CHAPTER 4

RESULTS AND DISCUSSION

4.1 System Design

System designisthe process by whichasystemis designedandlatertobe the development ofthe system. The design ofthe systemcan be interpretedas, afterthe analysisphaseofthe systemdevelopment cycle, definingonfunctional requirements, preparationfor thedesignimplementation, describing the systemwhichwill be establishedin the form ofdepictionof planning, sketching, the settingofseveralseparateelementsintoaunified wholeandfunction, and thesoftware and hardwarecomponents ofthe system. In accordance with the approach used is object-oriented approach, it is in the depiction of the entire process and the object using UML.

4.1.1 Objective of System Design

Information system design aims to provide an overview of the proposed system as a refinement of the current system, the current website is too broad where it contains all the tourism destinations together in one website with few information whereas the proposed system will emphasis on one particular tourist destination site which is Mt Wilhelm tourist destination.

In Accordance with the current system from the stages of the analysis above, it will design a website for the management of tourism for the proposed website Mt Wilhelm tourism destination

4.1.2 Proposed System Overview

The proposed system at Mt Wilhelm tourism destination can be described as a way of promoting tourist that will enable the Tourism Management process of Mt Wilhelm.With the "Tourism Information Management System of Mt Wilhelm"being designed the expected information needed for Mt Wilhelm tourist destination will be more organized and accurate with online bookings and precise information for Mt Wilhelm particularly in promotion of the destination.

4.1.3 Proposed Design Procedure

The proposed procedure design includes the use case diagrams, activity diagrams, sequence diagrams, class diagrams, object diagrams, component diagrams and deployment diagrams that produce a better system.

4.1.3.1Proposed Use Case Diagram

The Use-Case Diagram For the Proposed System,Mt Wilhelm Tourism

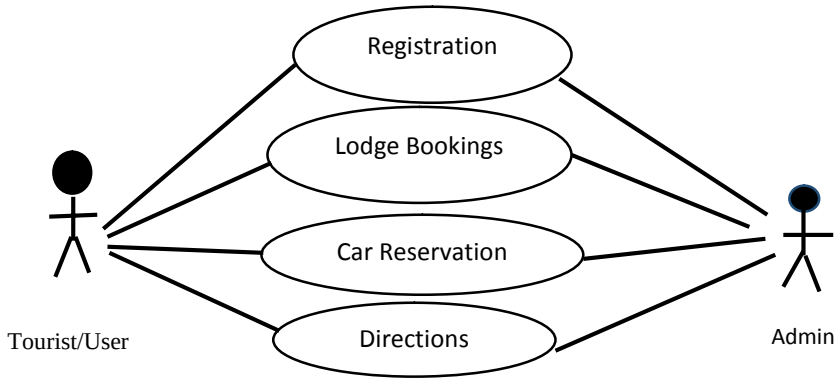


Figure 4.1 Use Case Proposed Mt Wilhelm Tourism

4.1.3.2 Scenario Use Case.

Proposed Use Case Scenario of Mt Wilhelm Tourist

1. Scenario Use Case Lodge Bookings.

The use case scenario Lodge Bookings system proposed is as follows:

1 Use Case Name: Lodge Bookings

2 Main Actor: Tourist, Lodge Manager

3 Purpose: Make Bookings for accomodation online

Table 4.1 Scenario Usecase Lodge Bookings

Tourist	**Website**
1.Tourist enters the Lodge Bookings menu on the website.	
	2.Displays the Lodge Bookings or Reservation form .
3.Tourist fill in the necessary information for Lodge Bookings or reservations.eg,full name,date of birth,name	

of lodge,no of rooms etc..	
	4.Display the lodges,the rooms, availablerooms,facilities available,price per night
	5. Display the number of rooms available in that chosen lodge and other facilities provided
6.Tourist selects the desired lodge and makes the bookings by selecting the rooms he or she wants	
	7.Display message Bookings successfully made
Scenario Alternative	
	8.If data incomplete message display that the data is incomplete and is unsuccessful try again
9.If need to cancel or rebook can do so by letting the manager know through email or contact	

on numbers given..	

2. Scenario Use Case Car Rental Reservation.

The use case scenario Car Rental Reservation system proposed is as follows:

1 Use Case Name: Car Rental Reservation

2 Main Actor: Tourist, Car Rental Manager

3 Purpose: Make Reservation for Car Rental online

Table 4.2 Scenario Usecase Car Rental Reservation

Tourist	**Website**
1.Tourist enters the Car Renatl menu on the website.	
	2.Displays the Car Renatl or Reservation form .
3.Tourist fill in the necessary information for Car Renatl or bookings.eg,full name,date of birth,type of car,no of cars etc..	

	4.Display the car types,available cars,price per day
	5.Display the car of the likings,type of car,condition of the car and the price
6.Tourist makes the bookings by fill the dates	
	7.Display message Car Reservation successfully made
Scenario Alternative	
	8.If data incomplete message display that the data is incomplete and is unsuccessful try again
9.If need to cancel or rebook can do so by letting the manager know through email or contact on numbers given..	

3 Scenario Use Case Direction.

The use case scenario Directions system proposed is as follows:

1 Use Case Name: Direction

2 Main Actor: Tourist, Tour Guide

3 Purpose: Show directions and help guide tourist to the destination site

Table 4.3 Scenario Usecase Direction

Tourist	**Website**
1.Tourist enters the Tour Guide menu on the website.	
	2.Displays the directions by a map and also tour guides,no of tour guides
3.Tourist locate the direction on the map and see's the tour guides	
	4.Display the location of Mt Wilhelm,and the tour guides(esp men)
5.Tourist start makes reservations and bookings and contact site manager for making arrangements like tour guides available and	

locate the destination site	
	6.Display results of the location and the tour guide available
7.Tourist makes payments and start his/her trip to the destination Mt Wilhelm	
	8.Display Location

4.2 Activity Diagram of Proposed System

The activity diagram of the Proposed System,Mt Wilhelm Tourism

1. Activity Diagram of Lodge Bookings

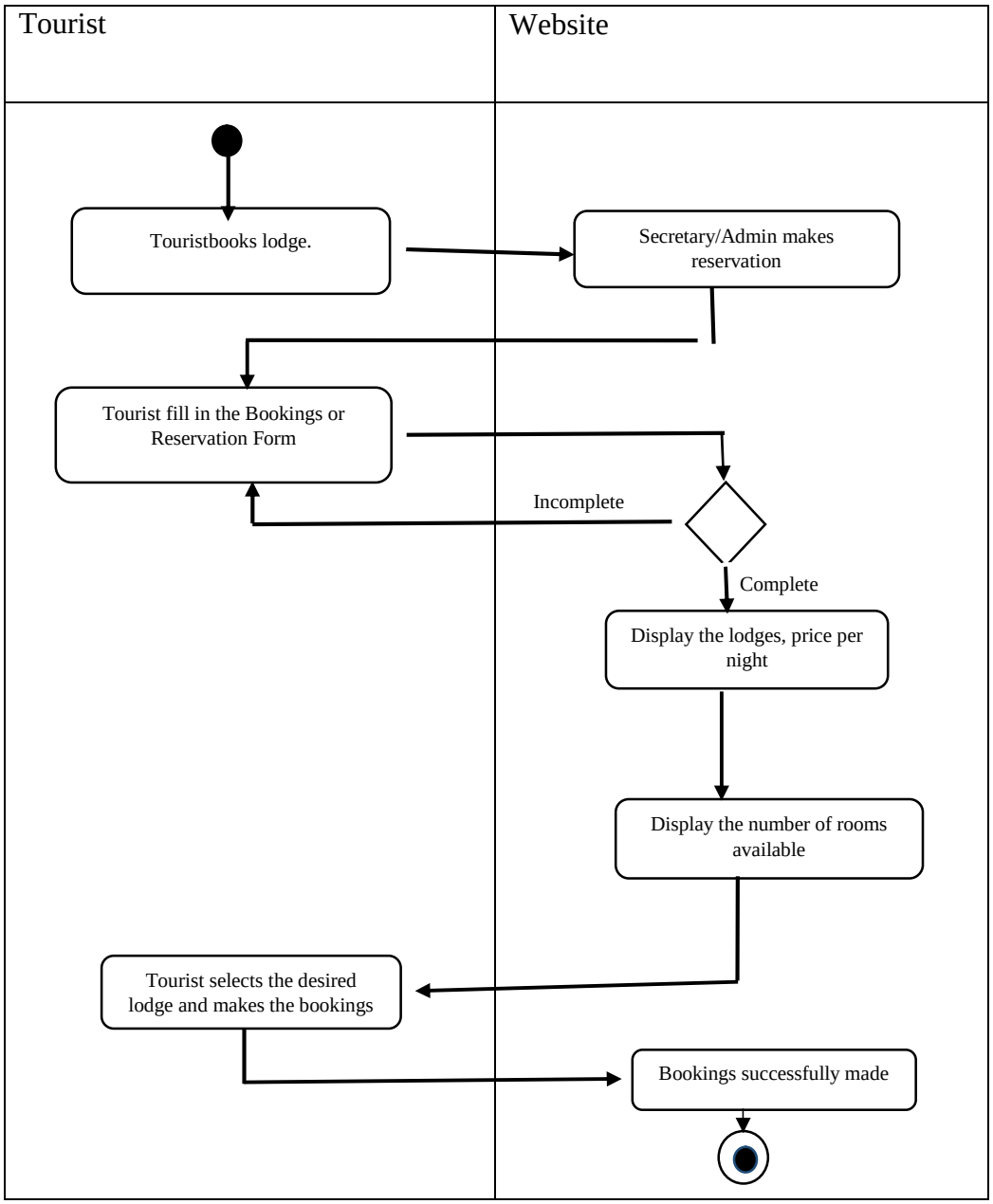


Figure 4.2 Activity Diagram of Lodge Bookin

2. Activity Diagram of Car Rental Reservation

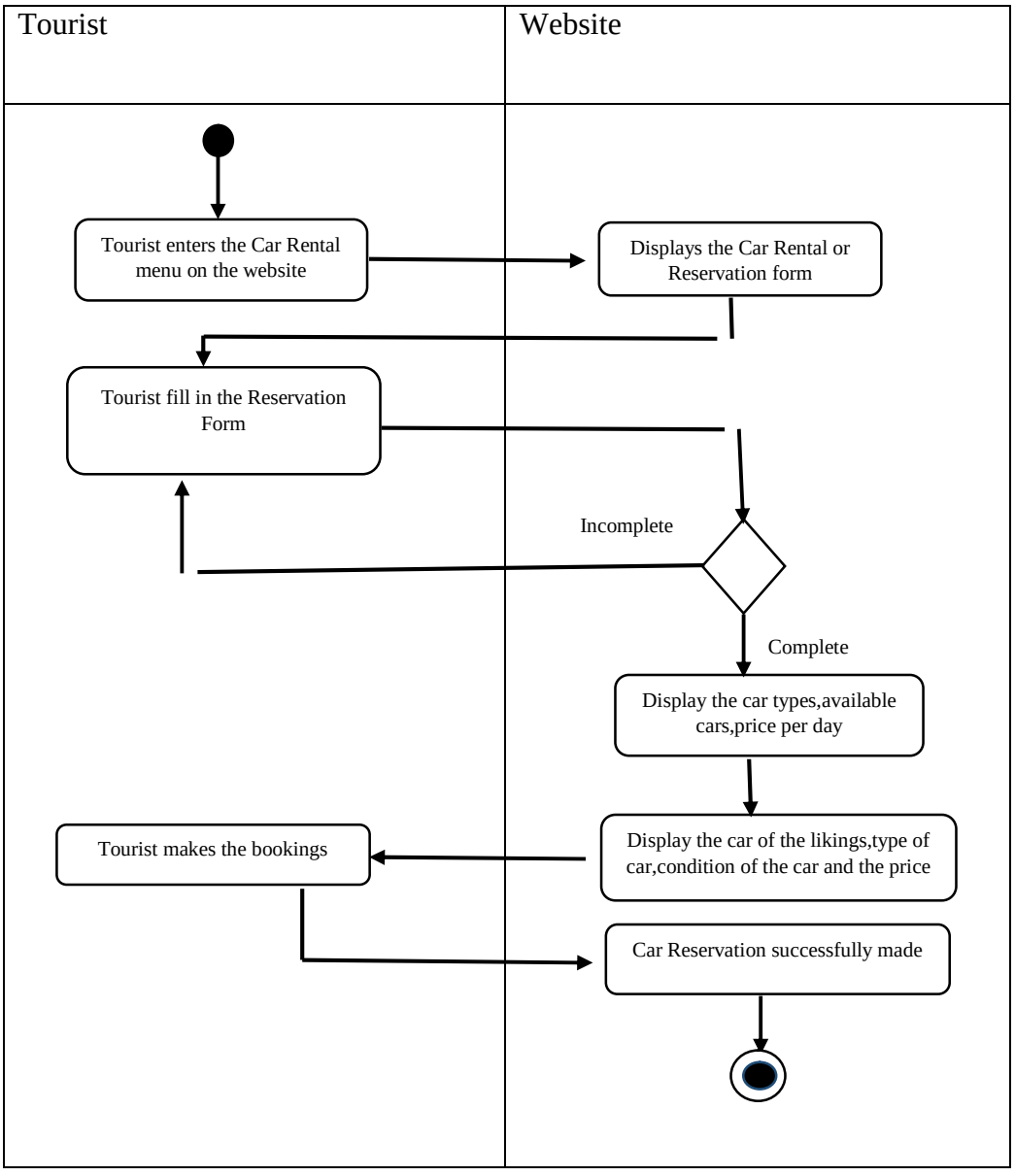


Figure 4.3 Activity Diagram of Car Rental Reservation

3. Activity Diagram of Direction

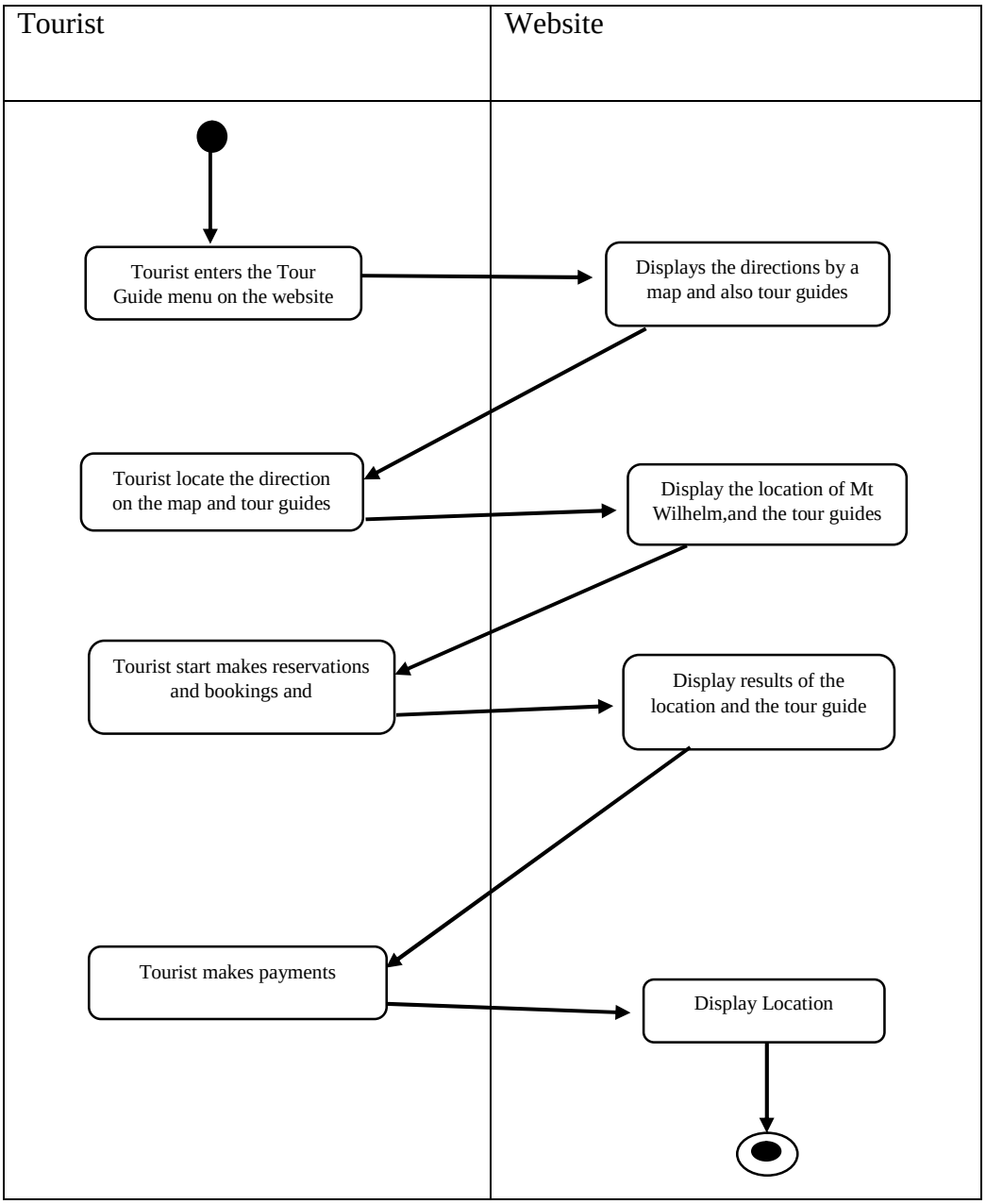


Figure 4.4 Activity Diagram of Direction

4.2.1 Sequence Diagram

The sequence diagram of the proposed Mt Wilhelm Tourism Website

1. **Sequence diagram for Lodge Reservations**

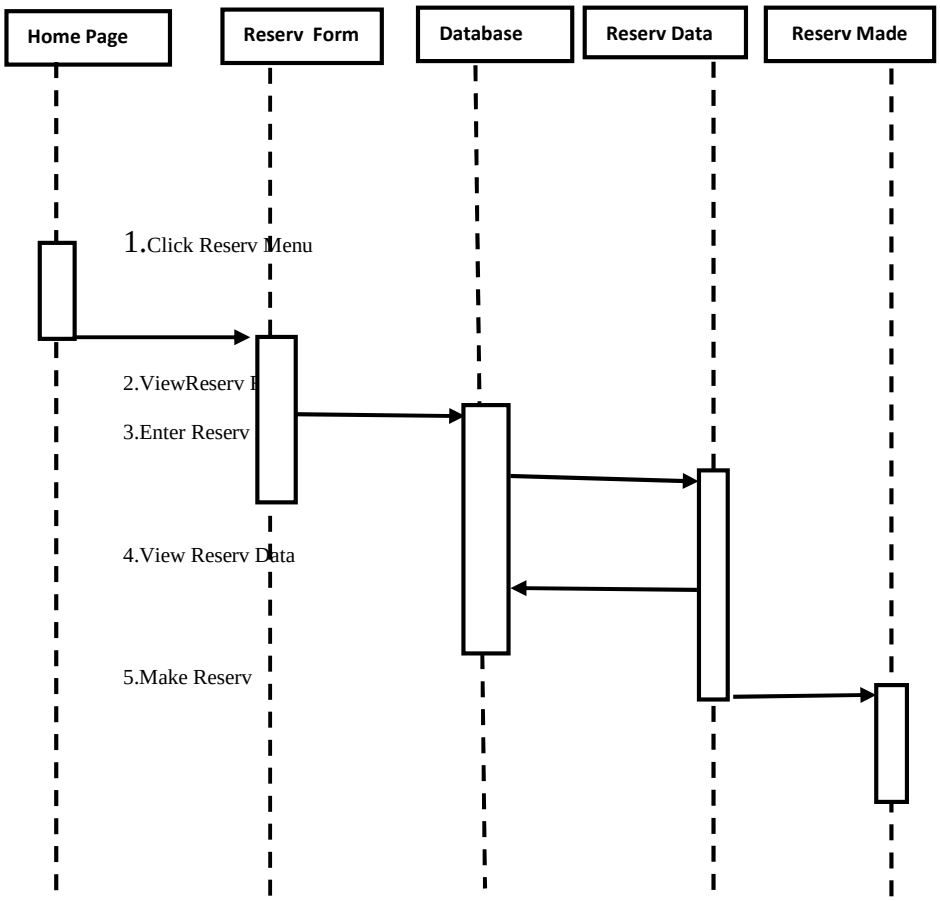


Figure 4.5 Sequence Diagram of Lodge Reservation

2. Sequence diagram for Car Rental Reservation

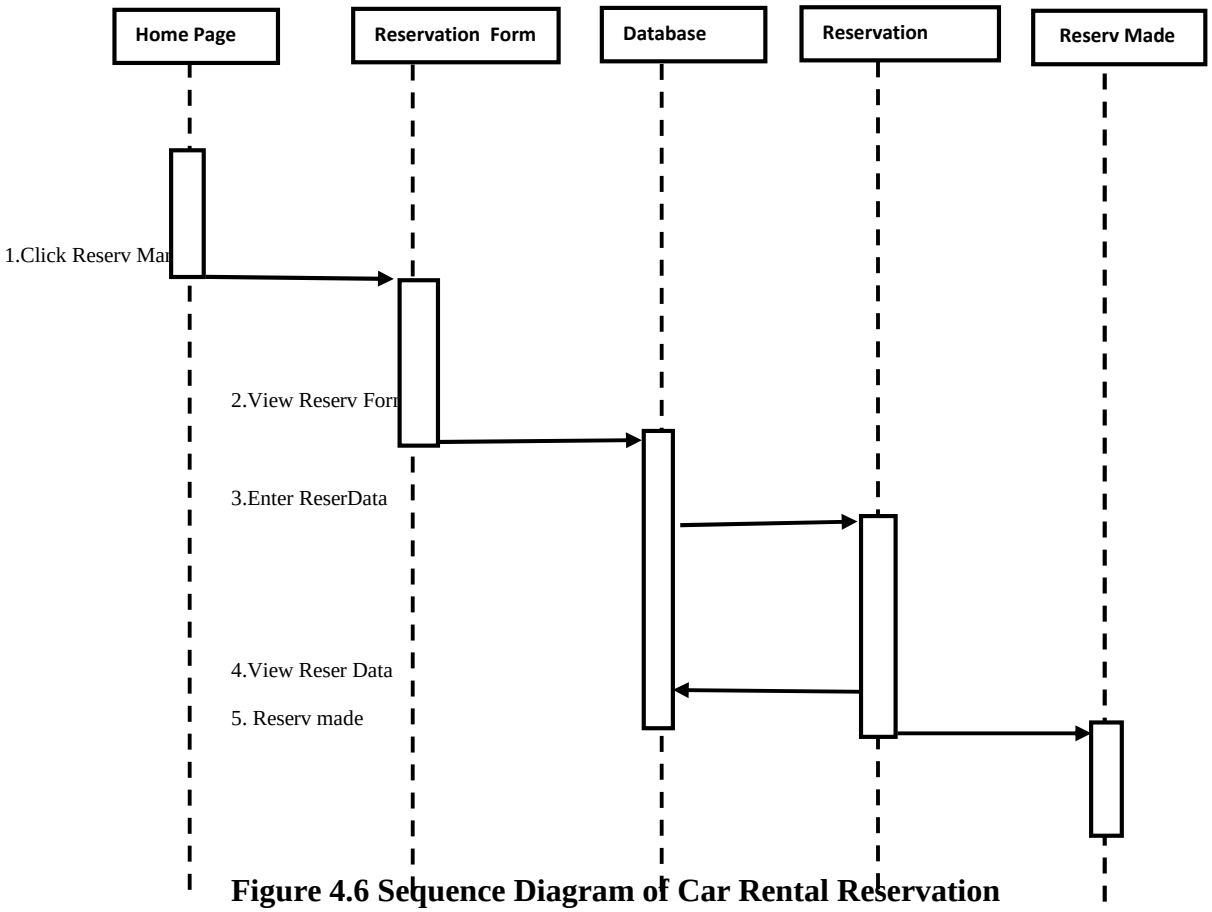


Figure 4.6 Sequence Diagram of Car Rental Reservation

3. Sequence diagram for Directions

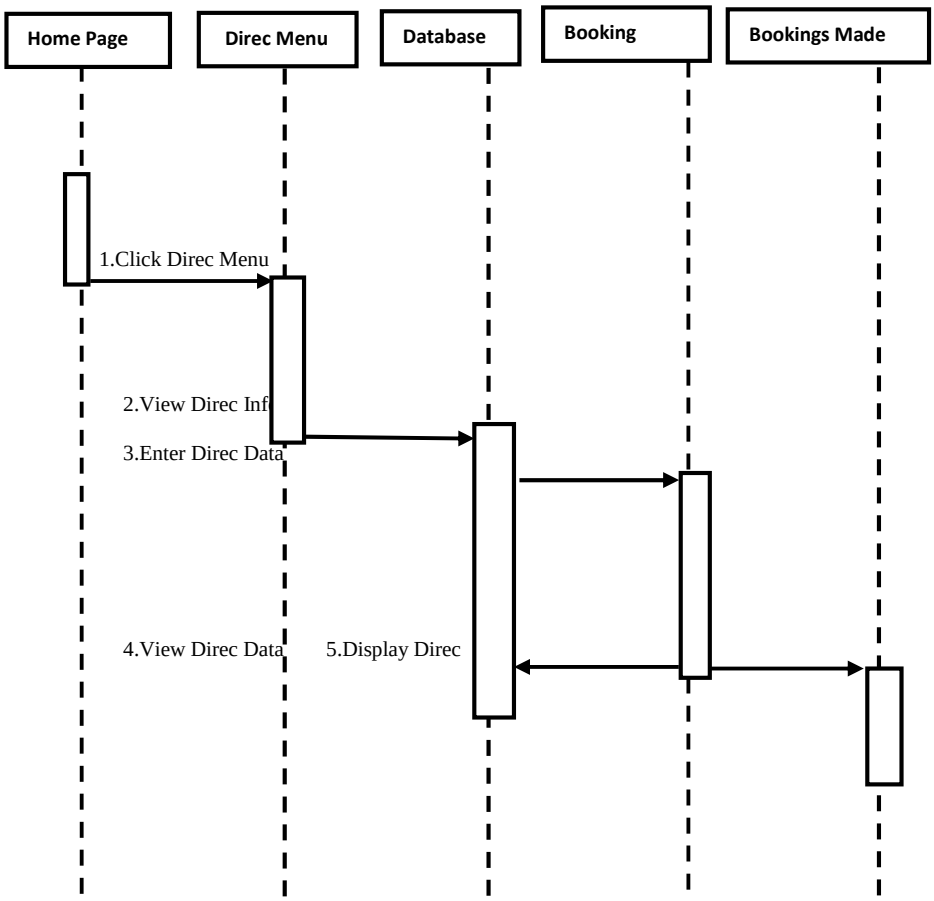


Figure 4.7 Sequence Diagram of Direction.

4.2.2 The Class Diagram

The class diagram describes the structure of the system in terms of defining the classes that will be created to build the system. Class used to represent something that is handled by the system.Here's the Class Diagram for Mt Wilhelm Tourism Website.

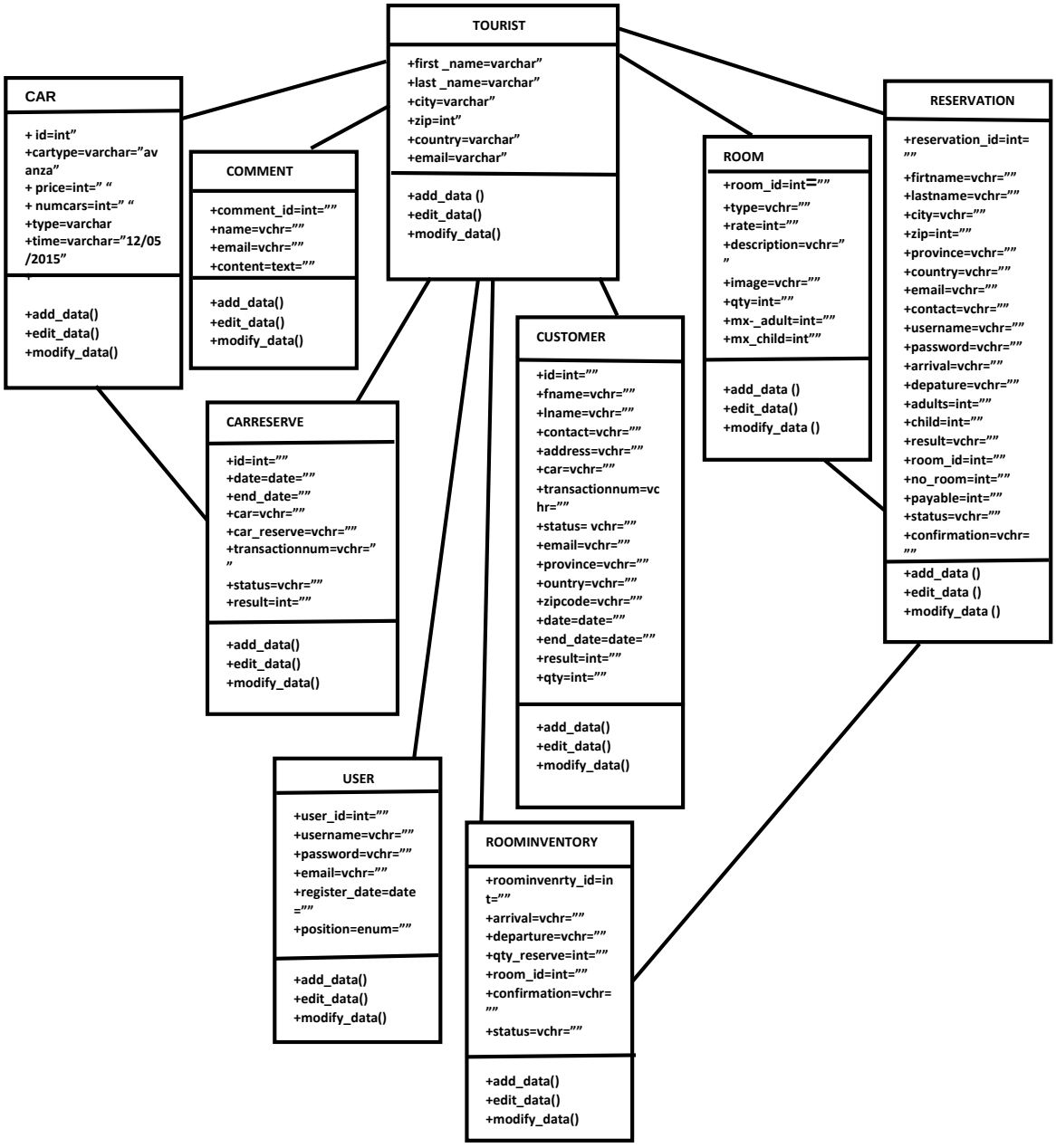


Figure 4.8 Class Diagram of Mt Wilhelm Website

4.2.3 Deployment Diagram

Deployment diagrams describe in detail how the components be deployed in the infrastructure system, where the components will be located (on the machine, server or hardware).Here is the deployment diagram of Mt Wilhelm Tourism Website.

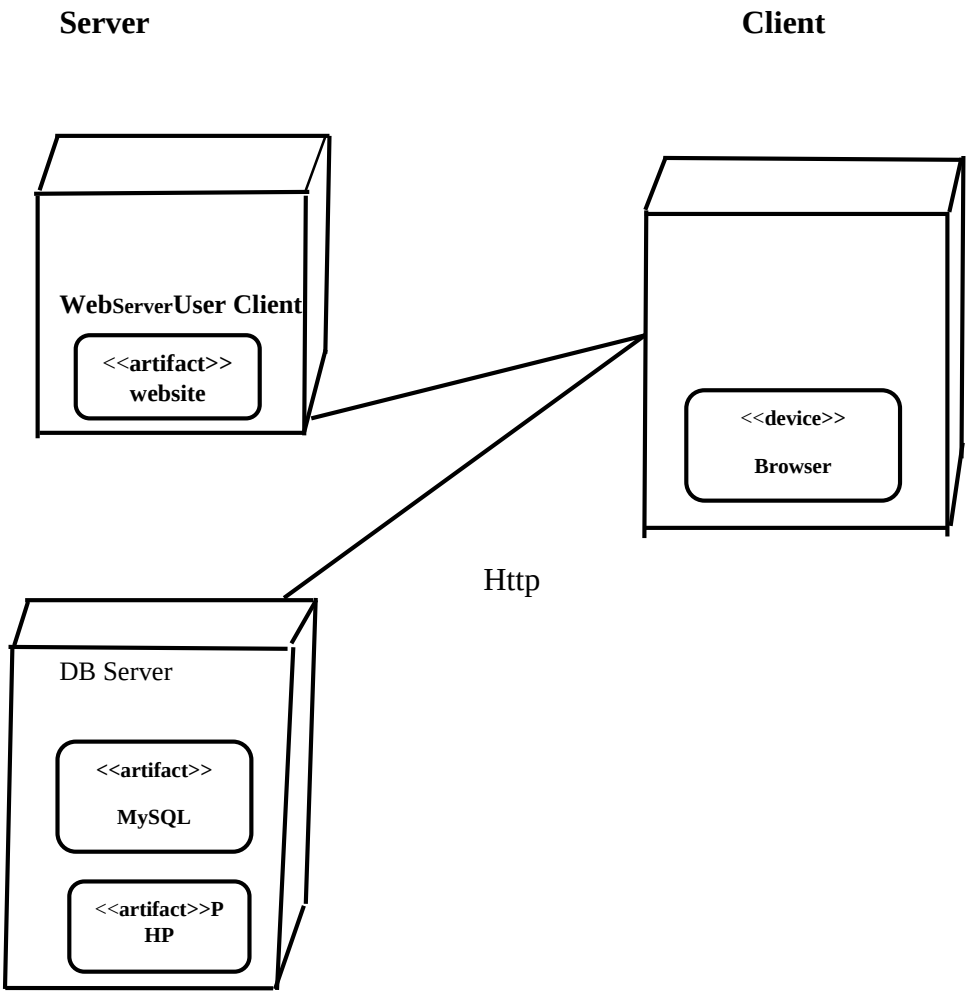


Figure 4.9 Deployment diagram ofMt Wilhelm Tourism Website

4.3 Design of System Interface

The following shows the design of interface of Integrated Website In Tourism Management of Mt Wilhelm.

4.3.1 Structure Menu Of Proposed System

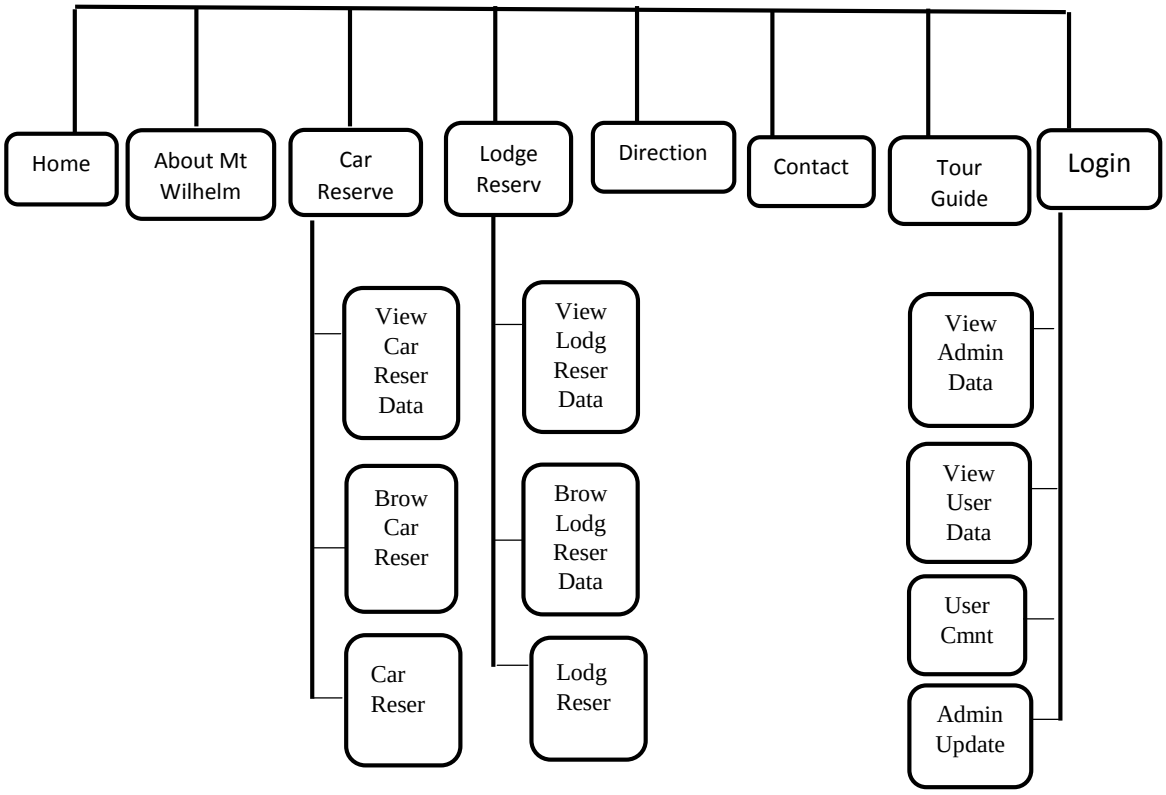


Figure 4.10 System Structure Manu

4.3.2 Structure of the Forms

Here is the structure of the input data form of the Car Rentals Bookings and Lodge Reservation forms of this system.

1. The structure of the input data form of Car Rentals Bookings

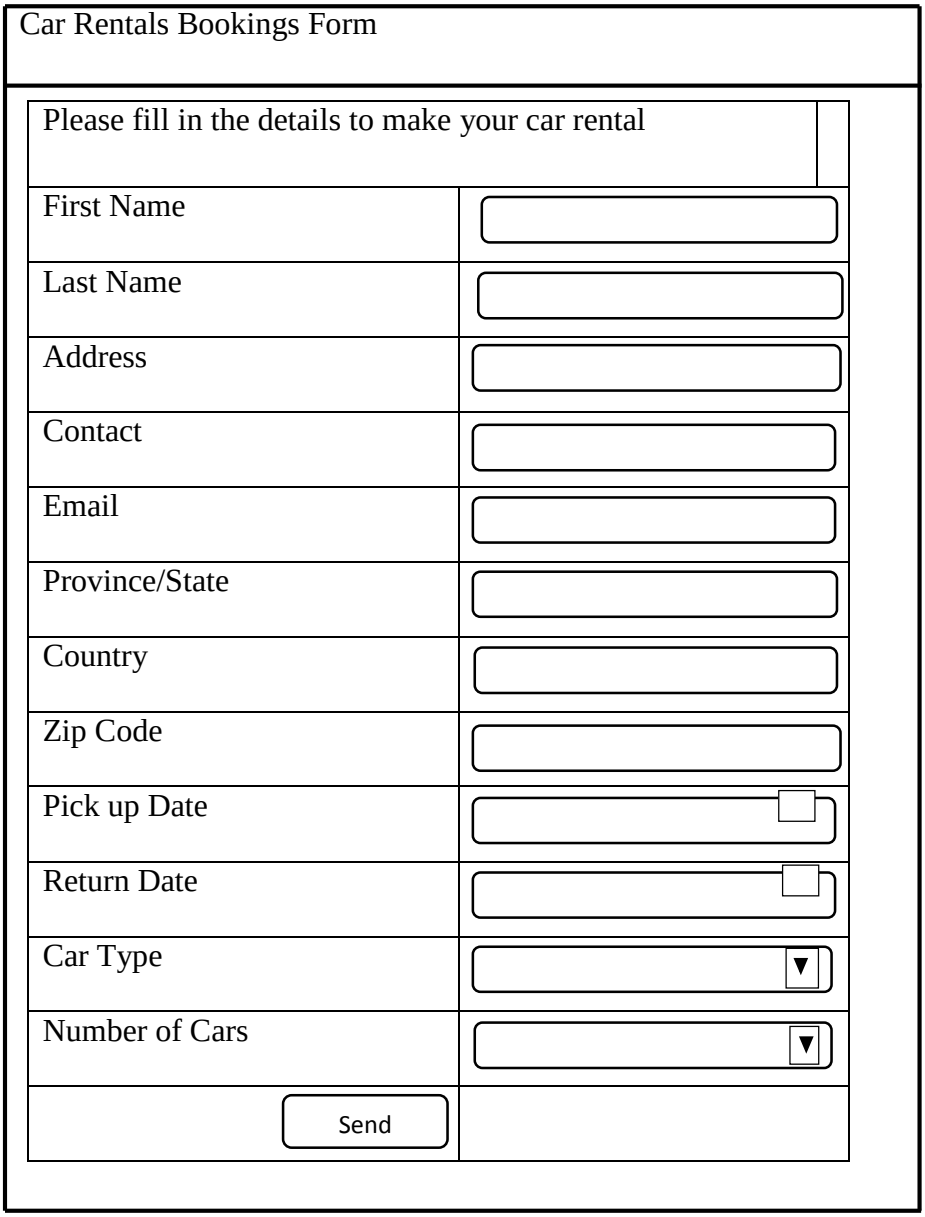


Figure 4.11 Car Rental Bookings input data form

2.The structure of the input data form of Lodge Reservation Form

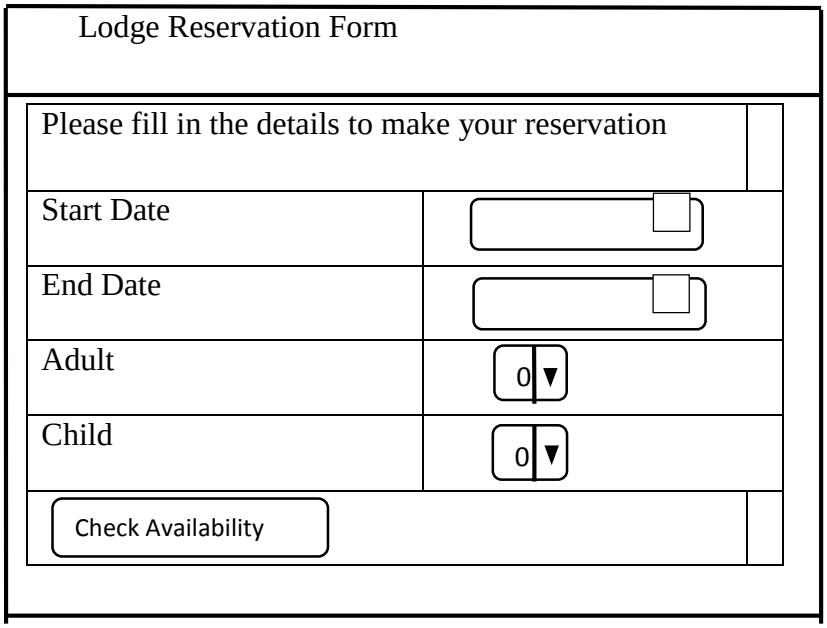


Figure 4.12 Lodge Reservation input data form

3. The structure of input data form of Login as Admin

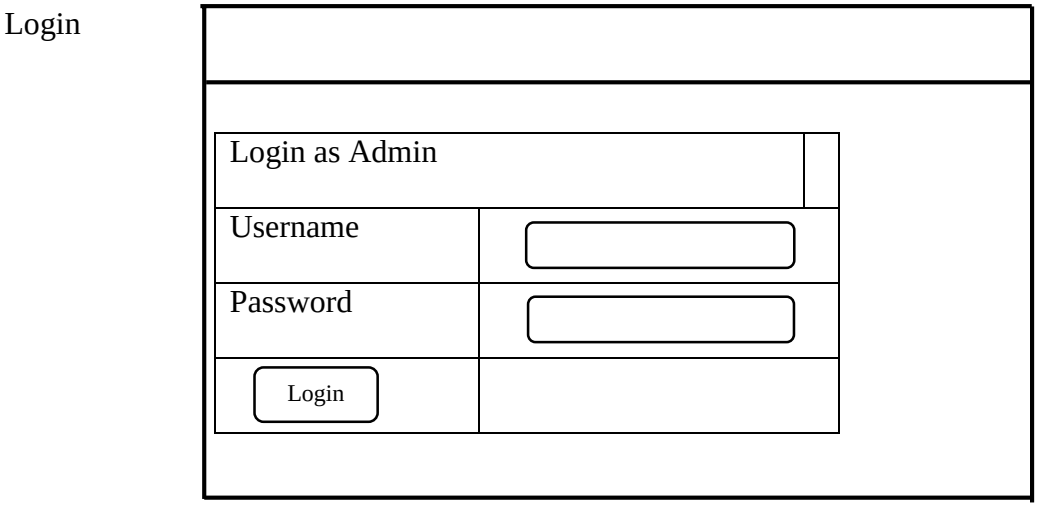


Figure 4.13 Login input data form

4.4 Testing

Software testing is an important technique for assessing the quality of a software product.In this study tests performed on the system that is functionally testing. The method used in this testing is black box testing focuses on the functionality of the system.

4.4.1 Test Planning

A test plan is a document describing the scope, approach, resources, and schedule of intended test activitiesThe system test plan that will be tested with blackbox testing techniques that will be grouped in the table below.

1. Car Rentals Menu

Table 4.5 Car Rentals menu testing and results

No	Tests Cases	Results
1	Fill the car rental reservation data in the form designed.	Data saved correctly in the database.
2	To see the data entered is automatically placed on the car rental reservation form	The data is correctly placed on the car rental reservation form.

2. Lodge Reservation menu testing

Table 4.6 Lodge Reservation menu testing and results

No	Tests Cases	Results
1	Fill the lodge reservation data in the form designed.	Data saved correctly in the database.
2	To see the data entered is automatically placed on the lodge reservation form	The data is correctly placed on the lodge reservation form.

4.4.1.1 Conclusion for the Testing Results

Based on the t results of the testing of the software with test cases as shown above, it can be concluded that the software is free of syntax errors and functionally release the results as expected.

4.4.2 Implementation

The programming languages used in this work are, PHP and HTML. With MySQL as the back-end integration database. The choice of these programming languages is based on the features of the languages that makes them more appropriate for this work.

4.4.2.1 Implementation limits

The limit on the implementation of the integrated website in tourism of Mt Wilhelm, including is:

1. Implementation of the website is given access to the administration for viewing users comments and reservations and users to access for browsing reservations
2. Implementation of this websiteis built specifically for users

4.4.3 Software Implementation

Implementation of software is with a PC or laptop operating systems Windows.The software implementation of software PC / Laptop includes:

1. Operating System Windows 7 Professional
2. XAMPP Control Panel v3.1.0 3.1.0
3. Macromedia Dreamweaver 8 Portable,
4. Mozilla Firefox browser
5. PHP 5.4.7
6. Apache 2.4.7

4.4.4 Hardware Implementation

The Hardware requirements used for the implementation of this proposed system are as following;

1. Processor:AMD E-350 Processor 1.60 GHz

2. Memory (RAM): 2.00 GB (1.60 GB Usable)

3. VGA

4.4.5 Data Base Implementation (SQL Syntax)

The implementation of the database with their database syntax as follow;

```
-- phpMyAdmin SQL Dump

-- version 3.5.2.2

-- http://www.phpmyadmin.net

-- Host: 127.0.0.1

-- Generation Time: May 08, 2015 at 05:19 AM

-- Server version: 5.5.27

-- PHP Version: 5.4.7

SET SQL_MODE="NO_AUTO_VALUE_ON_ZERO"

Database: `mt_wilhem`


Table structure for table `car`

--CREATE TABLE IF NOT EXISTS

`car` ( `id` int(11) NOT NULL AUTO_INCREMENT,

`cartype` varchar(100) NOT NULL,

`price` varchar(50) NOT NULL,

`numcars` int(30) NOT NULL,
```

```
 `type` varchar(100) NOT NULL,
`time` varchar(100) NOT NULL,

PRIMARY KEY (`id`)
-- Dumping data for table `car`
--INSERT INTO
`car` (`id`, `cartype`, `price`, `numcars`, `type`, `time`)
VALUES(1, 'avanza', '300000', 5, 'Air con', '24hours'),
(2, 'Innova', '400000', 6, 'White, aircon, Tinted windows',
');

Table structure for table `carreserve`
CREATE TABLE IF NOT EXISTS
`carreserve` ( `id` int(11)NOT NULL
AUTO_INCREMENT,
 `date` varchar(11) NOT NULL,
`end_date` varchar(11) NOT NULL,
`car` varchar(11)NOT NULL,
`car_reserve` int(11) NOT NULL,
`transactionnum` varchar(10) NOT NULL,
`carnum` varchar(100) NOT NULL,
`status` varchar(50) NOT NULL,
```

```
 PRIMARY KEY (`id`)
Dumping data for table `carreserve`
INSERT INTO `carreserve` (`id`, `date`, `end_date`, `car`,
`car_reserve`, `transactionnum`, `carnum`, `status`)
VALUES(7, '05/05/2015', '08/05/2015', '1', 1, 'mag36kmo',
'1, ', ''),

Table structure for table `comment
`CREATE TABLE IF NOT EXISTS
`comment`(`comment_id`int(11)NOT
NULL AUTO_INCREMENT,
`name` varchar(60) NOT NULL,
`email` varchar(100) NOT NULL,
`content` text NOT NULL,

PRIMARY KEY (`comment_id`)
Dumping data for table `comment`
INSERT INTO `comment` (`comment_id`, `name`,
`email`, `content`) VALUES(17, 'john',
'raimjohn@gmail.com', 'Thanks for the service'),
```

(16, 'Jerry', 'jerry@gmail.com', 'Thanks for the service'),

Table structure for table `customer`

CREATE TABLE IF NOT EXISTS

`customer` (`id` int(11) NOT NULL AUTO_INCREMENT,

`fname` varchar(30) NOT NULL,

`lname` varchar(30) NOT NULL,

`contact` varchar(30)NOT NULL,

`address` varchar(100) NOT NULL,

`car` varchar(30) NOT NULL,

`transactionum` varchar(30NOT NULL,

`payable` varchar(30) NOT NULL,

`status` varchar(100) NOT NULL,

`setnumber` varchar(100) NOT NULL,

PRIMARY KEY (`id`)

-- Dumping data for table `customer`

INSERT INTO `customer` (`id`, `fname`, `lname`, `contact`, `address`, `car`, `transactionum`, `payable`, `status`, `setnumber`) VALUES(1, 'peter', 'tera',

'082120867149', 'jl braga', '1', 'cpyuvbhk', '300000', '','4, '),(2, 'peter', 'tera', '082120867149',

Table structure for table `reservation`

CREATE TABLE IF NOT EXISTS

`reservation`(`reservation_id`int(11)NOTNULL

AUTO_INCREMENT,

`firstname` varchar(30) NOT NULL,

`lastname` varchar(30) NOT NULL,

`city` varchar(30) NOT NULL,

`zip` int(11) NOT NULL,

`province` varchar(30) NOT NULL,

`country` varchar(30) NOT NULL,

`email` varchar(50) NOT NULL,

`contact` int(20) NOT NULL,

`username` varchar(30) NOT NULL,

`password` varchar(30) NOT NULL,

`arrival` varchar(30) NOT NULL

`departure` varchar(30) NOT NULL,

`adults` int(11) NOT NULL,

`child` int(11)NOT NULL,

`result` int(11) NOT NULL,

```
`room_id` int(11) NOT NULL,
`no_room` int(11) NOT NULL,
`payable` int(11) NOT NULL,
`status` varchar(10) NOT NULL,
`confirmation` varchar(20) NOT NULL,

PRIMARY KEY (`reservation_id`)
-- Dumping data for table `reservation`
INSERT INTO `reservation` (`reservation_id`, `firstname`,
`lastname`, `city`, `zip`, `province`, `country`, `email`,
`contact`, `username`, `password`, `arrival`, `departure`,
`adults`, `child`,

Table structure for table `room`
CREATE TABLE IF NOT EXISTS
`room` (`room_id` int(11) NOT NULL
AUTO_INCREMENT,
`type` varchar(30) NOT NULL,
`rate` int(11)NOT NULL,
`description` varchar(300) NOT NULL,
`image` varchar(100) NOT NULL,
`qty` int(11) NOT NULL,
```

```
`max_adult` int(11) NOT NULL,
`max_child` int(11)NOT NULL,

PRIMARY KEY (`room_id`)
-- Dumping data for table `room`
INSERT INTO `room` (`room_id`, `type`, `rate`, `description`, `image`, `qty`, `max_adult`, `max_child`) VALUES(6, 'Superior', 15000, 'Fully air conditioned', 'photos/addemployee.png',

Table structure for table `roominventory`--
CREATE TABLE IF NOT EXISTS
`roominventory` (`roominventory_id` int(11) NOT NULL AUTO_INCREMENT,
`arrival` varchar(30) NOT NULL,
`departure` varchar(30) NOT NULL,
`qty_reserve` int(11)NOT NULL,
`room_id` int(11) NOT NULL,
`confirmation` varchar(10) NOT NULL,
`status` varchar(30) NOT NULL,

PRIMARY KEY (`roominventory_id`)
```

Dumping data for table `roominventory`

INSERT INTO `roominventory` (`roominventory_id`, `arrival`, `departure`, `qty_reserve`, `room_id`, `confirmation`, `status`) VALUES(1, '05/05/2015', '10/05/2015', 1, 6, '3k60c6ew', 'Active'),(2, '05/05/2015', '10/05/2015', 1, 6,

Table structure for table `user`

CREATE TABLE IF NOT EXISTS

`user` (`user_id` int(11) NOT NULL AUTO_INCREMENT,`username`varchar(30)NOT NULL,

`password` varchar(30) NOT NULL,

`email` varchar(50)NOT NULL,

`register_date` int(11)NOT NULL,

`position` enum('admin','frontdesk') NOT NULL,

PRIMARY KEY (`user_id`)

Dumping data for table `user`

INSERT INTO `user` (`user_id`, `username`, `password`, `email`,`register_date`, `position`) VALUES(1, 'terabyte', '123456', 'tera@gmail.com', 1428904648, 'admin'

4.4.6 Implementation Interface

The implementation and installation of the program Integrated Website in Tourism Management of Mt Wilhelm.

The steps are as follows:

1. Click the start menu and then select XAMPP ControlPanel Application

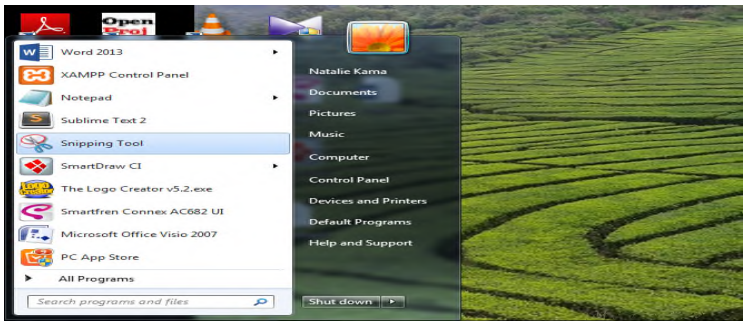


Figure 4.14 Enable XAMPP Control Panel

2. Activate the Control Panel Application XAMPP

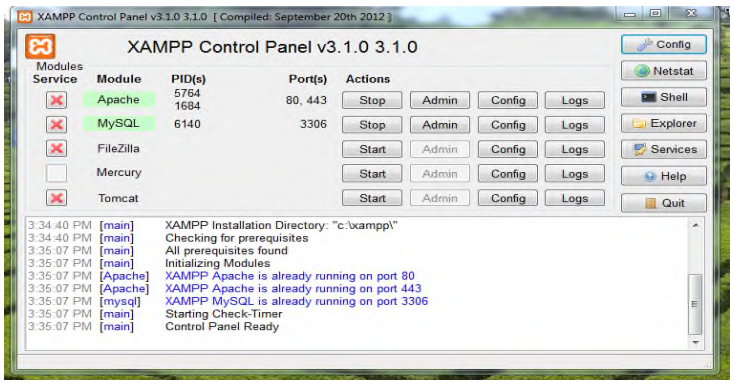


Figure 4.15 XAMPP Control Panel Application

3. Open Mozilla Firefox, then type the address http://localhost/xampp/splash.phpFigure

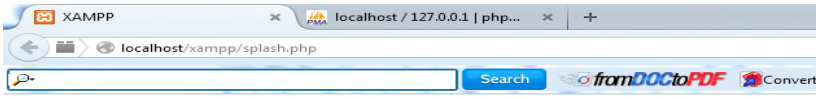


Figure 4.16URL Display

4.4.6.1 Guidelines of the System

Here's the guidelines of how to use this website, according to the capture screen.

1. **Home**

Displayed Menu of the Home Page



Figure 4.17 Implementation of the Home Page

2. About Mt Wilhelm

Displayed Menu of the About Mt Wilhelm

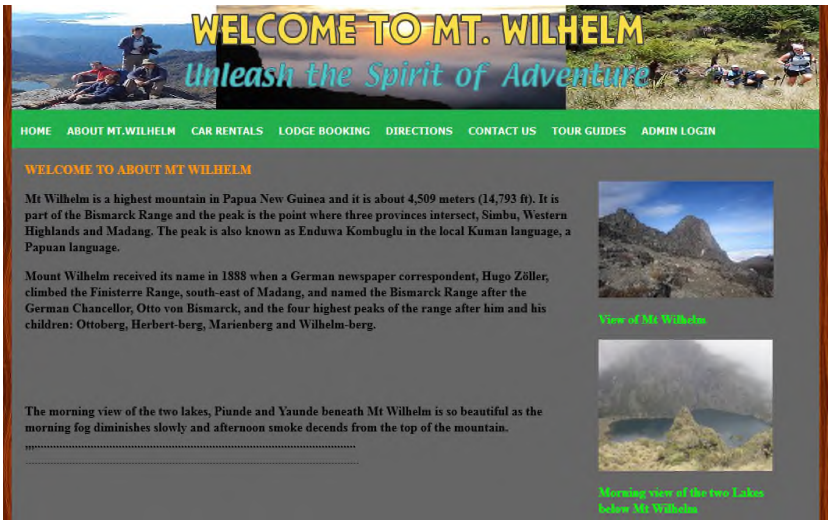


Figure 4.18 Implementation of About Mt Wilhelm

3. Car Rentals

Display Menu of Car Rentals Bookings

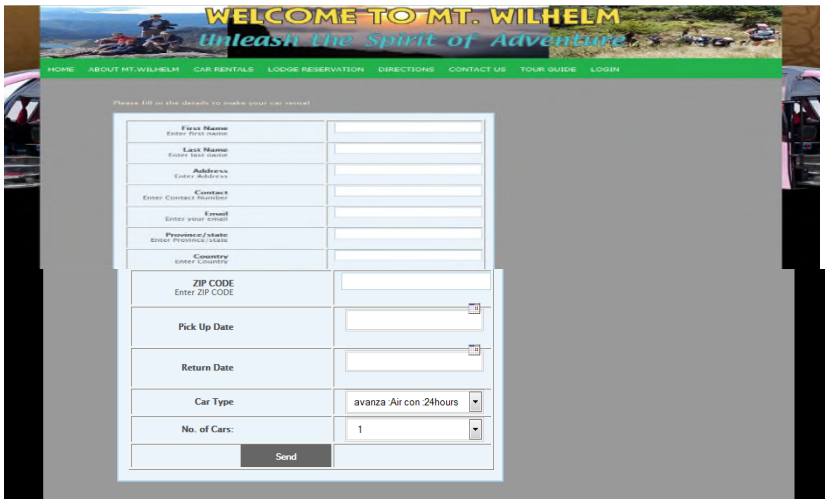


Figure 4.19 Car Rental Reservation Form

4. Lodge Reservation

Display Menu of Lodge Reservations

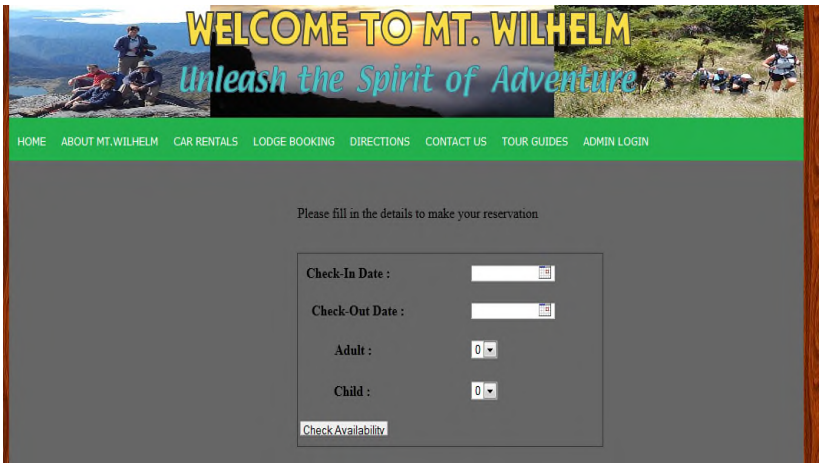


Figure 4.20 Lodge Reservation Form

5. Directions

Display Menu of Directions

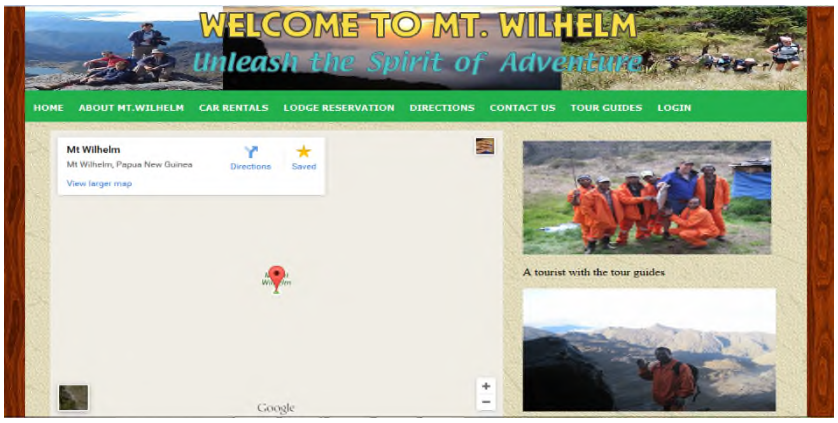


Figure 4.21Directions from Google Map and Tour Guides

6. Contact Us

Display Menu of Contact Information

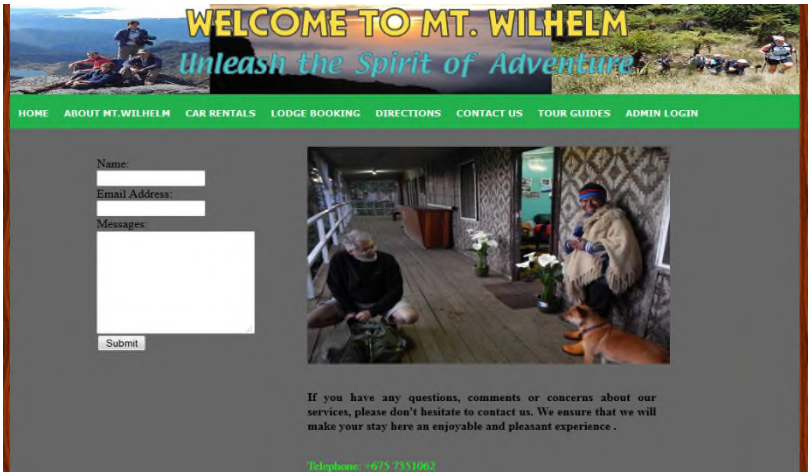


Figure 4.22 Contact Information

7. Tour Guides

Display Menu of Tour Guides



Figure 4.23 Tour Guide Information

8. Admin Login

Display Menu of Login as Admin



Figure 4.23 Login as Administration