 2. If manager enters wrong email format, the system will not proceed to the next step. 2. If manager does not enter staff address, the system will not proceed to the next step. 2. If manager does not enter staff password, the system will not proceed to the next step.	
Exception conditions:	N/A	
Includes:	N/A	
Special Requirements:	N/A	
Assumptions:	N/A	
Notes and Issues:	N/A	

3.2.14 UCD014 Delete Staff Profile

Use Case ID:	UCD015		
Use Case Name:	Delete staff profile		
Created By:	Nor Farahain Mohamed Omar	Last Updated By:	Ameera Iman
Date Created:	14/6/2020	Date Last Updated:	04/05/2021

Actor:	Manager	
Brief description:	The system should allow the Manager to remove staff profiles that are not available.	
Priority:	Medium	
Frequency of use:	Medium	
Preconditions:	Manager must have an account to log in to the system	
Postconditions:	Staff's profiles are successfully deleted.	
Normal Course of Events:	Actor	System
	1. Manager opens 'Staff list' page. 2. Manager chooses one of the staff to be deleted and clicks the delete option.	1.1 System displays a list of the staff. 2.1 Staff selected has been deleted from the database. 2.2 System informs the manager.
Alternative Courses:	N/A	
Exception conditions:	N/A	
Includes:	N/A	
Special Requirements:	Security	
Assumptions:	N/A	
Notes and Issues:	N/A	

3.2.15 UCD015 View List Staff Profile

Use Case ID:	UCD015		
Use Case Name:	View List Staff Profile		
Created By:	Nor Farahain Mohamed Omar	Last Updated By:	Ameera Iman
Date Created:	14/6/2020	Date Last Updated:	04/05/2021

Actor:	Manager	
Brief description:	The system should allow the Manager to view list staff profile	
Priority:	Medium	
Frequency of use:	Medium	
Preconditions:	Manager must have an account to log in to the system	
Postconditions:	Manager view all staff's details	
Normal Course of Events:	Actor	System
	1. Manager opens 'view Staff' page.	1.1 System displays list of the staff.
Alternative Courses:	N/A	
Exception conditions:	N/A	
Includes:	N/A	
Special Requirements:	Security	
Assumptions:	N/A	
Notes and Issues:	N/A	

3.2.16 UCD016 Add New Branch

Use Case ID:	UCD016		
Use Case Name:	Add new branch		
Created By:	Nor Farahain Mohamed Omar	Last Updated By:	Nabil Naim
Date Created:	14/6/2020	Date Last Updated:	30/04/2021

Actor:	Manager and Staff	
Brief description:	The system should allow the Manager and Staff to add information for the new branch of the homestay.	
Preconditions:	<ol style="list-style-type: none"> 1. Staff and Manager must be logged in into the system. 2. The homestay must exist 	
Postconditions:	<ol style="list-style-type: none"> 1. New homestay successfully created and saved. 	

	2. Prices per night for the branch were shown. 3. Images of homestay have been shown in the system.	
Priority:	Low	
Frequency of use:	Low	
Normal Course of Events:	Actor	System
	1. Users click the add branch button. 2. users insert all information about new branch and click add button 3. Users click image button on selected branch 4. Users finds new image and clicks add	1.1 display form add branch form. 1. 2 System prompts user to insert detail 2.1 Systems saves data into database 2.2 redirect users to the list of homestay branch page 2.3 displays new information added by the user. 3.1 System get all image data from the branch id 3.2 System display image data 3.3 System prompts user to insert new image 4.1 System add new image and display on the same page.
Alternative Courses:	N/A	
Exception conditions:	2. If staff does not insert branch name, the system will not proceed to the next step. 2. If staff does not enter address, the system will not proceed to the next step.	

	2. If staff does not enter address, the system will not proceed to the next step. 2. If staff does not enter description, the system will not proceed to the next step. 2. If staff does not enter deposit, the system will not proceed to the next step. 2. IF staff does not enter price, the system will not proceed to the next step.
Includes:	N/A
Special Requirements:	N/A
Assumptions:	N/A
Notes and Issues:	N/A

3.2.17 UCD017 Update Branch

Use Case ID:	UCD018		
Use Case Name:	Update branch		
Created By:	Nor Farahain Mohamed Omar	Last Updated By:	Ameera Iman
Date Created:	14/6/2020	Date Last Updated:	04/05/2021

Actors:	Manager and Staff	
Brief description:	The system should allow the Manager and staff to update the existing branches of the homestay and the homestay information.	
Priority:	Low	
Frequency of use:	Low	
Preconditions:	1. Manager and staff must log in into the system 2. Homestay subsystems must be available.	
Postconditions:	Manager successfully saved and set new homestay information.	
Normal Course of Events:	Actor	System
	1. Manager opens page 'homestay branch'	1.1 System displays the homestay branch information.

	2. Manager clicks 'edit' option 3. Manager edit the branch details. 4. Manager clicks the 'update' button.	2.1 System displays branch form 4.1 System changes the data with the new detail 4.2 system displays new data that has been inserted by the user.
Alternative Courses:	N/A	
Exception conditions:	N/A	
Includes:	N/A	
Special Requirements:	N/A	
Assumptions:	N/A	
Notes and Issues:	Branch details are branch name, branch address, description and price.	

3.2.18 UCD018 Delete Branch

Use Case ID:	UCD019		
Use Case Name:	Delete branch		
Created By:	Nor Farahain Mohamed Omar	Last Updated By:	Ameera Iman
Date Created:	14/6/2020	Date Last Updated:	04/05/2021

Actors:	Manager and staff
Brief description:	The system should allow the manager and staff to remove the branch that is not available.
Priority:	Low

Frequency of use:	Low	
Preconditions:	1. The branch must exists in the system 2. Manager must log in the system.	
Postconditions:	1. The information of the related branch will be no longer found in the system.	
Normal Course of Events:	Actor	System
	1. Users click the trash can icon	1.1 System deletes branches selected from the system. 1.2 System informs the users.
Alternative Courses:	N/A	
Exception conditions:	N/A	
Includes:	N/A	
Special Requirements:	N/A	
Assumptions:	N/A	
Notes and Issues:	N/A	

3.2.19 UCD019 View Schedule Homestay

Use Case ID:	UCD019		
Use Case Name:	View Schedule Homestay		
Created By:	Nabil Naim	Last Updated By:	Ameera Iman
Date Created:	15/1/2021	Date Last Updated:	04/05/2021

Actors:	Staff
Brief description:	The system should allow staff to view schedule homestay
Priority:	Low
Frequency of use:	Low
Preconditions:	1. The branch must exists in the system 2. Staff must log in the system.
Postconditions:	1. The schedule is displays by the system

Normal Course of Events:	Actor	System
	<ol style="list-style-type: none"> 1. Users open the 'Schedule' page. 2. Users view the schedule page 	1.1 System displays list reservation schedule.
Alternative Courses:	N/A	
Exception conditions:	N/A	
Includes:	N/A	
Special Requirements:	The customer must make a booking.	
Assumptions:	N/A	
Notes and Issues:	N/A	

3.2.20 UCD020 Refund

Use Case ID:	UCD019		
Use Case Name:	Refund		
Created By:	Nabil Naim	Last Updated By:	Ameera Iman
Date Created:	15/1/2021	Date Last Updated:	04/05/2021

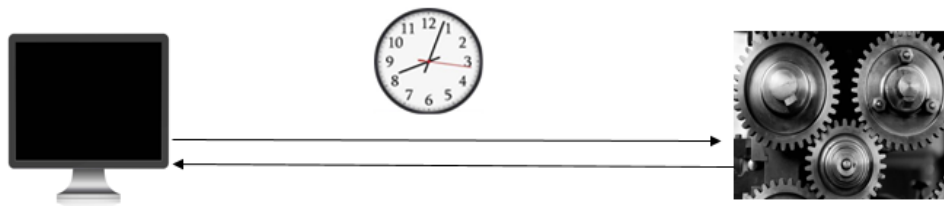
Actors:	Manager and staff		
Brief description:	The system should allow manager and staff to refund customer money if they make cancelation before 2 week of booking date		
Priority:	Low		
Frequency of use:	Low		
Preconditions:	<ol style="list-style-type: none"> 1. The branch must exists in the system 2. Staff and the manager must log in the system. 		
Postconditions:	<ol style="list-style-type: none"> 1. The information of the related branch will be no longer found in the system. 		
Normal Course of Events:	Actor	System	

	<ol style="list-style-type: none">1. Users open a 'refunds' page.2. Users choose one of the homestay books by the customer to be refunded.	<ol style="list-style-type: none">1.1 System displays list of canceled booking by customer.2.1 System set status of payment is refund
Alternative Courses:	N/A	
Exception conditions:	Refund only available if booking date does not exceed 2 week from the date of the book .	
Includes:	N/A	
Special Requirements:	Staff is required to refund the customer using 3rd online banking.	
Assumptions:	N/A	
Notes and Issues:	N/A	

4 Other Non-functional Requirements

4.1 Performance Requirements

In most organizations' systems, performance requirements tell how the system performs their functions under specific conditions. Performance requirement is the key element for the designing and testing phase. Scope in this project is between customers who visit the systems, reservation process, payment process and staff administration process. All this scope requires transaction and process flow through the real time system.



Real-Time Operating System

Diagram 3 *Real-Time Operating System*

Real time system is a system behaviour that responds to generate any input data within a finite and specified time for guaranteed to produce correct logical results. The correctness not only can be measured by the logical result but also the time response the process was delivered. Fault in response time to the process tends to the system. Products must have ability to perform their function within a given time-slot. The user will not expect how the system will react.

- Any interface in the system between user and interface that is automated, operated or linked must be at a maximum 7 second response time otherwise the user will notice the delay.
- The system can support 2000 numbers of users otherwise response time may be delayed.
- All response time 98% must be less than 10 seconds otherwise the system can lose user waiting times. Longer response time can cause users to feel the system is down.
- 0.2 second is the minimum limit for users who feel the system is responding instantaneously in response and show results.

4.2 Safety and Security Requirements

Safety and security requirements is an important term needed to consider in the system. Safety and Security requirements used to protect individual users and organisations against threats or privacy data criminals. Safety and security requirements focused on the actions to prevent and give protection to the system from aspects that can cause harm to user, system, organisations privacy and asset. This aspect will be protected by data policy, data authentication and notifications.

- Only Nur Homestay Melaka owner can see the personal records of their staff.
- Only Nur Homestay Melaka staff can see the reservation records.
- Only customers can see their online payment transaction activities. As this online payment requires a customer privacy account bank number, username and password information to fill in. As this system accepts many kinds of online banking applications after completing online pay form, their account authorization according to their online bank platform. To ensure their integrity and security.
- To ensure individual user privacy in the system, all individual users need to tick the Term & Conditions agreement as this system uses personal data as this system requires the user's email addresses, birthdate, profile images, names and addresses. Their personal data is legally protected by these mandatory laws. In Malaysia this policy is called the Personal Data Protection Act (PDPA).
- This system shall inform the user about user personal data requirements before collecting data from them.
- Any concern and suspicion to the account owner, this system will notify the user to change their personal information.
- System users have rights and consent to view their private data where appropriate and can ask for changes in their personal data.
- This system may ask users to use cookies in their computer and devices.
- Personal passwords are never viewable by other users or at any other time.
- Users will receive notifications about their profile creation or any updates.

4.3 Software Quality Attributes

These software quality requirements concern how well a system behaves influenced by system architecture. This requirement is not covered by functional requirements.

Availability Requirements: Any requirement that concerns on the periods of operating times.

- System maintenance will be available from 02:00 to 04:00 hours every day.
- The online payment shall be available starting at 06:00 am until 23:59 pm.
- The system function will be available from 04:01am until 01:59 am every day.

Correctness and Reliability Requirements: Collecting right requirements.

- The system will display a validation message if the user enters the wrong password, username or invalid email account.
- The system will display a validation message if the customer does not completely fill out a reservation form.
- The system shall validate the correctness when the user enters data.
- The payment authorization must match 100% correct to perform the online payment transaction.

Maintainability Requirements: Ease which fault in the system can be found and fixed.

- Maintenance developers must be able to repair and modify this system within the system maintenance hours.
- If this system does not operate one of the system functions, the system should be shut down for maintenance.
- In the development process, this system functions and services should re-testing many times before establishing the final product.

Interoperability Requirements: Extent of which system is able to share information and services.

- This system interface must be able with any other HTML devices or browser.
- This system must be able to support local communications, personal data and security.

Usability Requirements: How it easy the user to use the system.

- The developer should evaluate that the system is 98% able to be used by the user without full instructions.
- The customer shall be able to fill out the reservation form and details without instruction.
- Users who without training or not fully understanding English also able to understand what requirements this system wants to collect and feel easy to use this system.

Portability Requirements: How this system environment can be supported by other software and hardware.

- This system should be able to support MAC, Windows operating system, PC and mobile users to use this system.
- As this system developed for management services, this system will have a number of system versions.
- The payment gateway also shall be developed to support any kind of operating system.

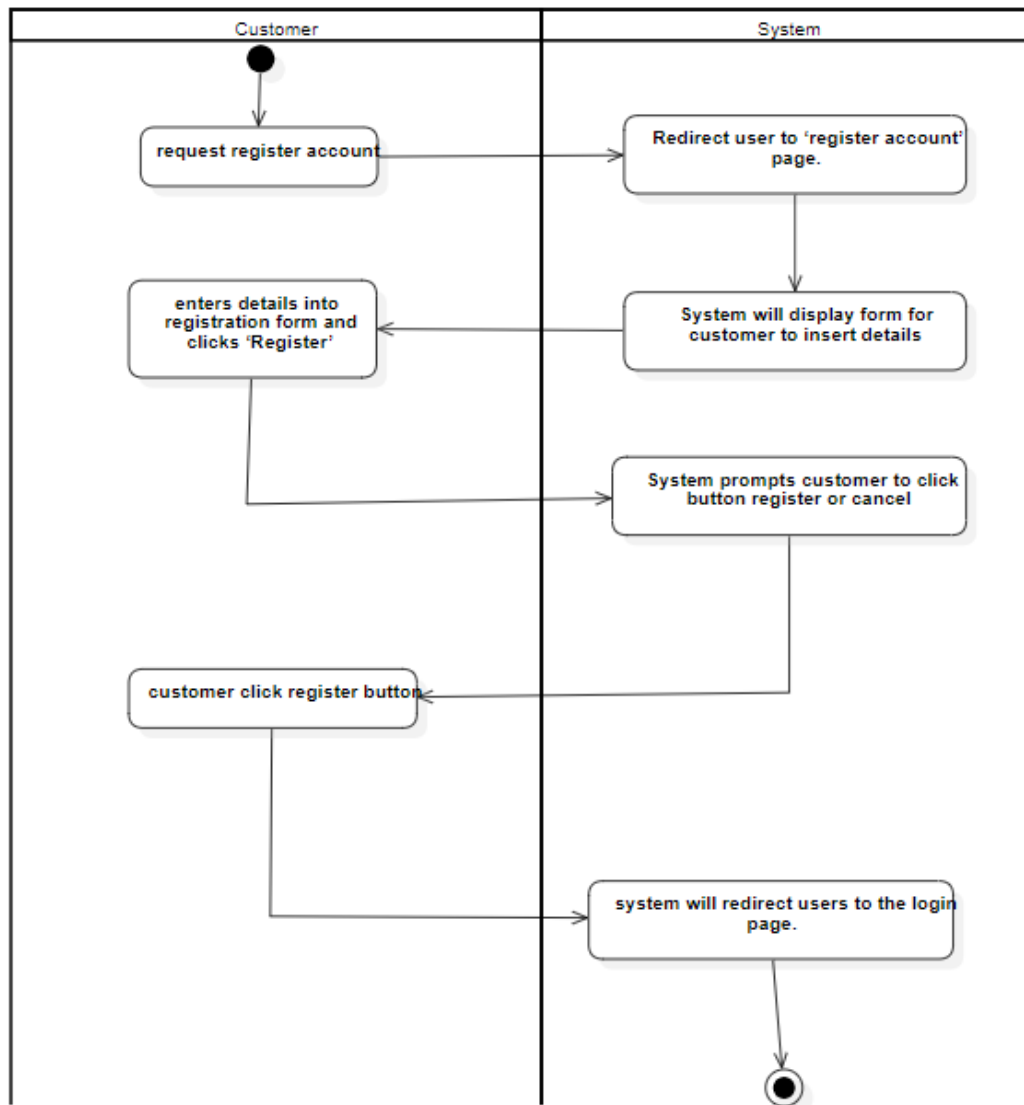
Appendix A – REQUIREMENT MODELS**1. BUSINESS ACTIVITY DIAGRAM**

Diagram A1.1 AD for Register Customer Account

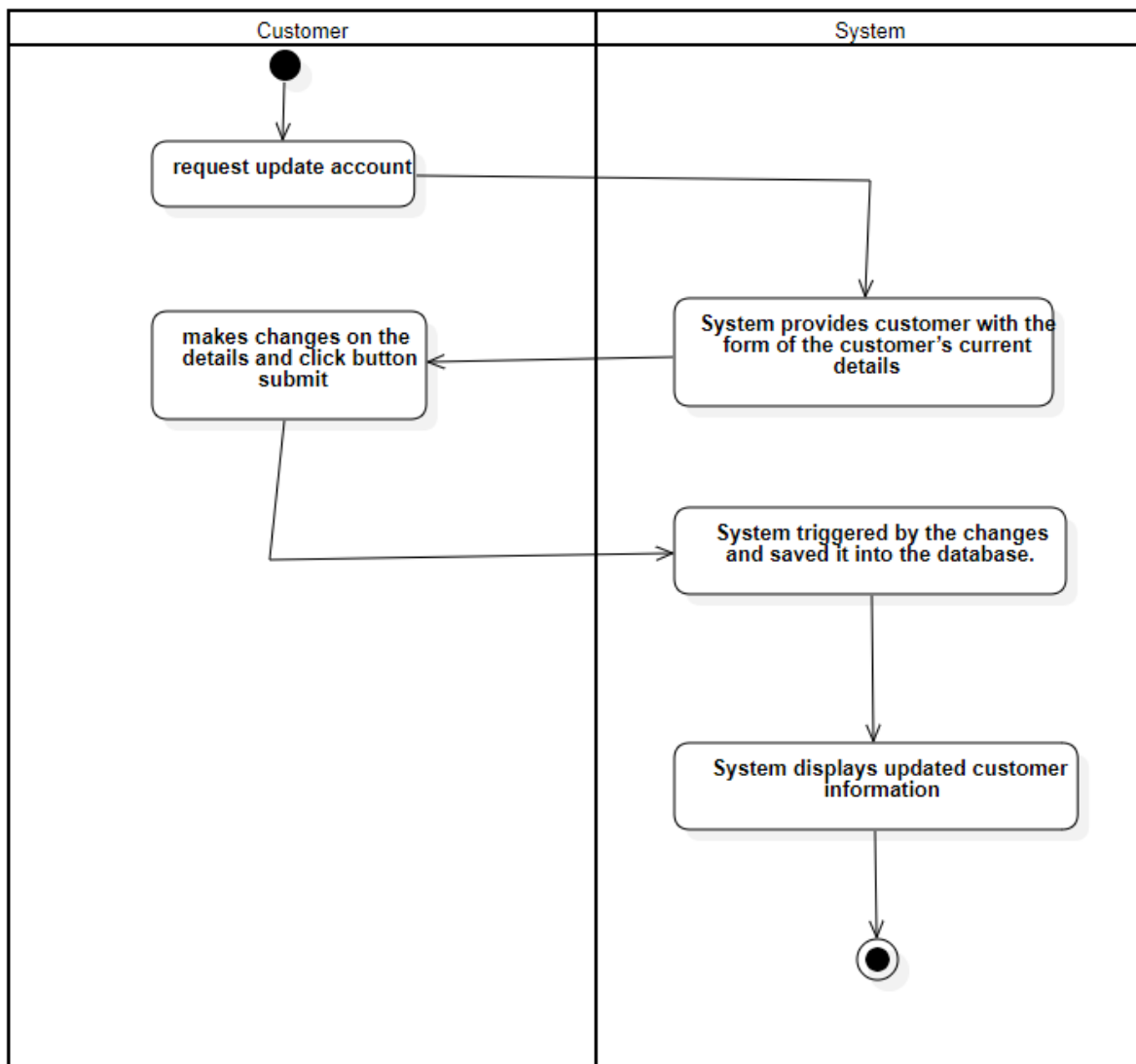


Diagram A1.2 AD for Update Customer Profile

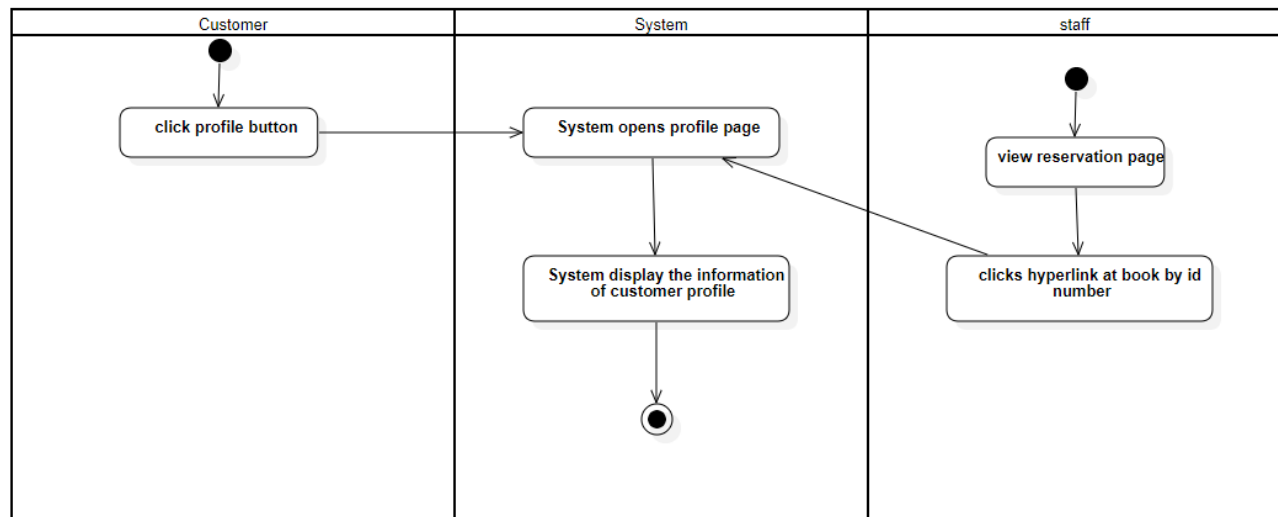


Diagram A1.3 AD for View Customer Profile

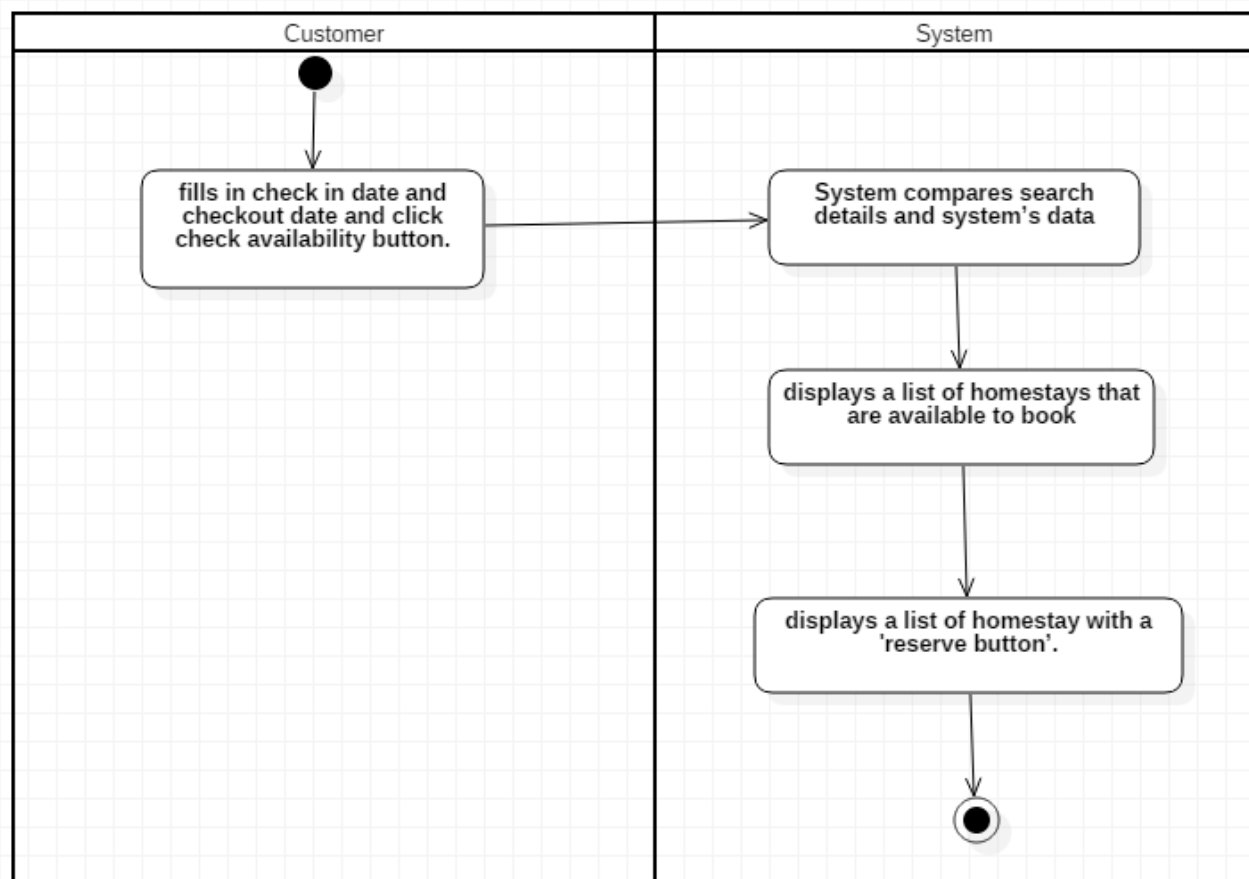


Diagram A1.4 AD for Search Homestay Availability

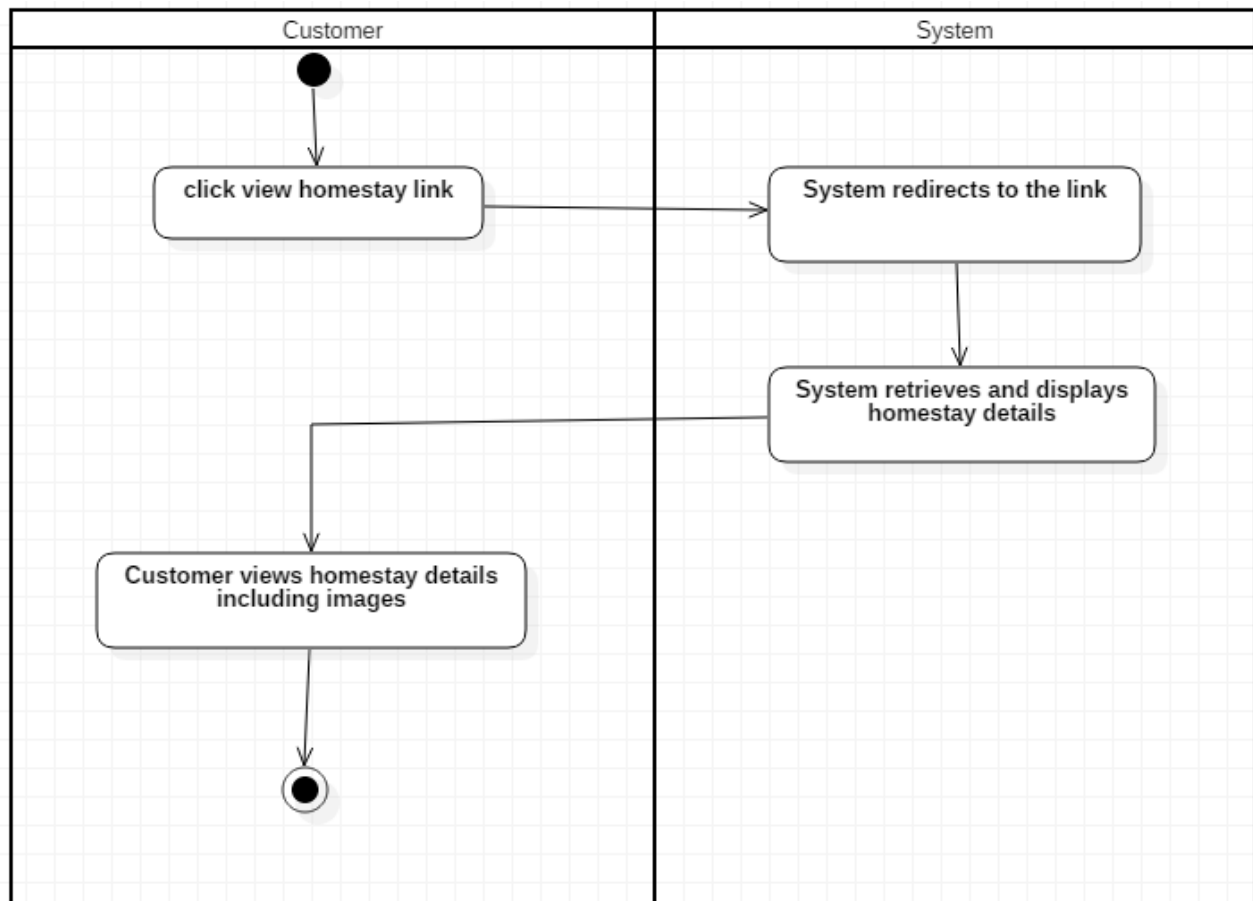


Diagram A1.5 AD for View Branch Homestay

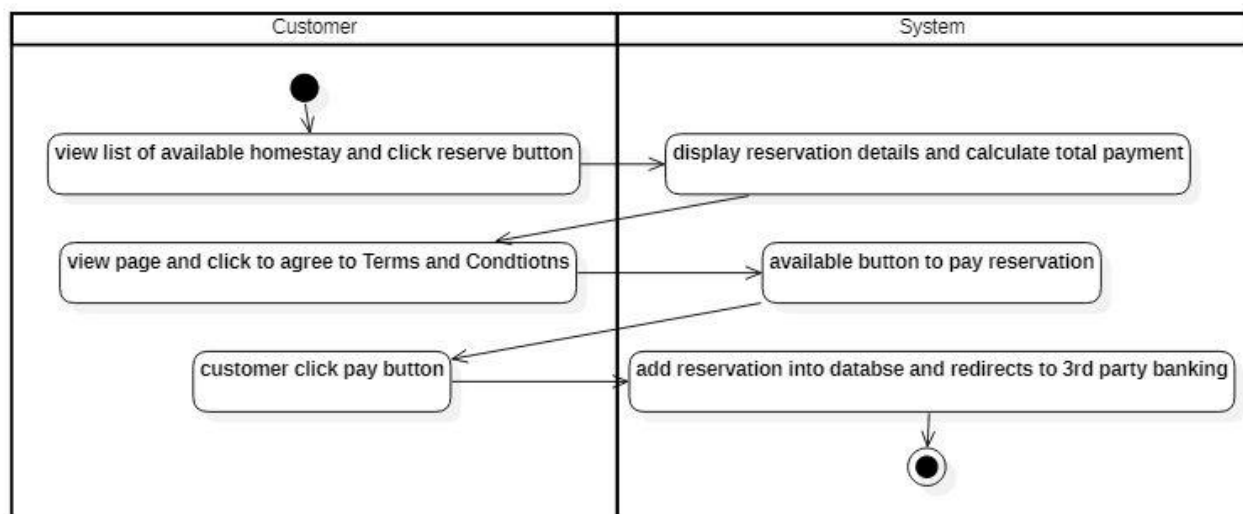


Diagram A1.6 AD for Add Reservation

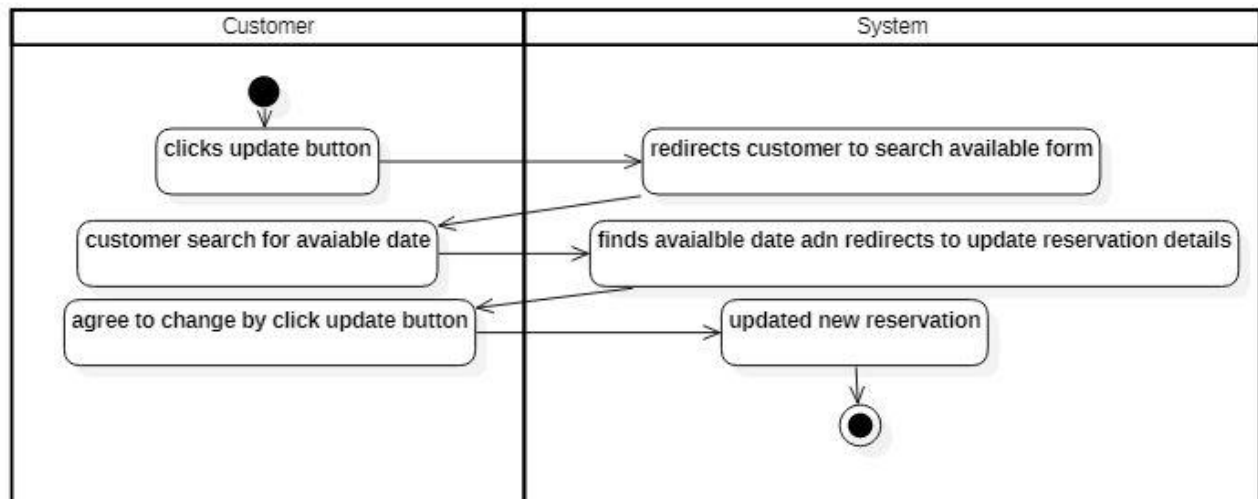


Diagram A1.7 AD for Update Reservation

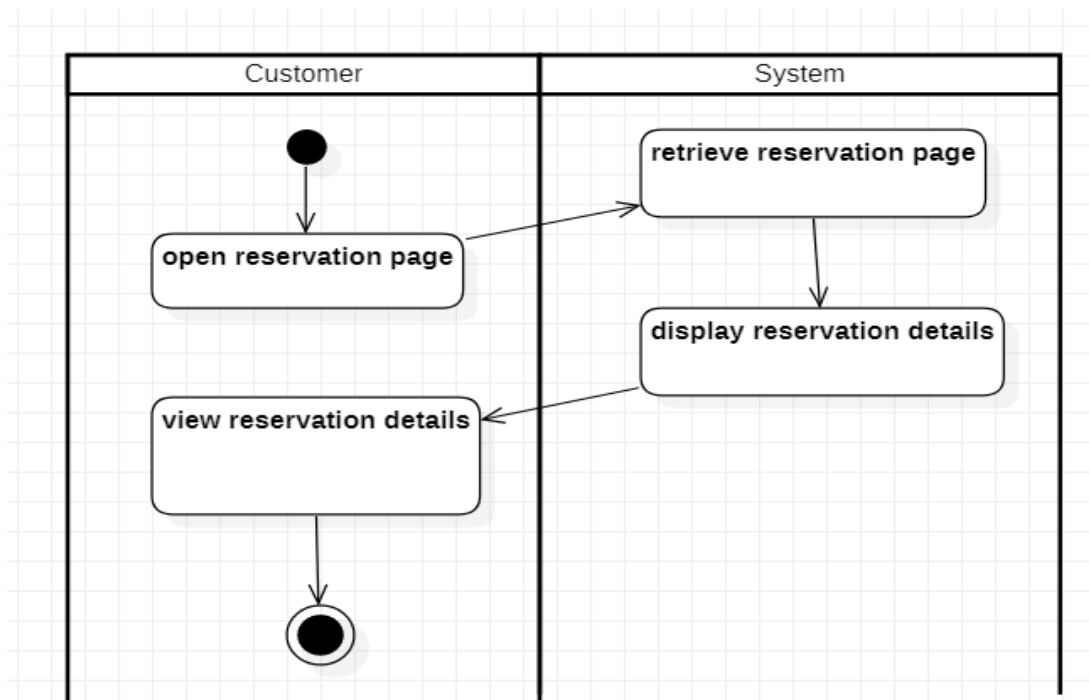


Diagram A1.8 AD for View Reservation

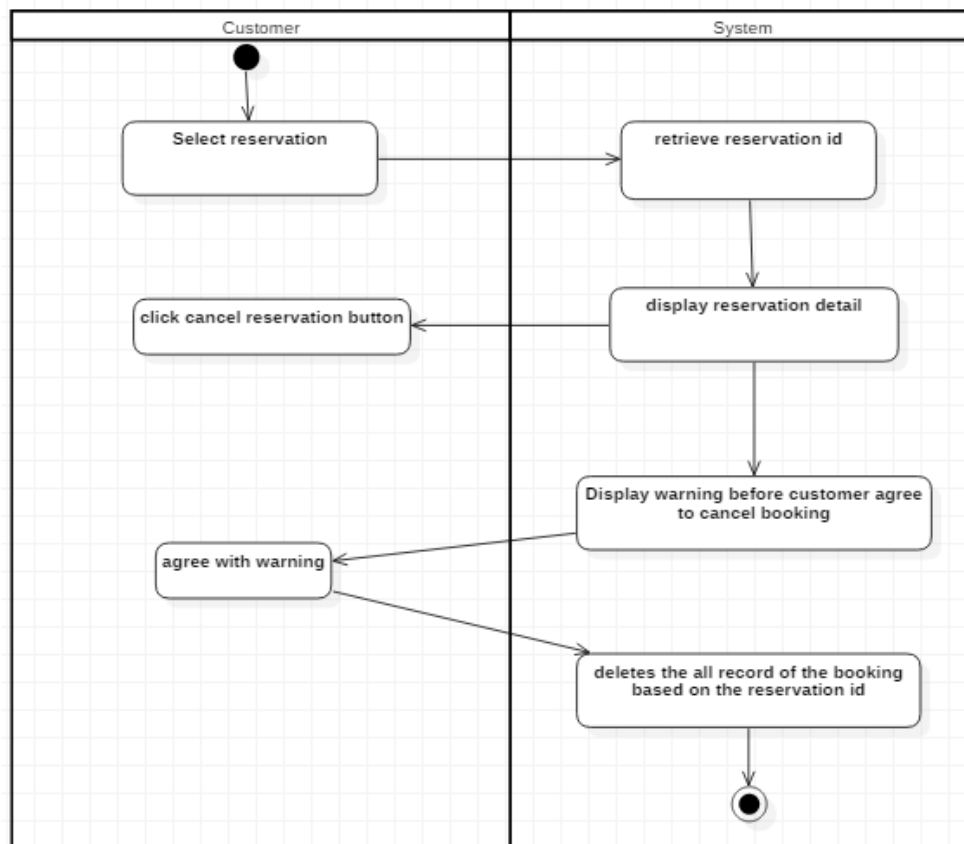


Diagram A1.9 AD for Cancel Reservation

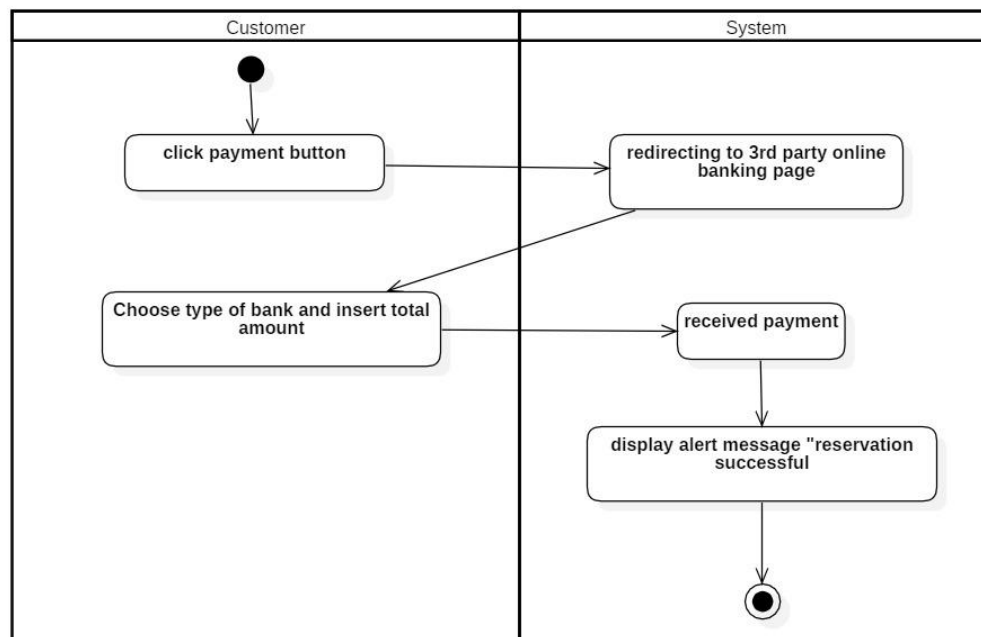


Diagram A1.10 AD for Make Payment

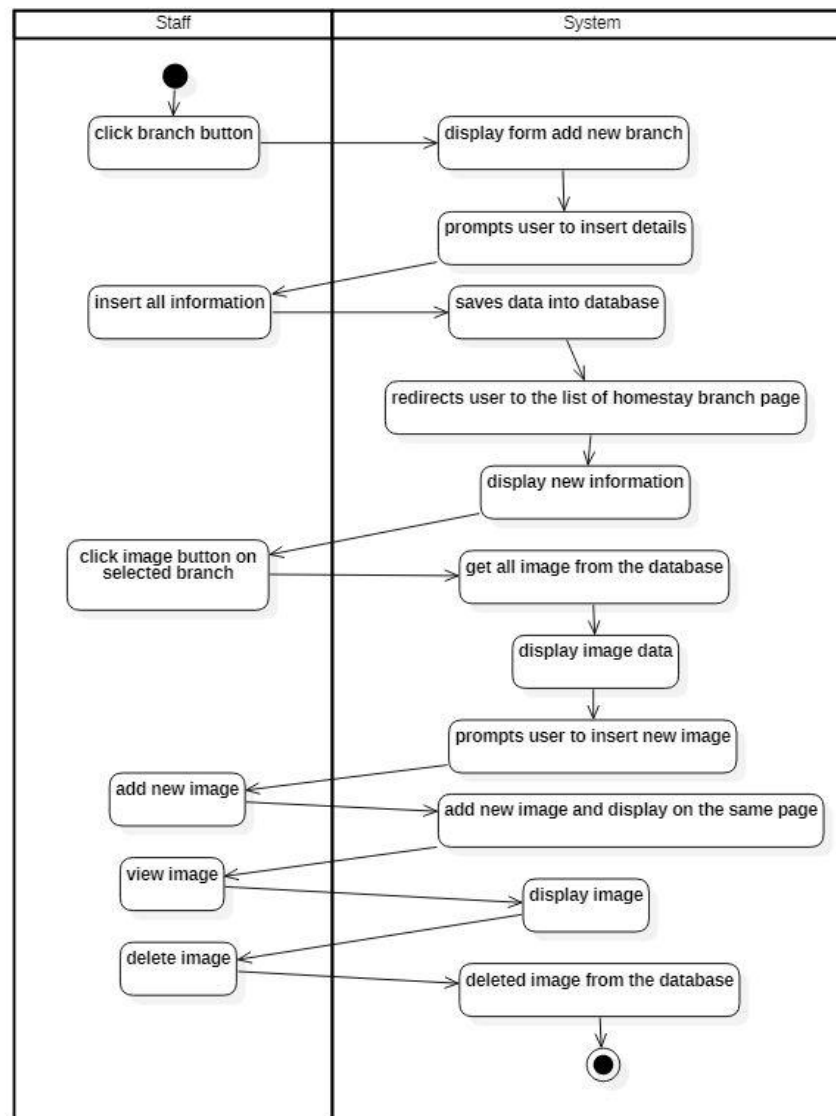


Diagram A1.11 AD for Add New Branch

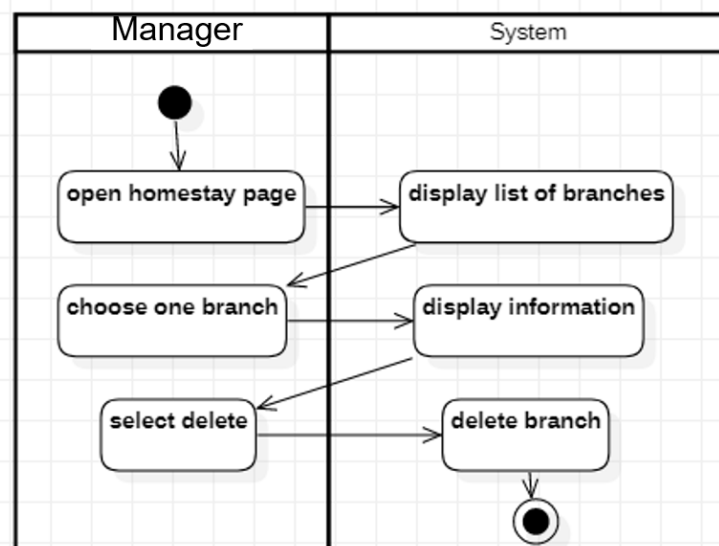


Diagram A1.12 AD for Delete Branch

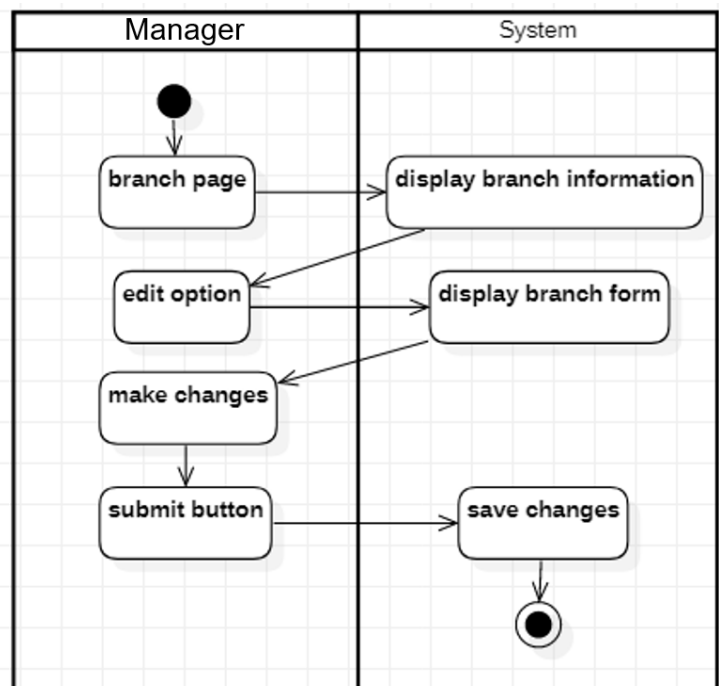


Diagram A1.13 AD for Update Branch

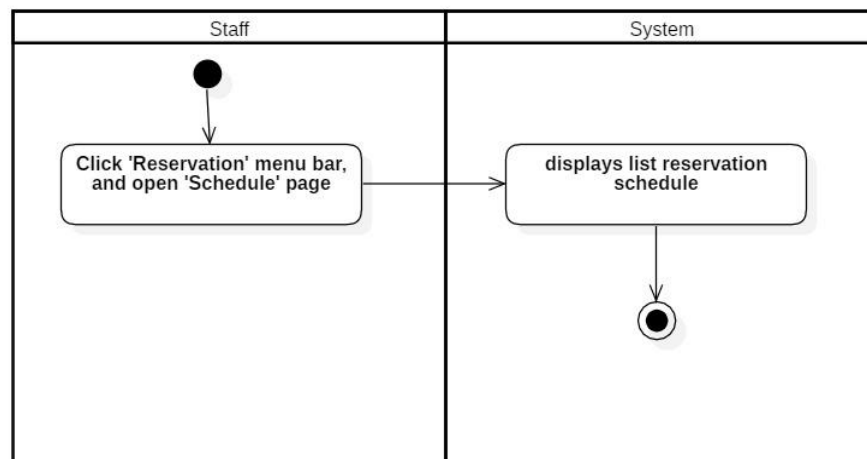


Diagram A1.15 AD for view schedule homestay

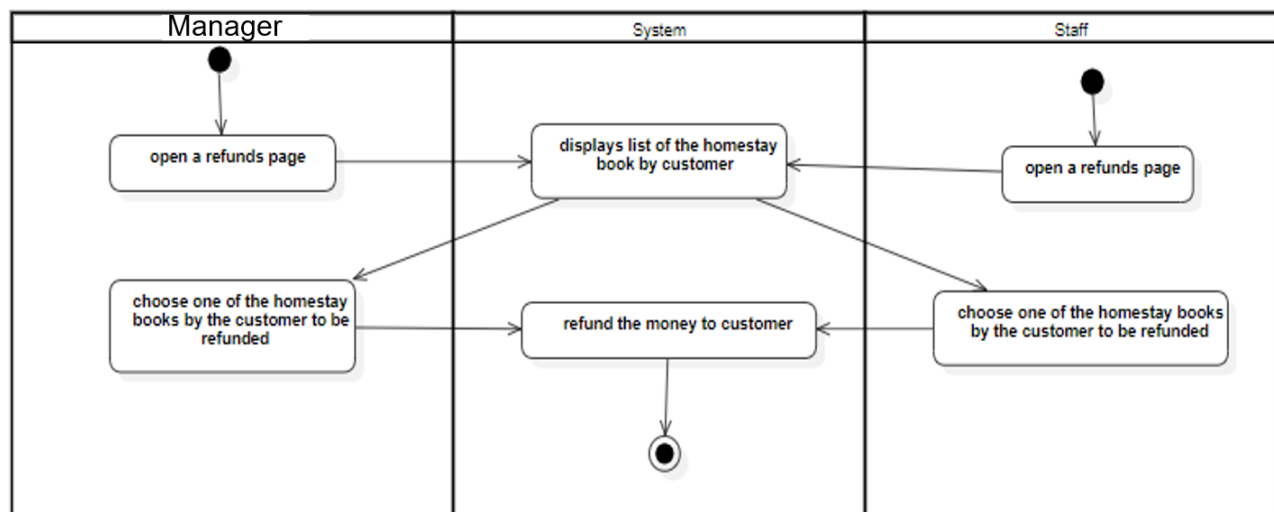


Diagram A1.16 AD for refund

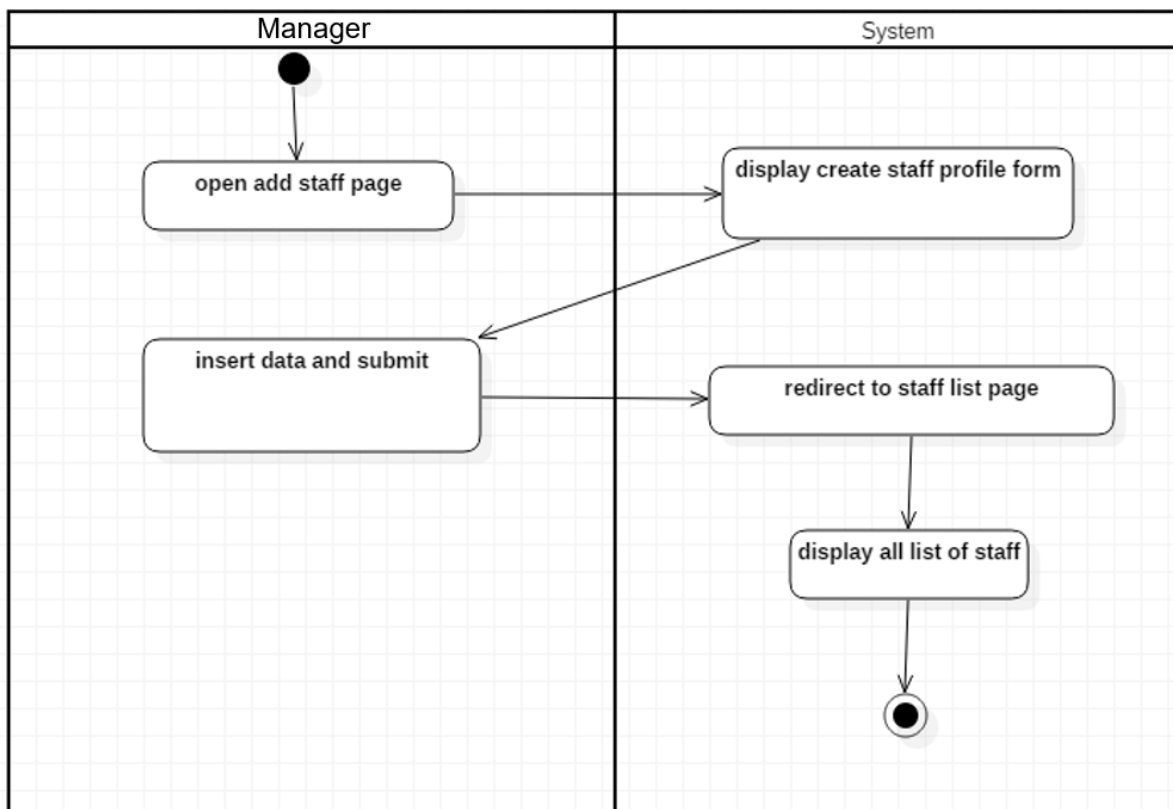


Diagram A1.17 AD for Create Staff Profile

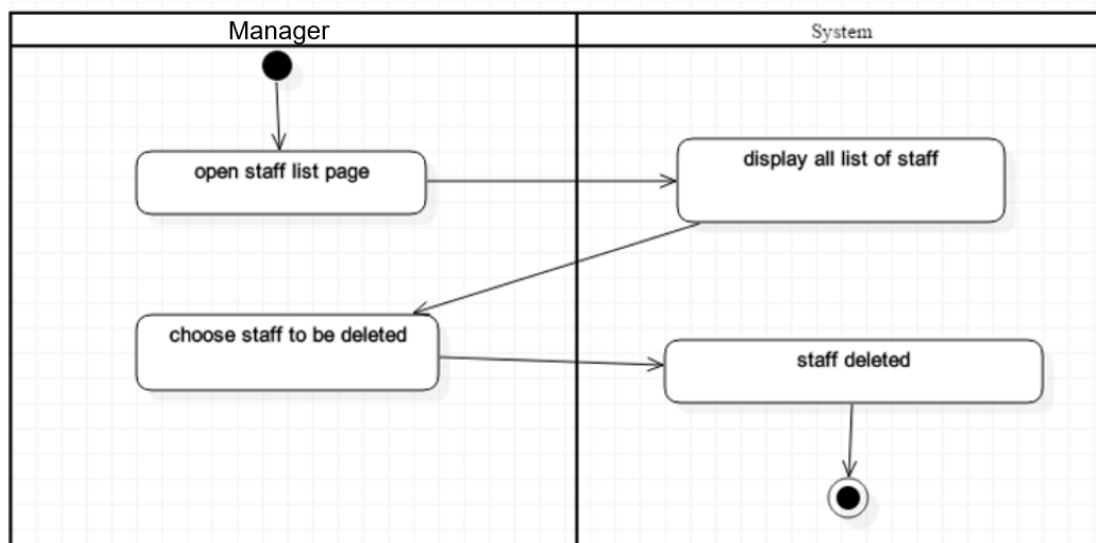


Diagram A1.18 AD for Delete Staff Profile

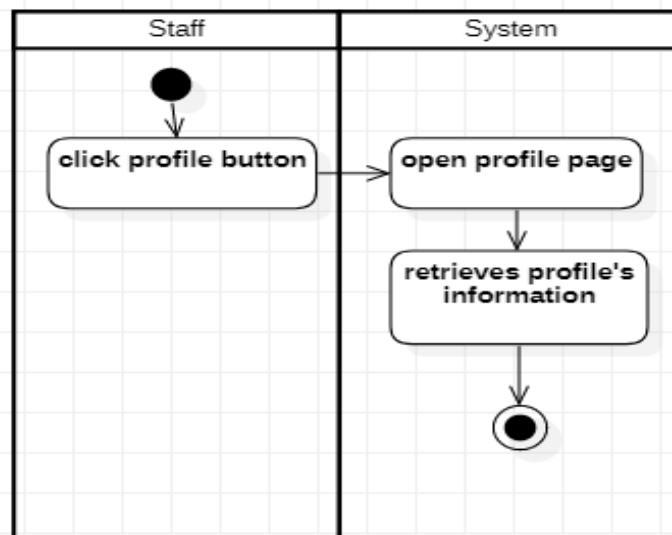


Diagram A1.19 AD for View users Profile

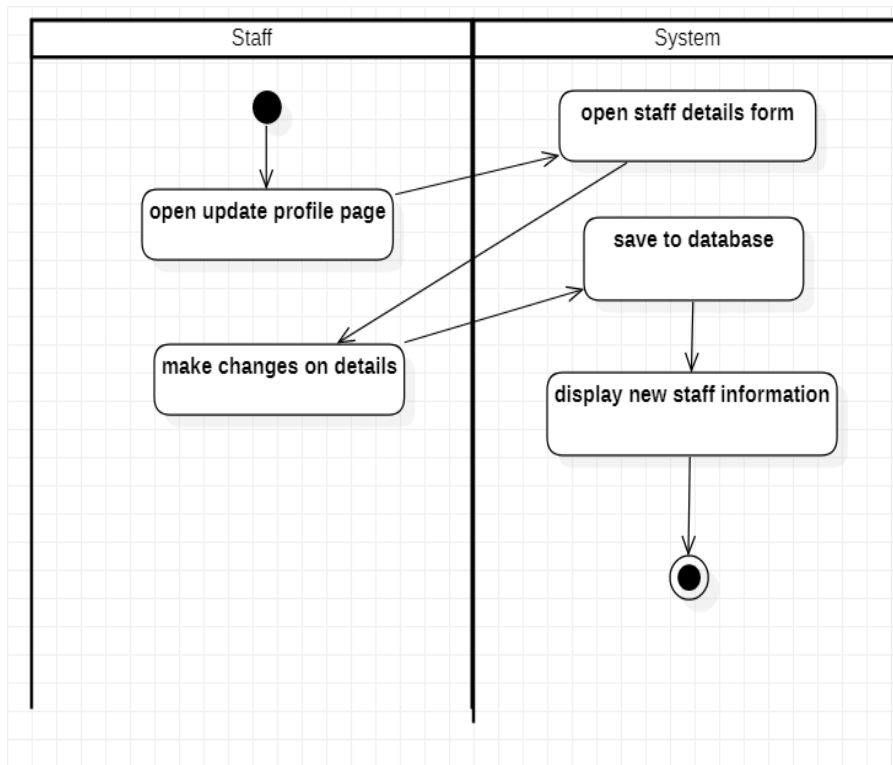


Diagram A1.20 AD for Update users Profile

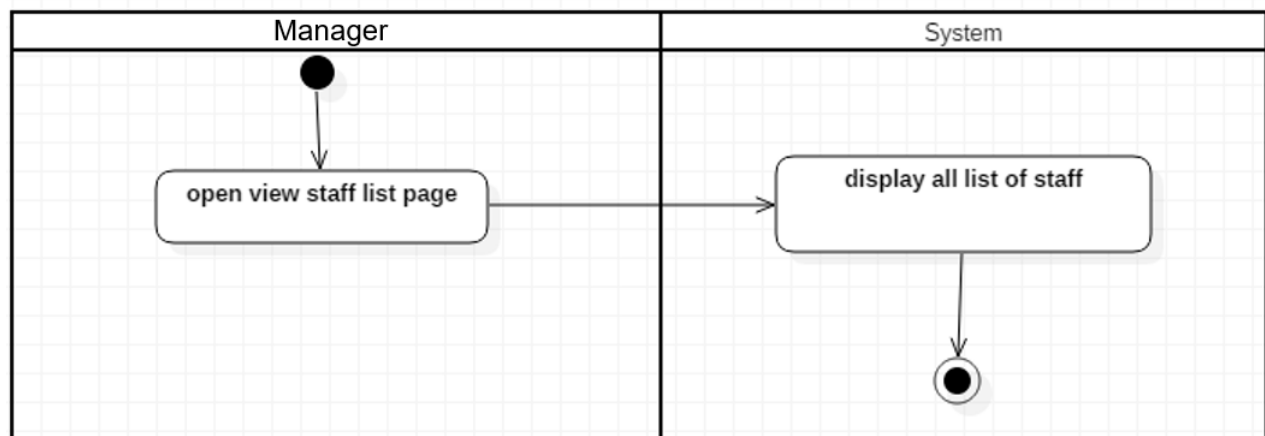


Diagram A1.21 AD for view staff list

2. CLASS DIAGRAM

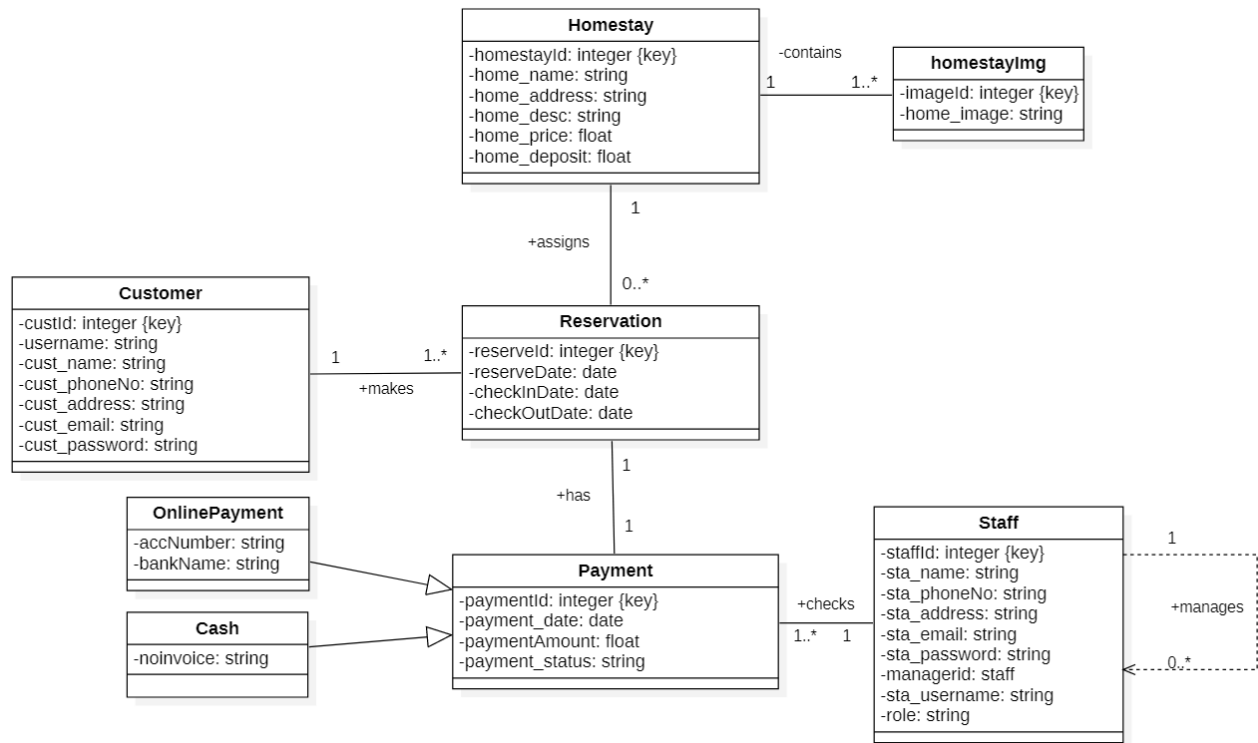
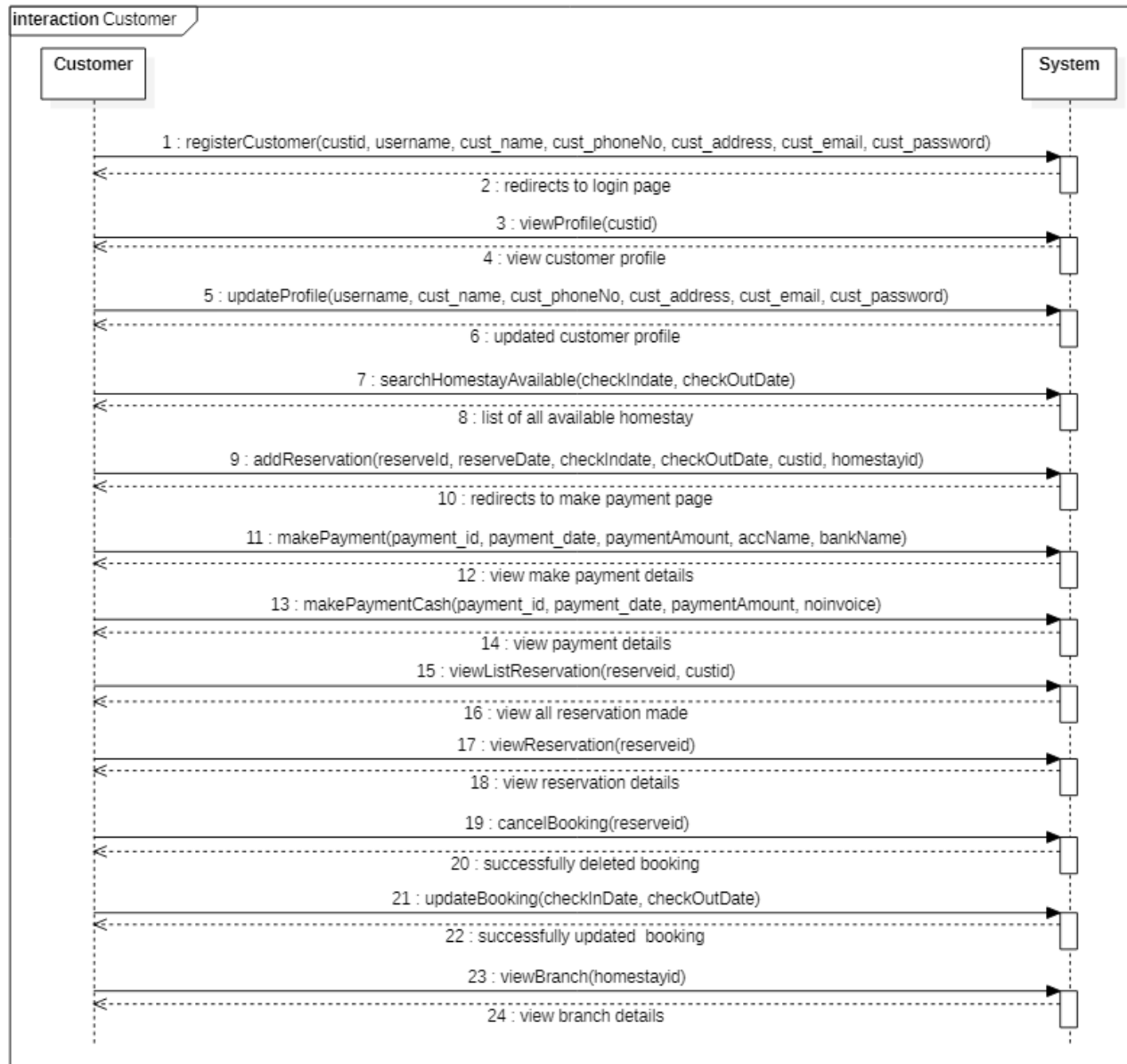
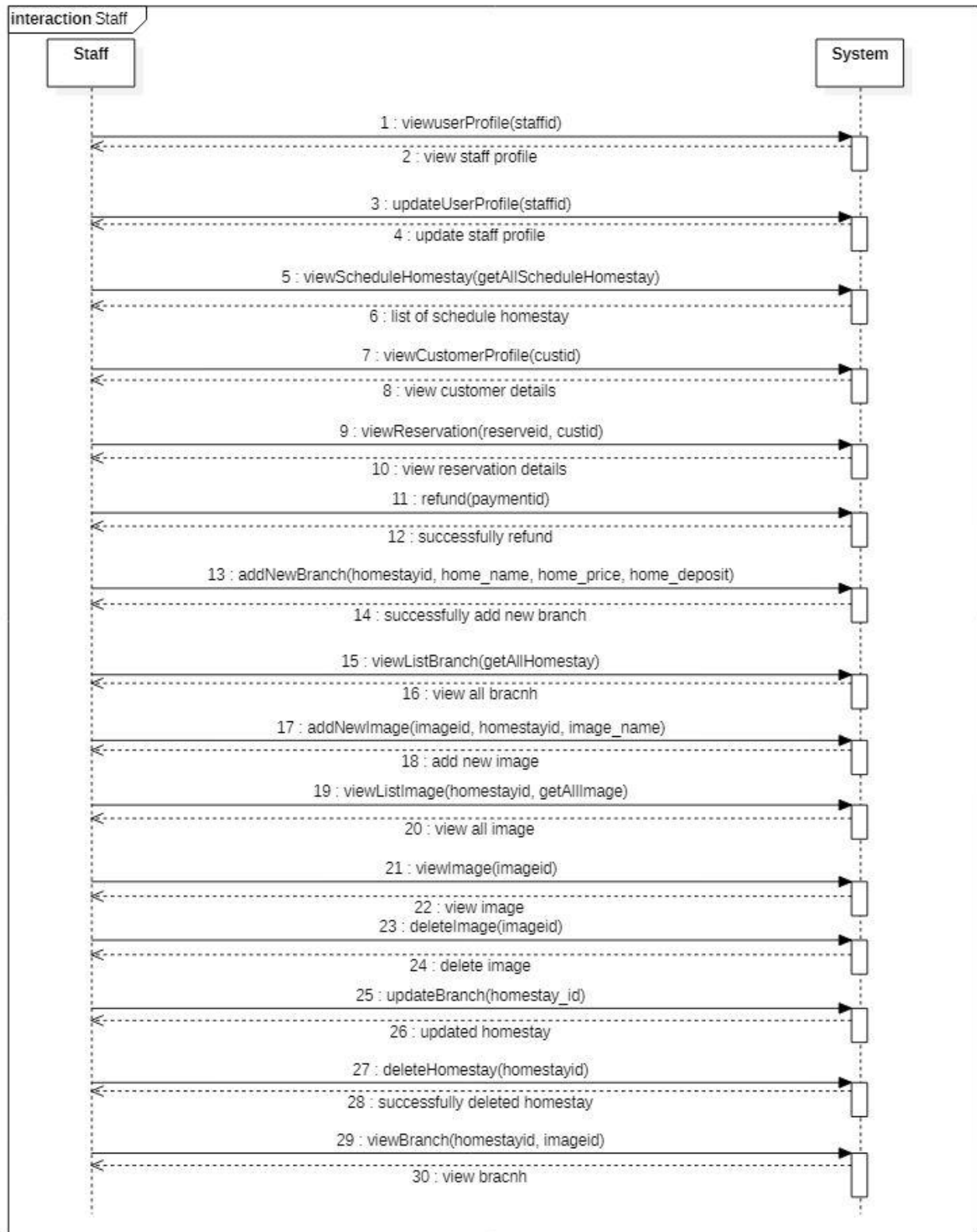


Diagram A2 Class Diagram

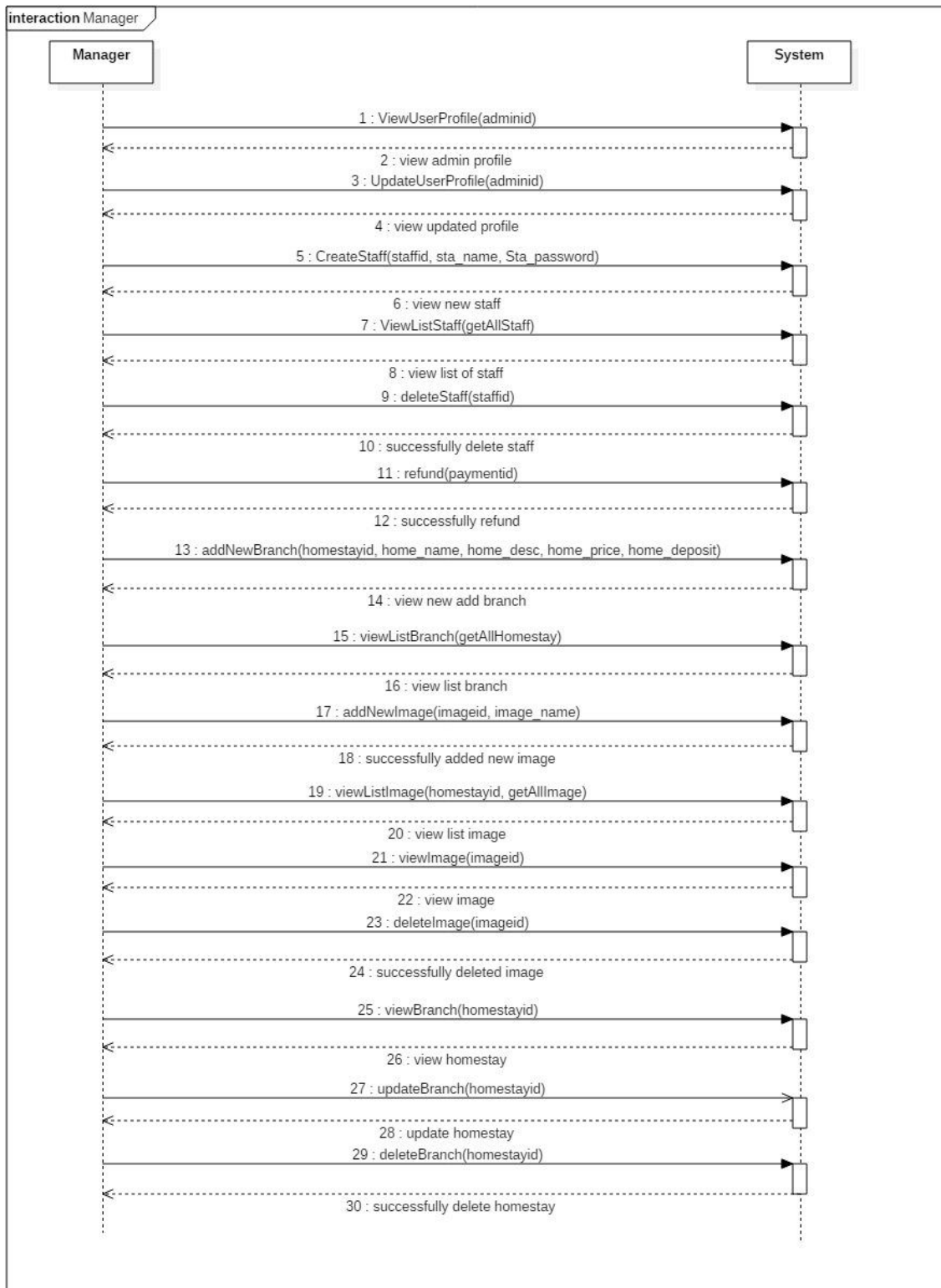
3. SYSTEM

Customer



Staff

Manager



Appendix B - Group Log

Table B1 Group Log

DATE	PLATFORM	DESCRIPTION
5/13/2020 11.10 am – 12.00pm	WhatsApp	Discussion about Use case Table
5/14/2020 8.00 am – 9.20 am	Google Meet	Discussion about use case diagram and completing the use case diagram
5/19/2020 10.15 am – 11.30 am 11.15 am – 12.30 pm 9.15 am – 10.10 am	Google Meet	Discussion about Domain Class diagram
5/19/2020 11.15 am – 12.30 pm	WhatsApp's	Discussion about Domain Class Diagram and make a sketch of Domain Class Diagram
5/19/2020 9.15 am – 10.10 am	WhatsApp's	Discussion on use case diagram and finalize use case diagram
6/13/2020 3.00 pm – 4.40 pm	WhatsApp's	Discuss and Fixing Domain Class Diagram and assign task to each group member for Software Requirements Specification

6/1/2020 10.00 am – 11.00am	Google Meet	Discussion about Domain Class Diagram with miss Anis Afiqah binti Sharip
14/10/2020 2.00pm - 4.30pm	Google Meet Whatsapp's	Reconstruct Domain Class Diagram and Use Case with Dr. Hazlifah Mohd Rusli.
26/10/2020 3.00pm - 4.00pm 6.00pm - 8.00pm	Whatsapp's	Discussion on changes needed to be made to diagram of SRS