VISVESVARAYA TECHNOLOGICAL UNIVERSITY

BELAGAVI, KARNATAKA

A Mini Project Report

(Fifth Semester)

on

"BOAT RESERVATION SYSTEM"

Submitted in the partial fulfillment for the requirements for the conferment of *degree* of

BACHELOR OF ENGINEERING

in

INFORMATION SCIENCE AND ENGINEERING

By

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CERTIFICATE

This is to certify that the Mini Project (Fifth Semester) entitled **"Boat Reservation System"** is a bonafide work carried out by **Ms.Akshara Y Tarikere(1BY7IS007),** in partial fulfillment for the award of **Bachelor of Engineering Degree in Information Science and Engineering** of the Visvesvaraya Technological University, Belagavi during the year 2019-20. It is certified that all corrections/suggestions indicated for Internal Assessment have been incorporated in this report. The mini project report has been approved as it satisfies the academic requirements with respect to mini project work for the B.E Degree.

Signature of the Guide	**Signature of the Coordinator**	**Signature of the HOD**
Dr. Manjunath T. N	Dr. Pushpa S. K	Dr. Usha B A

EXTERNAL EXAMINERS

Name of the Examiners	Signature with Date

ACKNOWLEDGEMENT

We are happy to present this project after completing it successfully. This project would not have been possible without the guidance, assistance and suggestions of many individuals. We would like to express our deep sense of gratitude and indebtedness to each and every one who has helped us make this project a success.

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By,
AKSHARA Y TARIKERE

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Declaration

We, hereby declare that the Mini Project titled "Boat Reserrvation System" is a record of original Mini Project work undertaken for the award of the degree Bachelor of Engineering in Information Science and Engineering of the Visvesvaraya Technological University, Belagavi during the year 2018- 19. I have completed this Mini Project work under the guidance of **Dr. Manjunath T.N**

I also declare that this Mini Project report has not been submitted for the award of any degree, diploma, associate ship, fellowship or other title anywhere else.

Student Photo

USN: 1BY17IS007

Name: Akshara Y Tarikere

Signature

ABSTRACT

The Boat Reservation System facilitates the passengers to inquire about the boats available on the basis of source and destination, Booking and Cancellation of tickets, inquire about the status of the booked ticket, etc.

The aim of case study is to design and develop a database maintaining the records of different type of boats, reservation status and passengers.

This project contains Introduction to the boat reservation system .It is the computerized system of reserving the seats of boat in advanced. It is used for long route as well as shorter route. On-line reservation has made the process for the reservation of seats very much easier than ever before.

In our country India, there are number of counters for the reservation of the seats and one can easily make reservations and get tickets. Then this project contains entity relationship model diagram based on Boat reservation system and introduction to relation model .There is also design of the database of the Boat reservation system based on relation model. Example of some SQL queries to retrieves data from Boat management database.

This software has one part. The administrator has the access to both, the front and the backend. Administrator is used by Island head. It will allow the admin to access database and allow new reservations. The system allows the admin to update about new boat model and it's availability.

To reserve a boat the system asks the admin to enter details such as name, destination, departure time etc. It then reserves the boat. The system also allows the admin to delete his/her reservation, if any problem occurs the system allows the admin to modify the or cancel the reservation.

This project is made for helping the people in islands for transportation. As boat is used only used near water bodies, there is no software for boat reservation unlike train, bus or flight reservation system, boat reservation is in high demand near islands and beach. Hence this project is made useful for reserving the desired boats in advance.

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CHAPTER 1

INTRODUCTION

1.1 Outline

Database is an organized collection of data. The data is typically organized to model aspects of reality in a way that supports processes requiring information. A DBMS makes it possible for end users to create, read, update and delete data in a database. The DBMS essentially serves as an interface between the database and end users or application programs, ensuring that data is consistently organized and remains easily accessible. The DBMS manages three important things: the data, the database engine that allows data to be accessed, locked and modified and the database schema, which defines the database's logical structure. These three foundational elements help provide concurrency, security, data integrity and uniform administration procedures. The DBMS can offer both logical and physical data independence. That means it can protect users and applications from needing to know where data is stored or having to be concerned about changes to the physical structure of data.

The main purpose of maintaining database for Boat Reservation System is to reduce the manual errors involved in the booking and canceling of tickets and make it convenient for the customers and providers to maintain the data about their customers and also about the seats available to them. Due to automation many loopholes that exist in the manual maintenance of the records can be removed. The speed of obtaining and processing the data will be fast. For future expansion the proposed system can be web enabled so that clients can make various inquiries about boats between different destinations. Due to this, sometimes a lot of problems occur and they are facing many disputes with customers. To solve the above problem, we design a data base which includes customer details, availability of seats in boats, number of boats and their details.

1.2 Motivation and Scope

A survey conducted by Government shows that people visiting the islands and other water bodies have no proper transport system. Hence this software is made useful to reserve the boat to travel from one island to other or from one city to another.

It allows the admin to update new models and edit new operator, price and capacity of boat. In this way employment opportunities also increases.

Check the validity of input data and protect user's privacy concerns.

Make it easy to travel with our boat reservationsystem

1.3 Problem Statement

Design and develop User Interface for Boat Reservation System where people can reserve boat and select the boats based on capacity, price and the operator. Admin can edit the details, add new operators and new models of the boat.

1.4 Limitations

- It requires the XAMPP local host server to be installed without which it will not be able to function.
- The project currently runs on a locally hosted server, hence it cannot reflect the changes.
- It cannot dynamically update the registrations and needs to be done by the Database
- administrator.

CHAPTER 2
REQUIREMENT SPECIFICATION

2.1 Functional Requirements

Request for Login

The system shall require a user to register, in order to carry out any operations with it. It will ask the user for the following information at the least–a user name, a password, if correct the system allows the user to carry out the operations.

Entering details for the individual reservation

Having taken the input of name and destination, the user is now required to add the boat model to the database. The user adds up details which includes the location, departure time and date.

Retrieving details of the passenger

The system allows the user to check the status of any passenger by the search option.
In case the user looks up for cancellation of ticket.

The system accesses the DB-reservation immediately, retrieves the data from the database and displays the required information to the user.

View reservation Status

The system shall allow a passenger to view all information about time and price. It accesses DB and retrieves the details of the requested information and presents them to the passenger in a convenient format.

Admin login

Admin can login and edit the details. Can add new boat model, new operator and also delete or update the information. Admin can access to reservation details from different users ansd make the best facilities.

Query reservation Details

The system shall allow any user to access the details or status about the boat reservation by requesting the user to login. The system accesses DB- schedule and presents the record of that reservations.

Web Browser

A Web Browser is a software application for accessing information on the world wide web. Each individual web page, image, and video is identified by the distinct URL, enabling browsers to retrieve and display them on the user's device. Note that the web browsers is not the same thing as a search engine, through the two are often confused.

XAMPP

XAMPP is a free and open source cross-platform web server solution stack package developed by Apache Friends, consisting mainly of the Apache HTTP Server, MariaDB database, and interpreters for scripts written in the PHP and Perl programming languages. XAMPP stands for Cross-Platform (X), Apache (A), MariaDB (M), PHP (P) and Perl (P). It is a simple, lightweight Apache distribution.

2.2 Non-Functional Requirements

Performance

Response time of the System should be less than 3 second most of the time. Response time refers to the waiting time while the system accesses, queries and retrieves the information from the databases (DB-user, DB-schedule etc) (A local copy of student database is maintained to reduce this access time). It shall show no visible deterioration in response time as the number of reservations increases.

Reliability

- It shall be available 24 hours a day, 7 days a week
- It shall always provide accurate information about boat and reservations
- This software shall be robust enough to have a high degree of fault tolerance.
- For example, if the user enters a wrong password, the system should not crash and shall identify the invalid input and produce a suitable error message.
- The application shall be able to recover from power failures and other natural catastrophes
- and rollback the databases to their most recent valid state.

Usability

It shall provide a easy-to-use graphical interface similar to other existing registration system so that the users do not have to learn a new style of interaction.
Any notification or error messages generated by the website shall be clear, succinct and polite.

Integrity

Only system administer has the right to change system parameters, such as boat details etc.

The system should be secure and must use encryption to protect the databases.
Users need to be authenticated before having access to any data.

Interoperability

The website shall minimize the effort required to couple it to another system, such as Course management database system.

2.3 Domain Constraints

- **Regulatory policies:** It is a mandatory that no text box must be left empty or contains Insufficient data.
- **Hardware limitations:** There must be a 64 MB on board memory
- **Control functions:** The software must be very user-friendly and display appropriate error messages.
- **Interfaces to other applications:** Not applicable.
- **Parallel operations:** It must support many users simultaneously.
- **Safety/security considerations:** The application must be exited always normally.
- **Software Requirement:** Operating System- Windows/Mac/Ubuntu

  Browser- Chrome/Mozilla Firefox/Internet Explorer
- **Hardware Requirement:** Processor- 32 or 64bit

  Memory- 2GB RAM

  Hard Disk- 100M

CHAPTER 3

SYSTEM/ REQUIREMENT ANALYSIS

3.1 Overall System Description

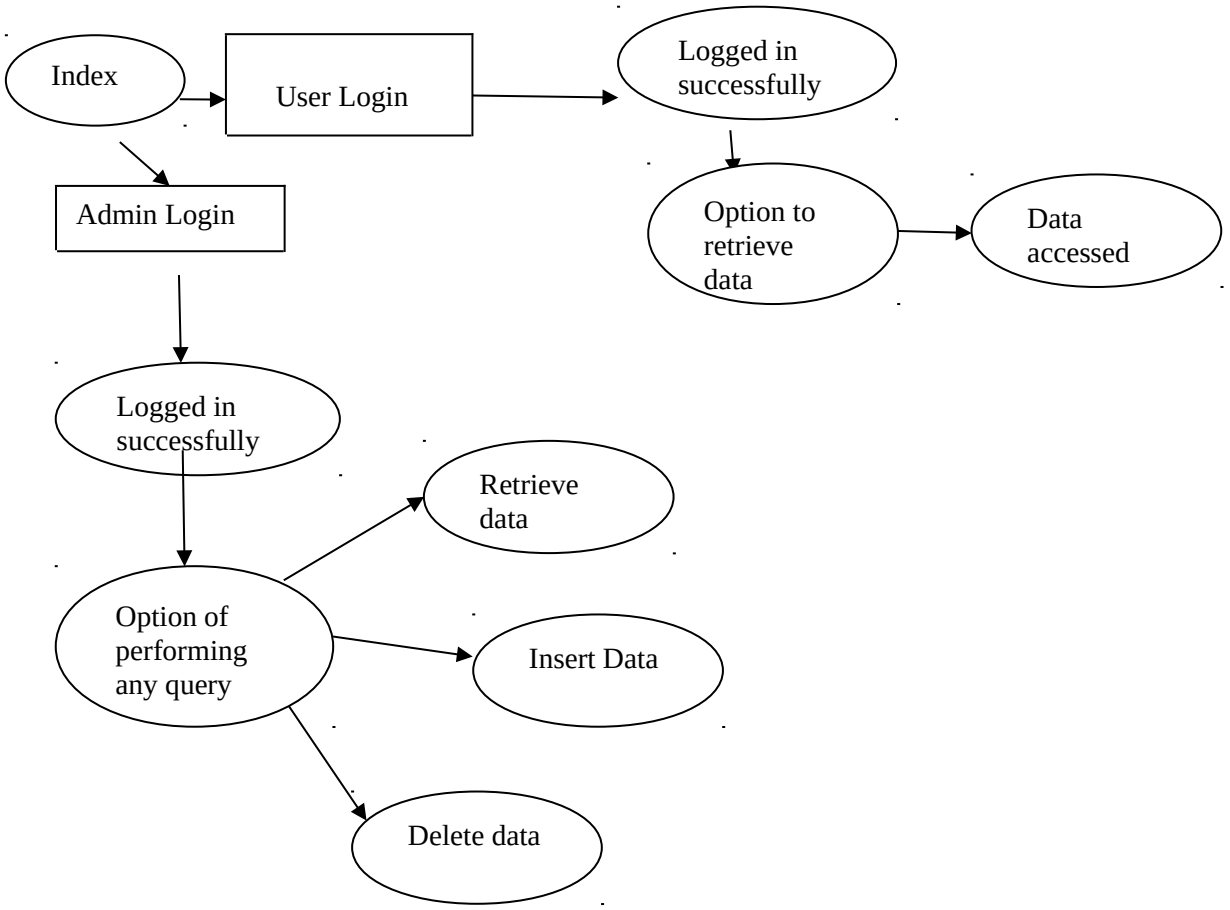


Fig. 3.1.1: Overall System Design

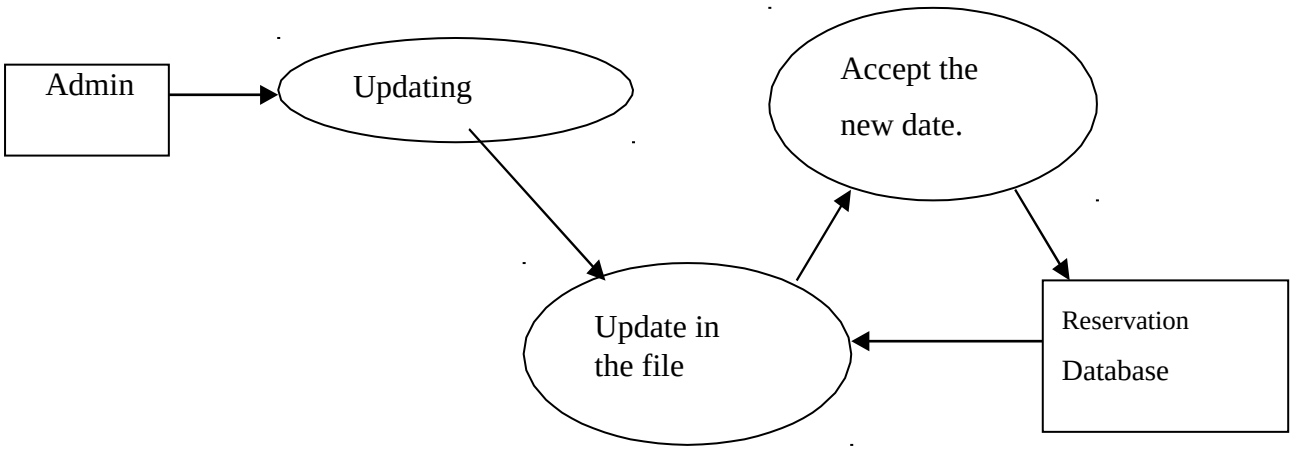
The overall description of the system is as follows:

This project is about creating the database about Boat Reservation System. The Boat

reservation system facilitates the passengers to inquire about the boats available on the basis of source and destination, booking and cancellation of tickets, inquire about the status of the booked ticket, etc. The aim of case study is to design and develop a database maintaining the records of different boats, boat status, and passengers. The record of boat includes its number, name, source, destination, and days on which it is available, whereas record of boat status includes dates for which tickets can be booked, total number of seats available, and number of seats already booked.

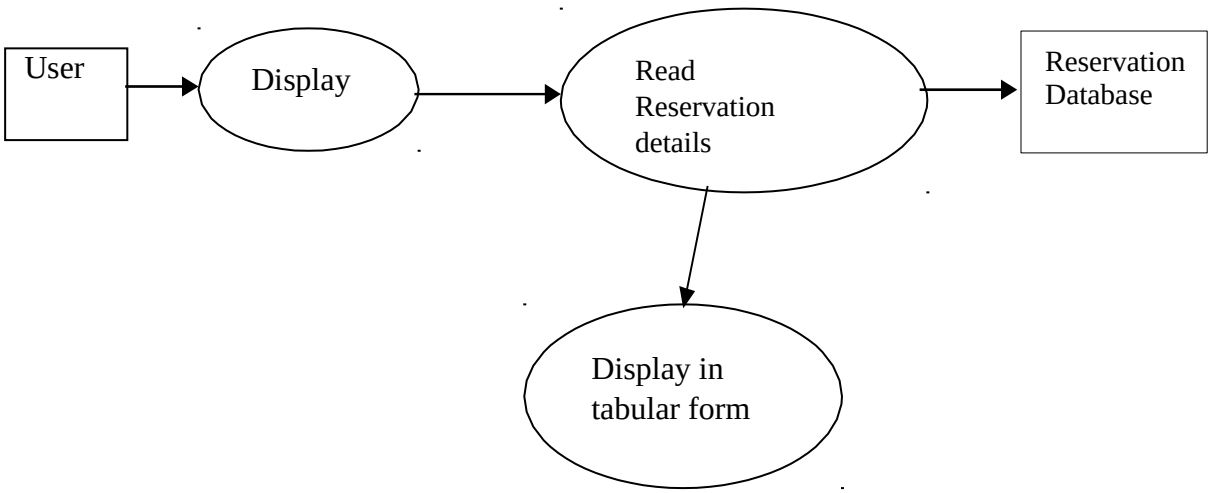
The user is first presented with a login screen where he asked to enter his Username and Password. If the correct input is received from the user, he is taken to the Main Interface where he will be presented with an array of choices. Inputting a wrong Username and Password displays a message to the user to check the details he has entered and to correct it or to register his details first. Only the Database Administrator has the authority to remove user accounts. It also allows the user to view the details of the added information and search.

3.2 Updating Module



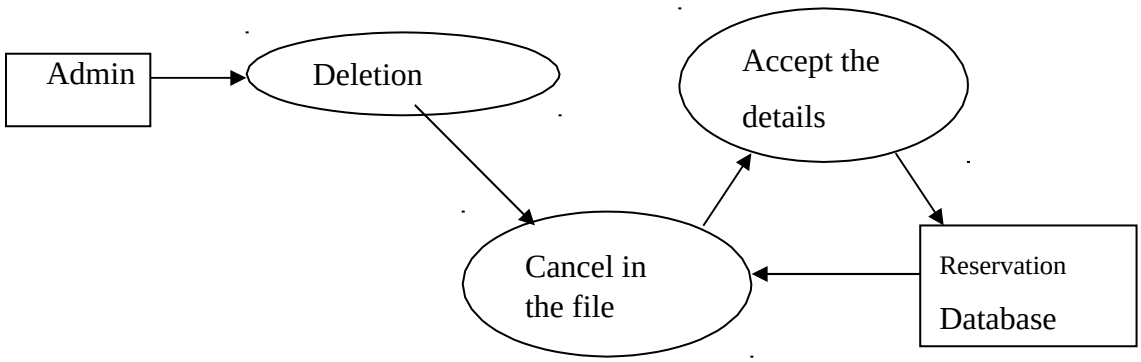
There are situations where the details of reservations, user or boat are mistyped and are stored in the database. To update them we need to use this mode. This can be done only by the admin. After updating the database is again committed with new details.

3.3 Display Module



This mode is used to view the information about any reservations, user, or a tboat. He can view details in the form of table also.

3.4 Deletion Module



In Deletion mode the admin has the right to delete a detail or information of the boat . Admin has right to delete any information

CHAPTER 4

SYSTEM DESIGN

4.1 Entity Relationship Diagram

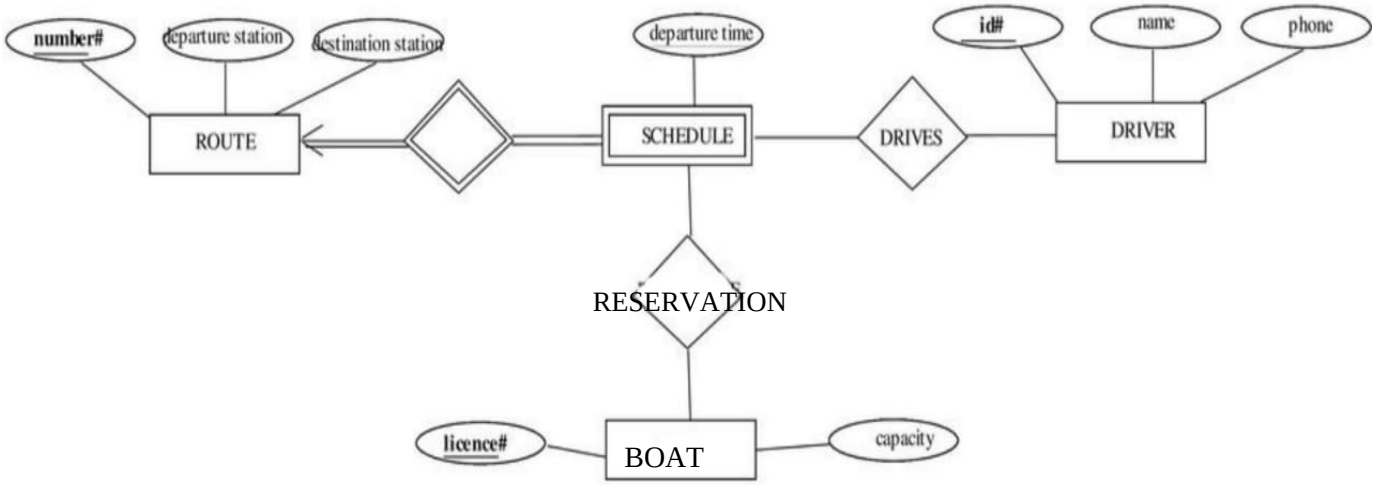


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Fig. 4.1.1: ER Diagram

CHAPTER 5

IMPLEMENTATION

5.1 Description of Database Used

(Backend)

MariaDBis a community-developed fork of the MySQL relational database management system intended to remain free under the GNU GPL. Development is led by some of the original developers of MySQL, who forked it due to concerns over its acquisition by Oracle Corporation.[5]

MariaDB intends to maintain high compatibility with MySQL, ensuring a drop-in replacement capability with library binary parity and exact matching with MySQL APIs and commands. It includes the XtraDB storage engine for replacing InnoDB, as well as a new storage engine, Aria, that intends to be both a transactional and non-transactional engine perhaps even included in future versions of MySQL.

5.2 Description implementation of the Front end:

PHP:

Hypertext Preprocessor is a server-side scripting language designed for Web development, and also used as a general-purpose programming language. It was originally created by Rasmus Lerdorf in 1994; the PHP reference implementation is now produced by The PHP Group. PHP is a server side scripting language ,that is used to develop Static websites or Dynamic websites or Web applications. PHP stands for Hypertext Pre-processor, that earlier stood for Personal Home Pages. PHP scripts can only be interpreted on a server that has PHP installed

HTML/CSS

Hypertext Markup Language is the standard markup language for creating web pages and web applications. With Cascading Style Sheets and JavaScript, it forms a triad of cornerstone technologies for the World Wide Web.

WEB STACK:

1. **HTML5:** Hypertext Markup Language revision 5 (HTML5) is markup language for the structure
   and presentation of World Wide Web contents. HTML5 supports the traditional HTML and XHTML-style syntax and other new features in its markup, New APIs, XHTML and error handling.

2. **CSS3:** Cascading Style Sheets (CSS). As you probably know, CSS is a style language that describes how HTML markup is presented to the user. CSS3 is the latest version of the CSS specification.

CSS3 contains just about everything that's included in CSS2.1, the previous version of the spec. It also adds new features to help developers solve a number of presentation-related problems without resorting to scripting plugins or extra images.

3. JAVASCRIPT: JavaScript is a programming language that started off simply as a mechanism to add logic and interactivity to an otherwise static Netscape browser. In the system since its introduction, it has not only supplanted a variety of other competing languages and technologies to become the standard for browser-based programming, but it has also expanded beyond the client space to become a dominant language on the server side, as well.

CHAPTER 6

TESTING

6.1 Component Test

Login Module

TEST UNIT	TEST CASE	RESULT
Login Screen	An invalid username or password is entered by the user.	The system generates a message saying "invalid user id" or invalid password, whichever is the case.
Login Screen	An valid username or password is entered by the user	The system grants access to the user and takes him to the Main Interface

Table 6.1.1 User Login Module Test

Boat Reservation Module

TEST UNIT	TEST CASE	RESULT
Reservation Window	Click on reserve without date	Displays a message, reservation unsuccessful
Reservation Window	Click on reserve with date	Displays a message, reservation successful

Table 6.1.2 Boat Reservation Module Tests

User Registration Module

TEST UNIT	TEST CASE	RESU LT
Registration Window	Click on Submit with incorrect details	System Displays message to enter the correct details.
Registration Window	Click on Submit with correct details.	Displays a message, registration successful.

Table 6.1.3 User Registration Module Test

Displaying Reservation Details

TEST UNIT	TEST CASE	RESULT
Display	Enter view reservation option.	If details entered were not reserved, the information will not be seen in the table.
Display	Enter view reservation option.	If the details have been successfully reserved, it'll display the list of the reservations.

Table 6.1.4 Boat Reservation Status Module Tests

6.2 System Testing

TEST UNIT	TEST CASE	RESULT
Boat Reservation	Click on any boat Button.	Opens boat reservation Window.
Canceling reservation	Click on cancel button	Cancels the reservation
User Registration	Click on Registration Button.	Opens a Registration Window.
View reservation	Click on my reservations.	Opens reservation status Window.
Deleting/Updating a boat info.	Click on boats.	Opens boat details window where it gives options to edit and delete

Table 6.2.1 System/Integration Tests

CHAPTER 7

INTERPRETATION OF RESULT

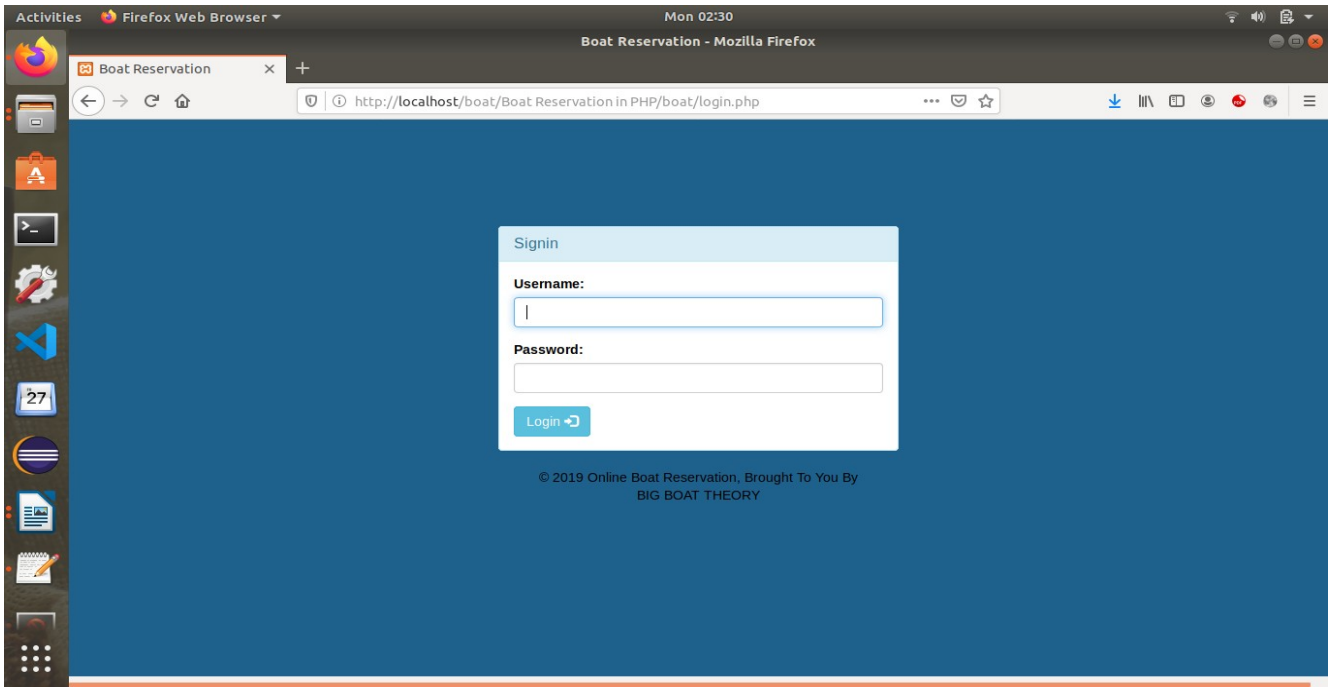

Fig.7.1:Login Window

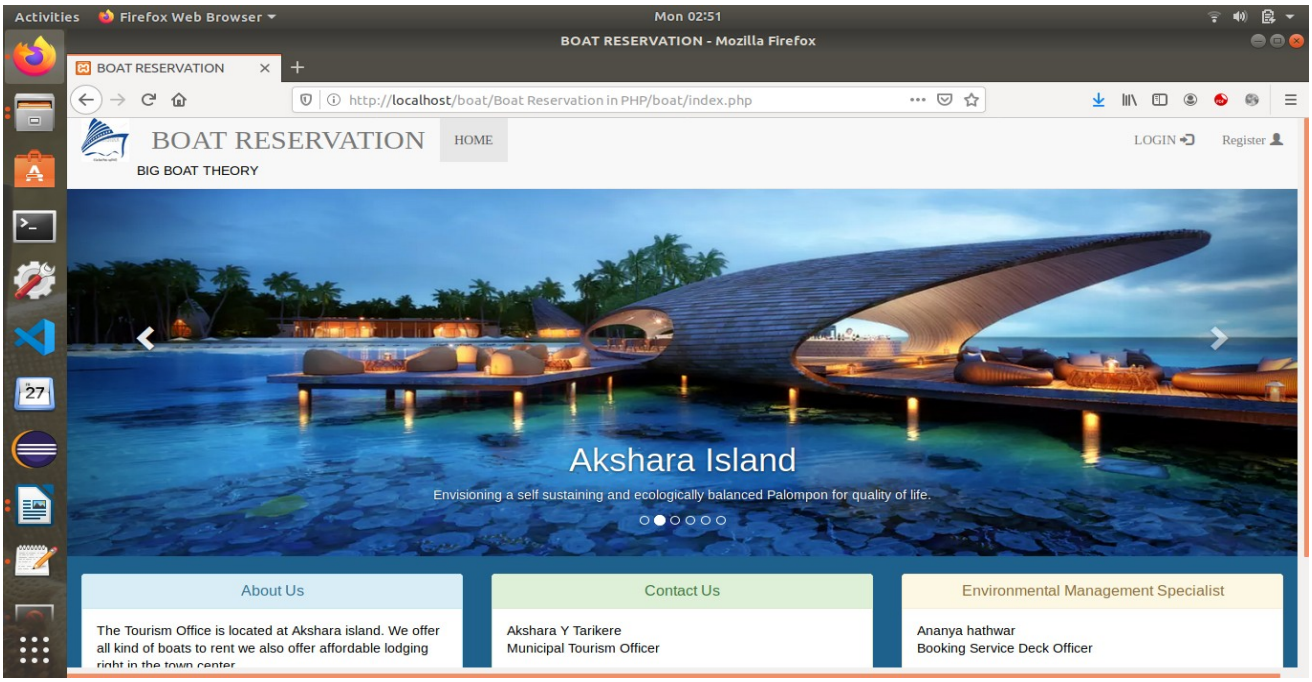

Fig. 7.2: Home Page

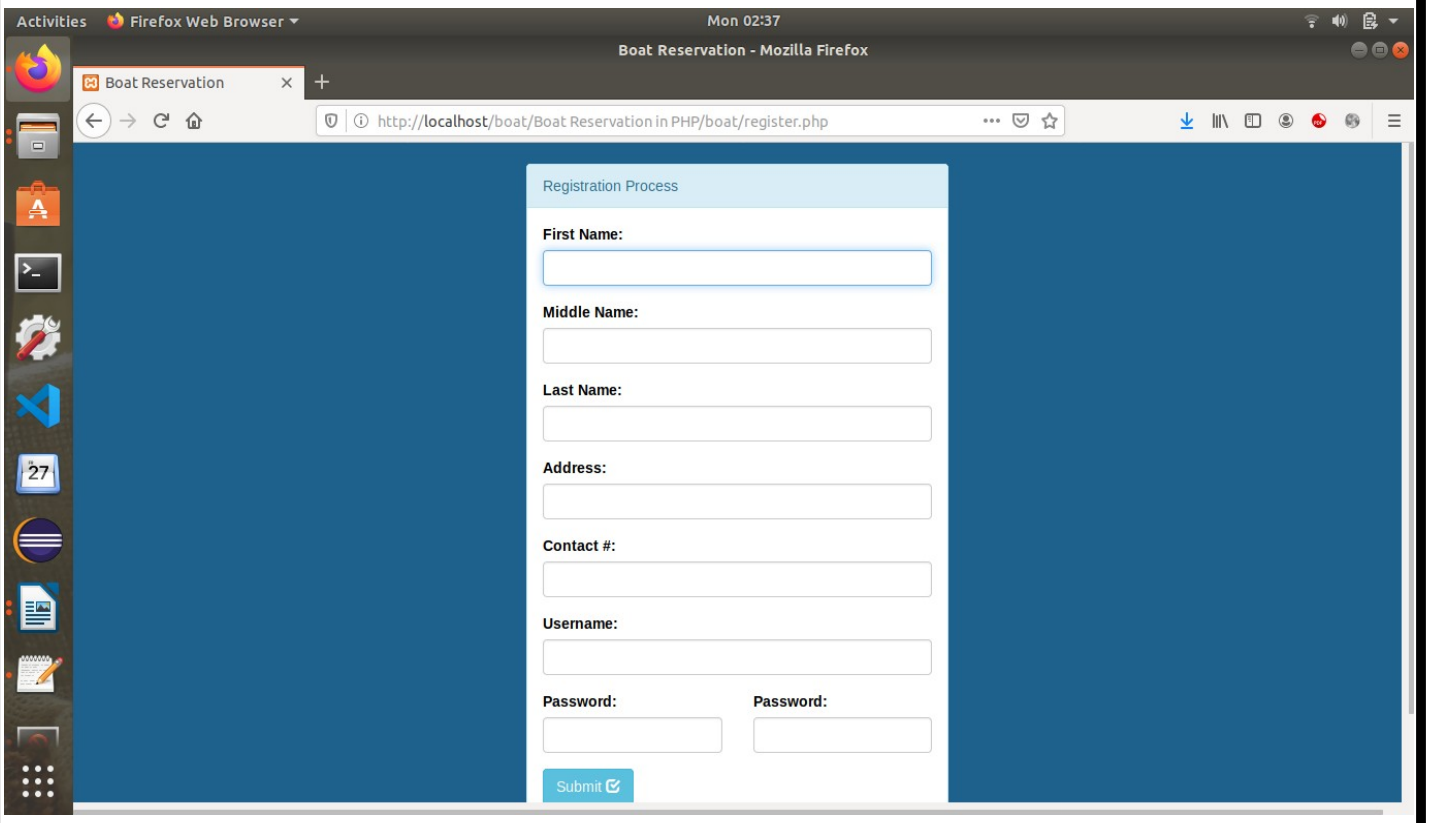

Fig. 7.3:Registration Window

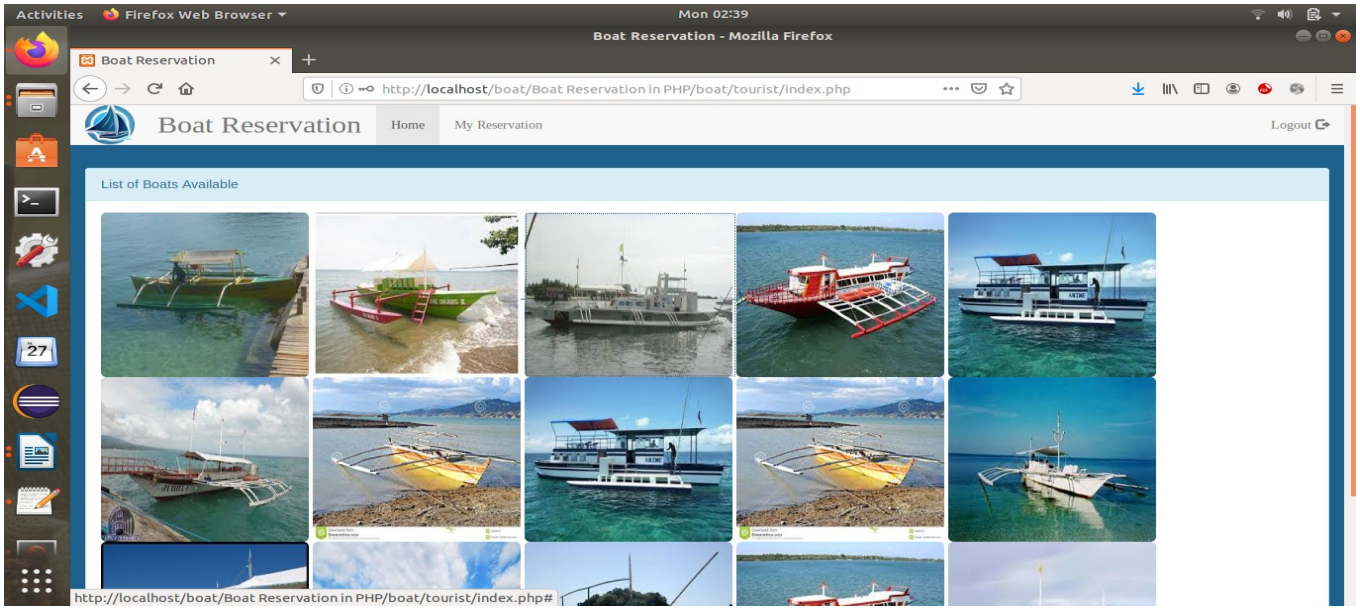

Fig. 7.4: Available boats Window

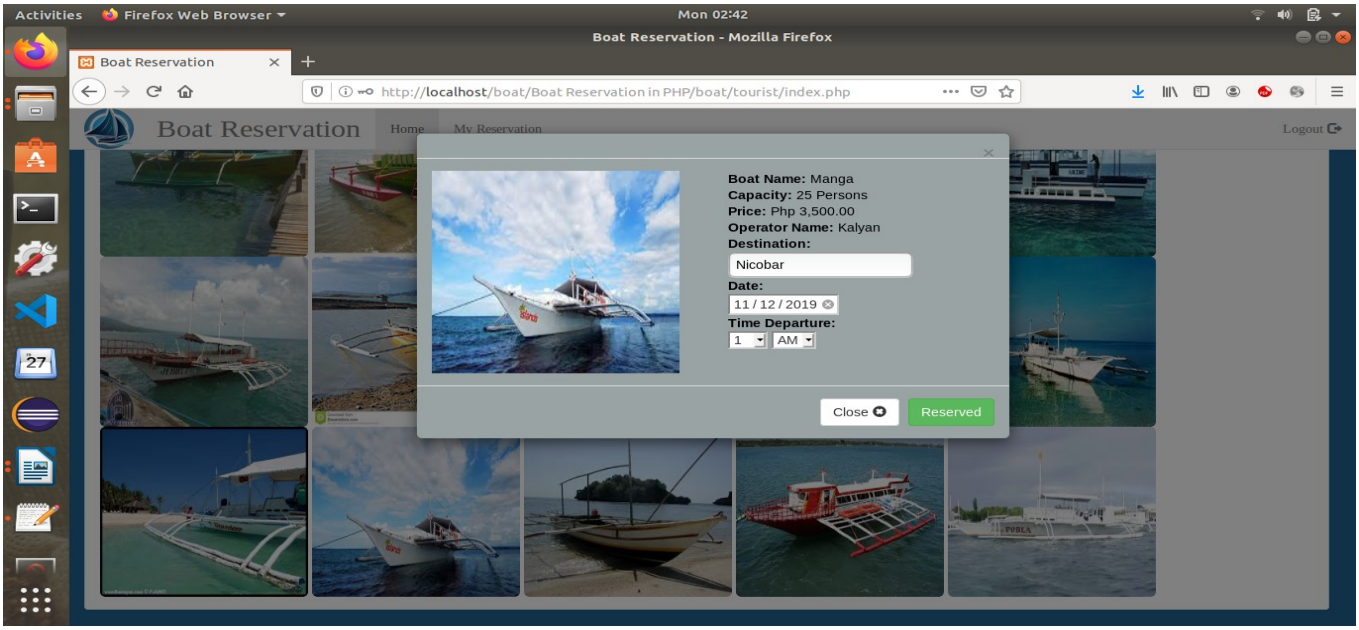

Fig. 7.5: Reservation Window

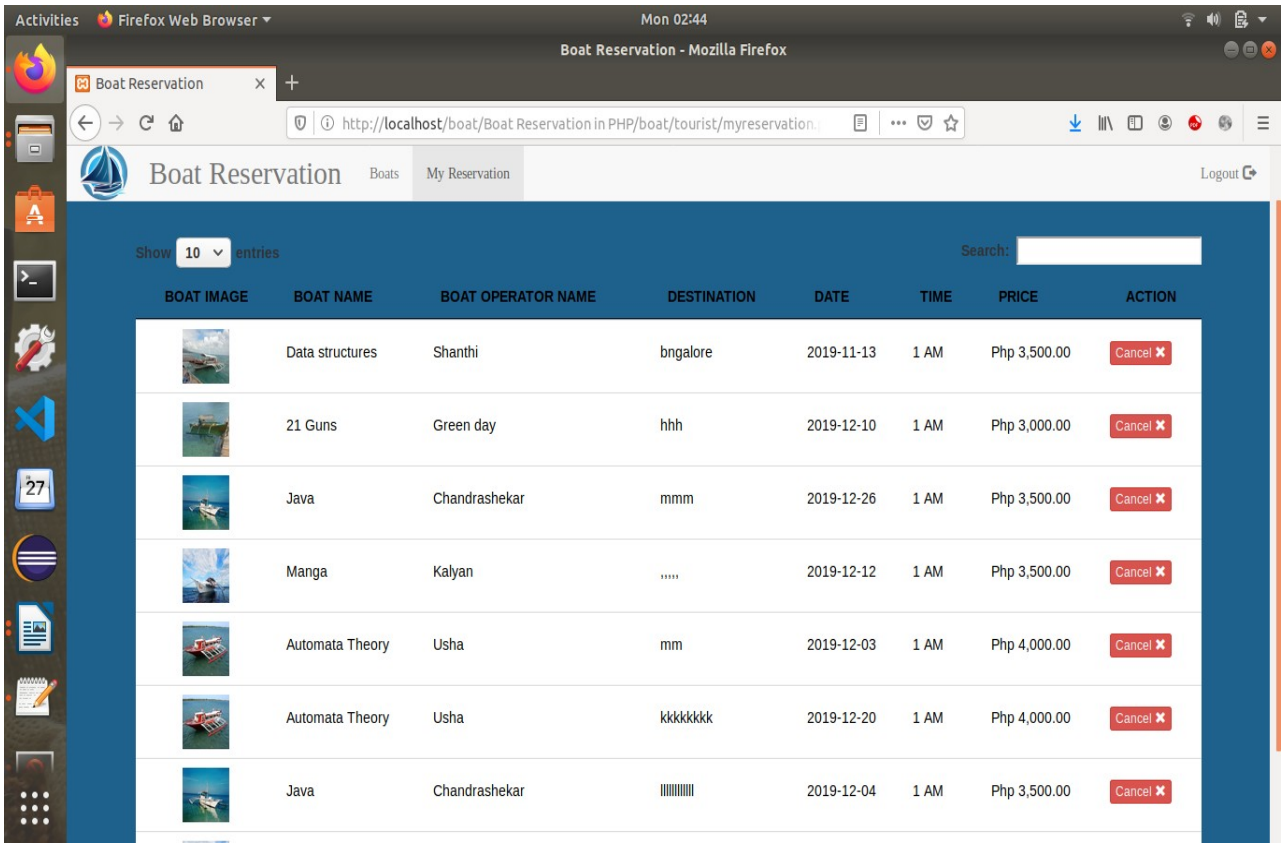

Fig. 7.6 My Reservation Window

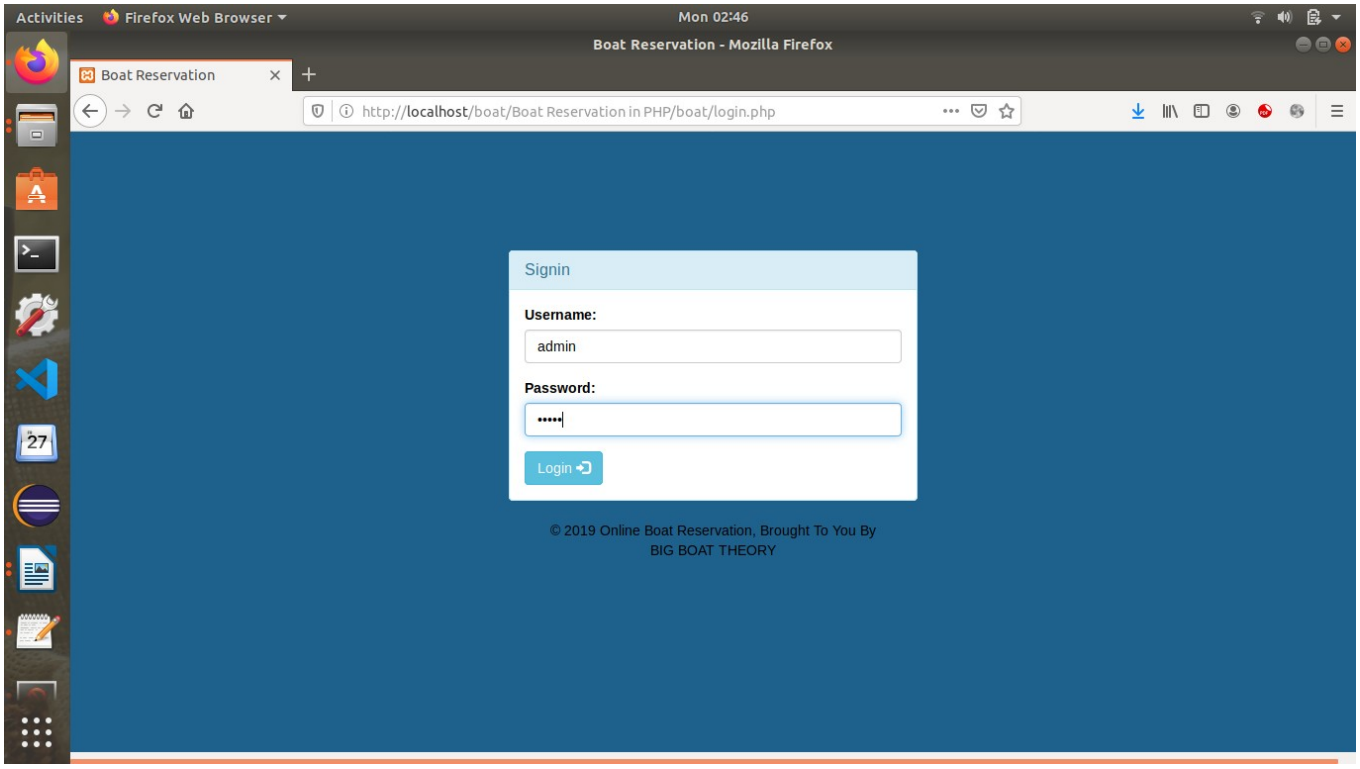

Fig. 7.7: Admin login window

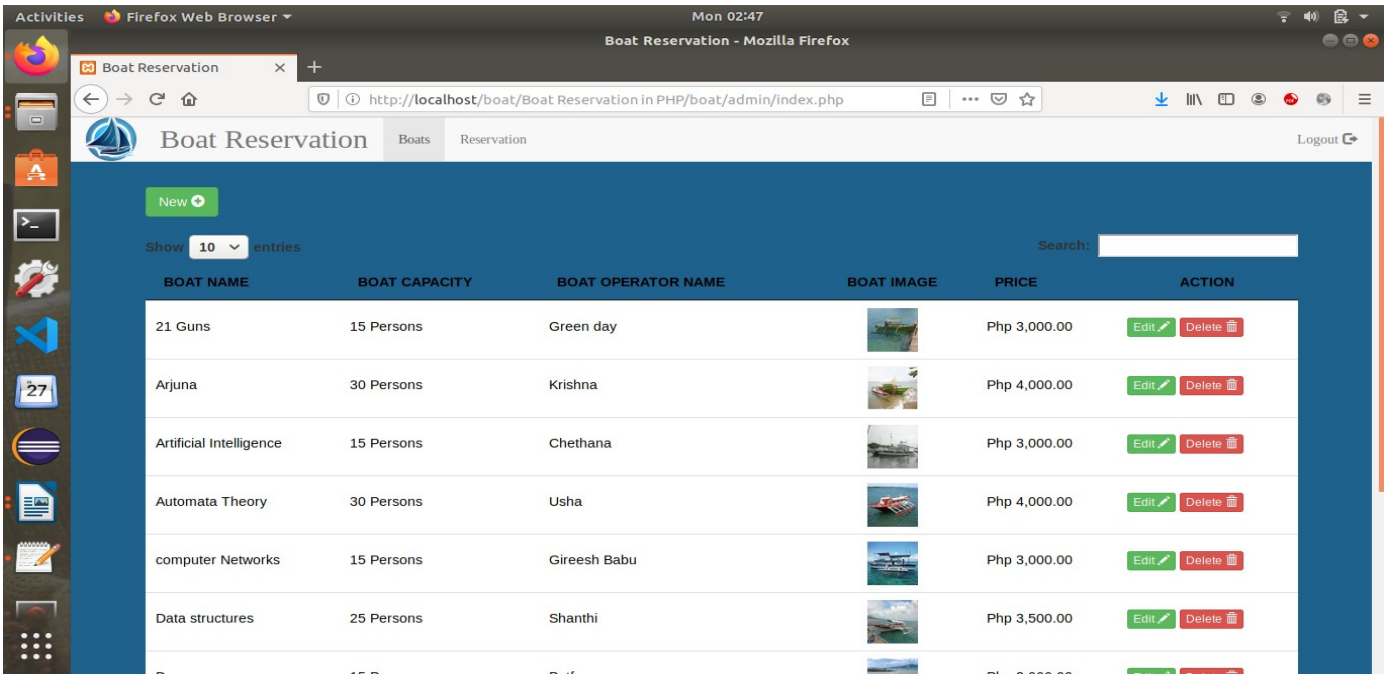

Fig. 7.8: Update or Edit window

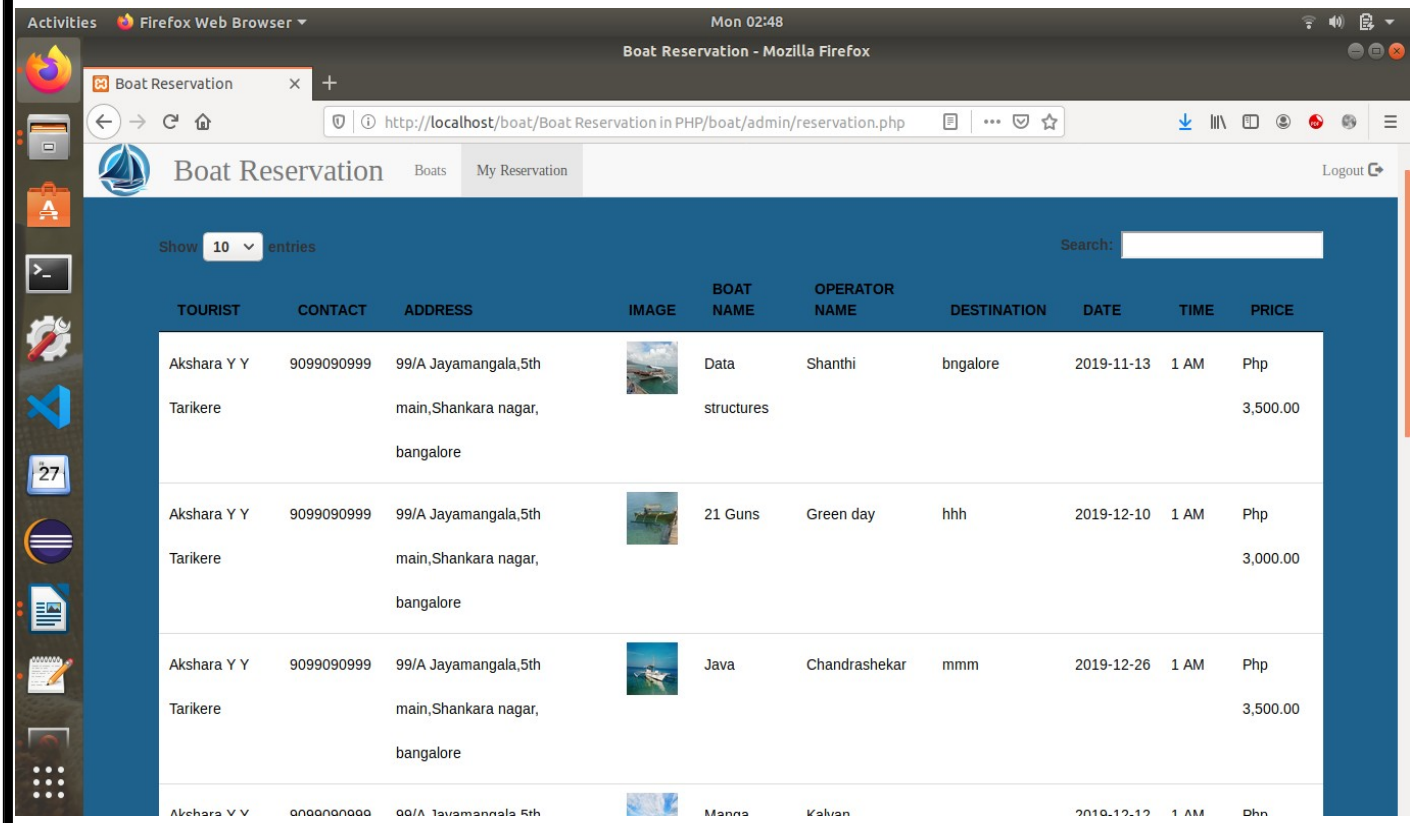

Fig. 7.9: Reservation view detail window

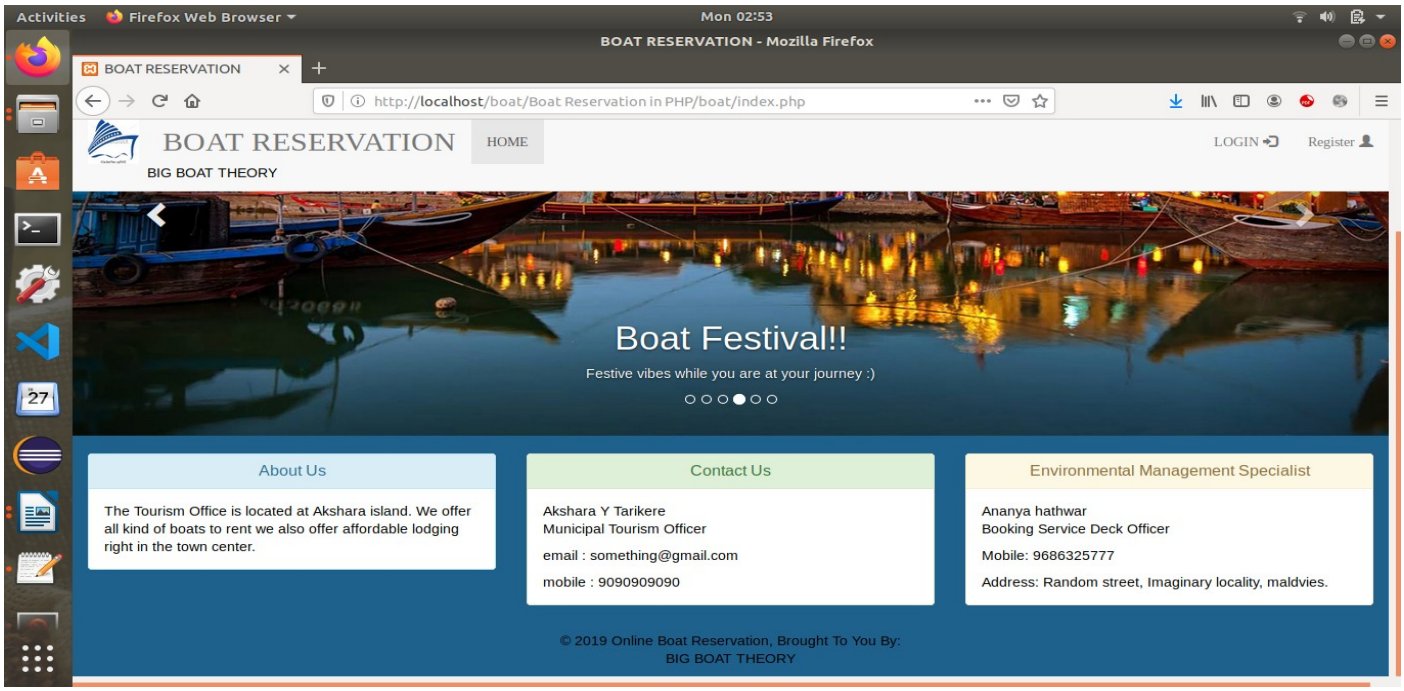

Fig. 7.10: About us, Contact us window

CONCLUSION

This project is about creating the database about Boat Reservation System. The Boat reservation system facilitates the passengers to inquire about the boats available on the basis of source and destination, booking and cancellation of tickets, inquire about the status of the booked ticket, etc. The aim of case study is to design and develop a database maintaining the records of different boats, boat status, and passengers. The record of boat includes its number, name, source, destination, and days on which it is available, whereas record of boat status includes dates for which tickets can be booked, total number of seats available, and number of seats already booked.

In our project Boat reservation system we have stored all the information about the Boat scheduled and the users booking tickets and even status of trains, seats etc. This data base is helpful for the applications which facilitate passengers to book the Boat tickets and check the details of Boat and their status from their place itself it avoids inconveniences of going to island for each and every query they get. We had considered the most important requirements only, many more features and details can be added to our project in order to obtain even more user friendly applications. These applications are already in progress and in future they can be upgraded and may become part of amazing technology.

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- PHP and MySql Web development: Luke Welling book
- GitHub.io
- YouTube: https://www.youtube.com

APPENDICES:

A- Abbreviations:

- CSS3……Cascading Style Sheets
- DB…….Data Base
- HTML**..**…….Hyper Text Markup Language
- PHP……PHP Hypertext Preprocessor
- VB……Visual Basic (Microsoft)
- XAMPP…… Cross-Platform(X),Apache(A), MySql(M),PHP(P), Perl(P).