A PROJECT REPORT

ON

BUS RESERVATION SYSTEM

DONE BY

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ABSTRACT

Online Bus Ticket Reservation System is a Web based application that works within a centralized network. This project presents a review on the software program “Online Bus Ticket Reservation System” as should be used in a bus transportation system, a facility which is used to reserve seats, cancellation of reservation and different types of route enquiries used on securing quick reservations. BRS is built for managing and computerizing the traditional database, ticket booking and tracking bus and travel made. It maintains all customer details, bus details, reservation details. In addition, HTML,CSS,BOOTSTRAP language was used for the front- end of the software while the back end was designed using MySQL. It covers all the required modules right from User Registration, Ticket Information, Admin, etc.

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ABSTRACT

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INTRODUCTION TO THE STUDY

Introduction:-

The project is to computerize traveling company to manage data, so that all the transactions become fast and there should not be any error in transaction like calculation mistake, bill generation and other things. It replaces all the paper work. It keeps records of all bills also, giving to ensure 100% successful implementation of the computerized Bus reservation system. Our reservation system has three modules. First module helps the customer to enquire the availability of seats in a particular bus at particular date. Second module helps him to reserve a ticket. Using third module he can cancel a reserved ticket.

Problem Definition:-

- Information about the route, cancellation of tickets, departure time, arrival time, number of buses available and other such information.
- Keep track of all its passengers and thus schedule their journey accordingly.
- User friendly interface to administrator and customer.

Drawbacks of current system:-

- The current manual system has a lot of paper work.
- More number of staff is required, there is a chance of transferring tickets from one person to another person, sometimes the conductor will not have enough money(change) to give to the passenger.
- The retrieval of records of previously registered users will be a tedious job.

Proposed System:-

- The system is very simple in design and implementation.The system requires very low system resources and will work in almost all configurations. It has got the following properties
    - Ensure data accuracy.
    - Passengers just need to log in and can search bus availability and book ticket easily.
    - Passengers can also cancel it easily.
    - This would help the corporation prepare and organize its schdules more efficiently on the basis of traffic demand.
    - Previous registered users data can be retreived
    - Manual paper work is reduced.
    - No need to stand in long queues.

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OBJECTIVES AND AIM

OBJECTIVE:-

The main purpose of this study is to automate the manual procedures of reserving a bus ticket for any journey made through this Bus reservation System. This system is said to be an automatic system and customers can select seats by themselves. Specifically, objectives of this project will consist of:

Providing a web-based bus ticket reservation function where a customer can buy bus ticket through the online system without a need to queue up at the counter to purchase a bus ticket.

- Enabling customers to check the availability and types of busses online.
- Customer can check the time departure through the system.
- Ability of customers to cancel their reservation.
- Admin user privileges in updating and canceling payment, route and vehicle records.

AIM:-

The aim of the study to fully related with Bus Reservation System

- The Software is for the automation of. Bus Reservation System
- It maintains two levels of users:-
    - Administrator Level
    - User Level
- The Software includes:-
    - Maintaining users details.
    - Providing bus availability.
    - Reserve ticket as per their convienience

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REQUIREMENTS

The project 'Bus Reservation System' is based on the database, object oriented and networking technique. As there are many areas where we can keep record of the database for which we are using MYSQL. The front end is developed using html, bootstrap and css while the backend connectivity is done using MYSQL.

HARDWARE

Processor : intel i5

Memory : 8 GB RAM

Hard Disk : 1 TB [at least 3 MB free space required]

SOFTWARE

Operating System : Windows 10

Font-End Tool : JSP, Servlets, Java Script

Back-End : My Sql

FRONT END

We have implemented JavaScript for all the Client side validations. Client side JavaScript is designed to reside inside HTML document & ensure they run properly. It is object based, event driven, platform independent. These are important parts of any Web application to implement Client side Validations and the invalid data is not submitted. The form is not submitted until user fills in correct data. It is extremely useful to restrict mistakes by user.

BACK END

We have used My Sql. My Sql provides efficient/effective solution for major database

tech.

- Large database and space management.

- Many concurrent database users.

- High transaction processing requirement

- High Availability

- Industry accepted standards

- Manageable security

- Portability

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SYSTEM ANALYSIS

PRINCIPLES OF SYSTEM ANALYSIS:

PRINCIPLES:

- Understand the problem before you begin to create the analysis model.
- Develop prototypes that enable a user to understand how human machine interaction will occur.
- Record the origin of and the reason for every requirement.
- Use multiple views of requirements like building data, function and behavioral models.
- Work to eliminate ambiguity

System Analysis is a separation of a substance into parts for study and their implementation and detailed examination.

Before designing any system it is important that the nature of the business and the way it currently operates are clearly understood. The detailed examination provides the specific data required during designing in order to ensure that all the client's requirements are fulfilled. The investigation or the study conducted during the analysis phase is largely based on the feasibility study. Rather it would not be wrong to say that the analysis and feasibility phases overlap. High-level analysis begins during the feasibility study. Though analysis is represented as one phase of the system development life cycle (SDLC), this is not true. Analysis begins with system initialization and continues until its maintenance. Even after successful implementation of the system, analysis may play its role for periodic maintenance and up gradation of the system. One of the main causes of project failures is inadequate understanding, and one of the main causes of inadequate understanding of the requirements is the poor planning of system analysis.

Analysis requires us to recall the objectives of the project and consider following three

questions:

• What type of information is required?

• What are the constraints on the investigation?

• What are the potential problems that may make the task more difficult?

Keeping the above questions in mind and considering the survey conducted to determine the need of the system; the total system was designed and can be described as under:

The three major parts of the system are:

 Providing Information:

The system is effectively used to provide large variety of information to the interested customer. The major purpose of the site is to easily provide access to records of various Job seekers & users of matrimonial such as resume & profile of boys and girls those who want to search a life partner with quick update to latest modifications in the records. This thing is not at all possible in printed material, which are updated only once a few weeks. It also gives information about the general usage of the system for first time visitors. The system itself works as a information provider for company & life partner seekers.

Preliminary Investigation

System development, a process consisting of two major steps of system analysis and design, start when management or sometimes system development personnel feel that a new system or an improvement in the existing system is required. The system development life cycle is classically thought of as the set of activities that analysts, designers and users carry out to develop and implement an information system. The system development life cycle consists of the following activities:

 Preliminary investigation

 Determination of system requirements

 Design of system

 Development of software

 System testing

 Implementation, evaluation, and maintenance

A request to take assistance from information system can be made for many reasons, but in each case someone in the organisation initiates the request is made, the first system activity the preliminary investigation begins. This activity has three parts:

1) Request clarification

2) Feasibility study

3) Request approval

Request clarification: Many requests from employees and users in the organisations are not clearly defined, Therefore it becomes necessary that project request must be examined and clarified properly before considering systems investigation.

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FEASIBLITY STUDY

The feasibility study proposes one or more conceptual solution to the problem set of the project. In fact, it is an evaluation of whether it is worthwhile to proceed with project or not.

1. Evaluation of feasibility of such solutions. Such evaluation often indicates shortcomings in the initial goals. This step is repeated as the goals are adjusted and the alternative solutions are evaluated.

Feasibility analysis usually considers a number of project alternatives, one that is chosen as the most satisfactory solution. These alternatives also need to be evaluated in a broad way without committing too many resources. Various steps involved in feasibility analysis are:

2. To propose a set of solution that can realize the project goal. These solutions are usually descriptions of what the new system should look like.

Four primary areas of interest in feasibility study are:

Economic Feasibility: An evaluation of development cost weighed against the ultimate income of benefit derived from the development system of product. In economic feasibility, cost benefit analysis is done in which expected cost and benefits are evaluated.

COST AND BENEFIT ANALYSIS:

Developing an IT application is an investment. Since after developing that application it provides the organization with profits. Profits can be monetary or in the form of an improved working environment. However, it carries risks, because in some cases an estimate can be wrong. And the project might not actually turn out to be beneficial.

Cost benefit analysis helps to give management a picture of the cost, benefits and risks. It usually involves comparing alternate investments.

Cost benefit determines the benefits and savings that are expected from the system and compares them with the expected costs.

In performing cost and benefit analysis it is important to identify cost and benefits factors. Cost and benefits can be categorized into the following categories:

1. **Development Costs –** Development costs is the costs that are incurred during the development of the system. It is one time investment.

2. **Operating Costs –** Operating Costs are the expenses required for the day to day running of the system. Examples of Operating Costs are Wages, Supplies and Overheads.

3. **Hardware/Software Costs –** It includes the cost of purchasing or leasing of computers and it's peripherals. Software costs involves required S/W costs.

4. **Personnel Costs –** It is the money spent on the people involved in the development of the system.

5. **Facility Costs –** Expenses that are incurred during the preparation of the physical site where the system will be operational. These can be wiring, flooring, acoustics, lightning, and air-conditioning.

6. **Supply Costs –** These are variable costs that are very proportionately with the amount of use of paper, ribbons, disks, and the like.

 BENEFITS

We can define benefits as

Profit or Benefit = Income – Costs

Benefits can be accrued by:

 Increasing income, or

 Decreasing costs, or

 Both

TECHNICAL FEASIBILITY:

Technical Feasibility includes existing and new H/W and S/W requirements that are required to operate the project using JSP. The basic S/W requirement is J2EE in which the front end of the online hospital management project has been done. The basic entry forms are developed in JSP and the data is stored in the MY SQL.

OPERATIONAL FEASIBILITY:

Operational feasibility is mainly concerned with issues like whether the system will be used if it is developed and implemented. Whether there will be resistance from users that will affect the possible application benefits? The essential questions that help in testing the technical feasibility of a system are following:

 Does management support the project?

 Are the users not happy with current business practices? Will it reduce the time considerably? If yes, then they will welcome the change and the new system.

 Have the users involved in the planning and development of the project? Early involvement reduced the probability of resistance towards the new system.

 Will the proposed system really benefit the organization? Does the overall response increase? Will accessibility of information be lost? Will the system affect the customers in considerable way?

Legal Feasibility:

A determination of any infringement, violation, or liability that could result from development of the system. Legal feasibility tells that the software used in the project should be original purchased from the legal authorities and they have the license to use it or the software are pirated.

Alternatives:

An evaluation of alternative approaches to the development of system or product.

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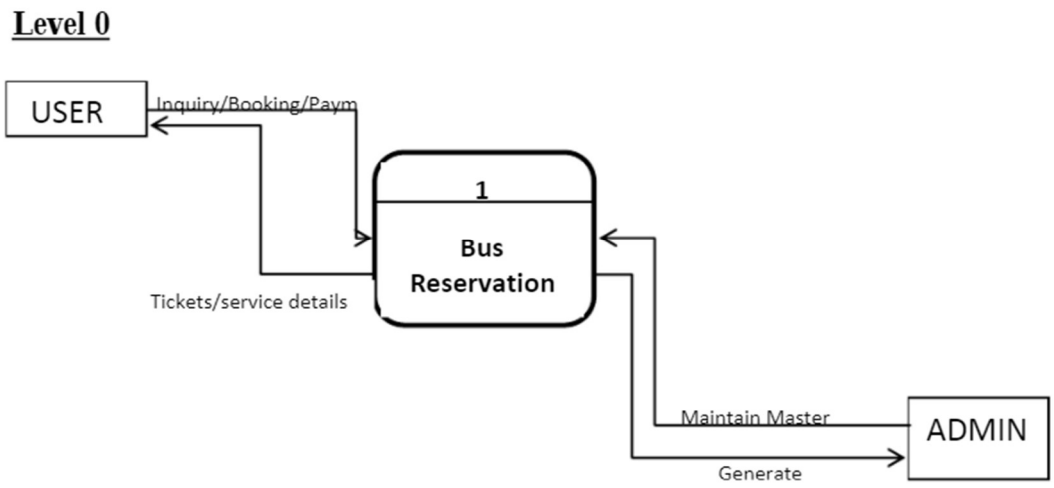
DESIGN DETAILS

A data flow diagram (DFD) is a graphical representation of the "flow" of data through an information system, modeling its process aspects. A DFD shows what kind of information will be input to and output from the system, where the data will come from and go to, and where the data will be stored.

The development of DFD'S is done in several levels. Each process in lower level Diagrams can be broken down into a more detailed DFD in the next level. The Top-level diagram is often called context diagram. It consist a single process bit, which plays vital role in studying the current system. The process in the context level diagram is exploded into other process at the first level DFD



LEVEL 1

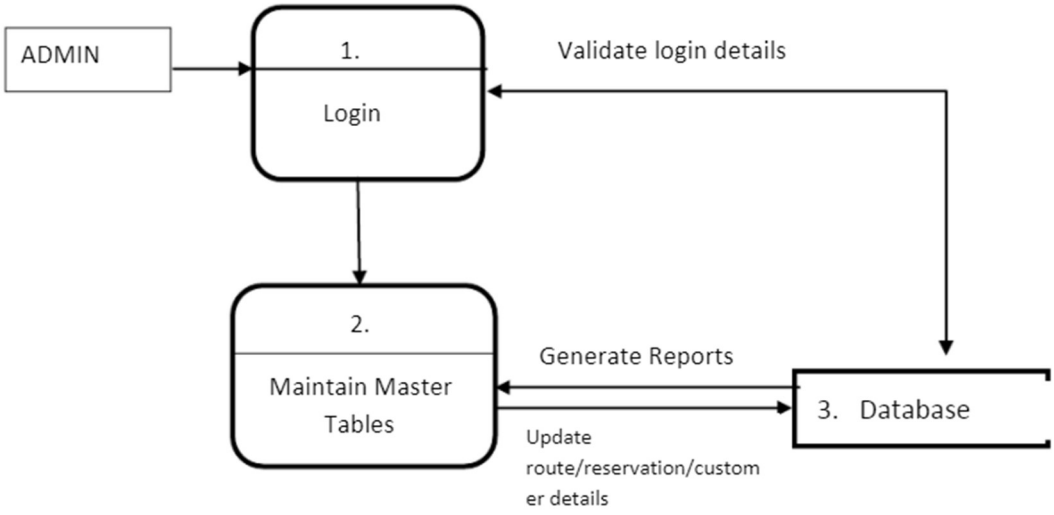


Figure 3.3 User view of Online Bus Ticket Reservation System

Level 2

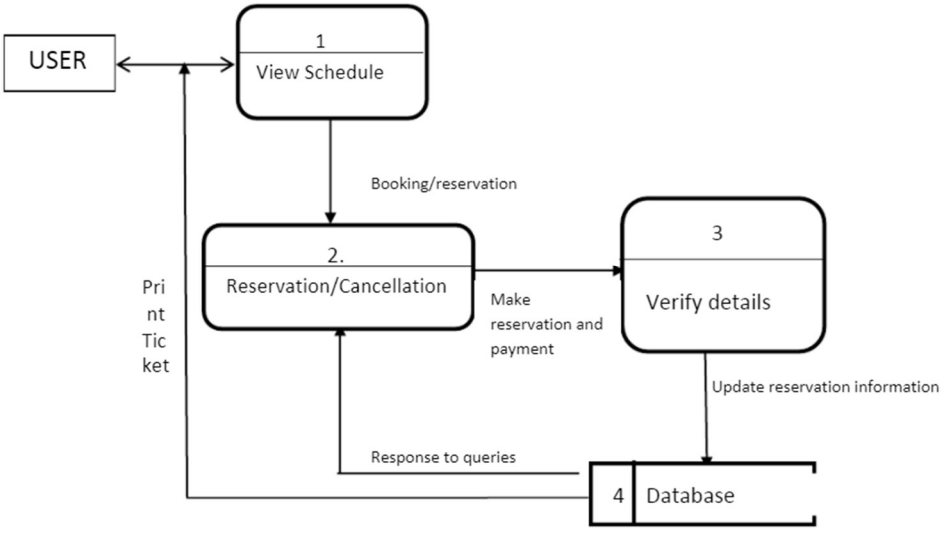
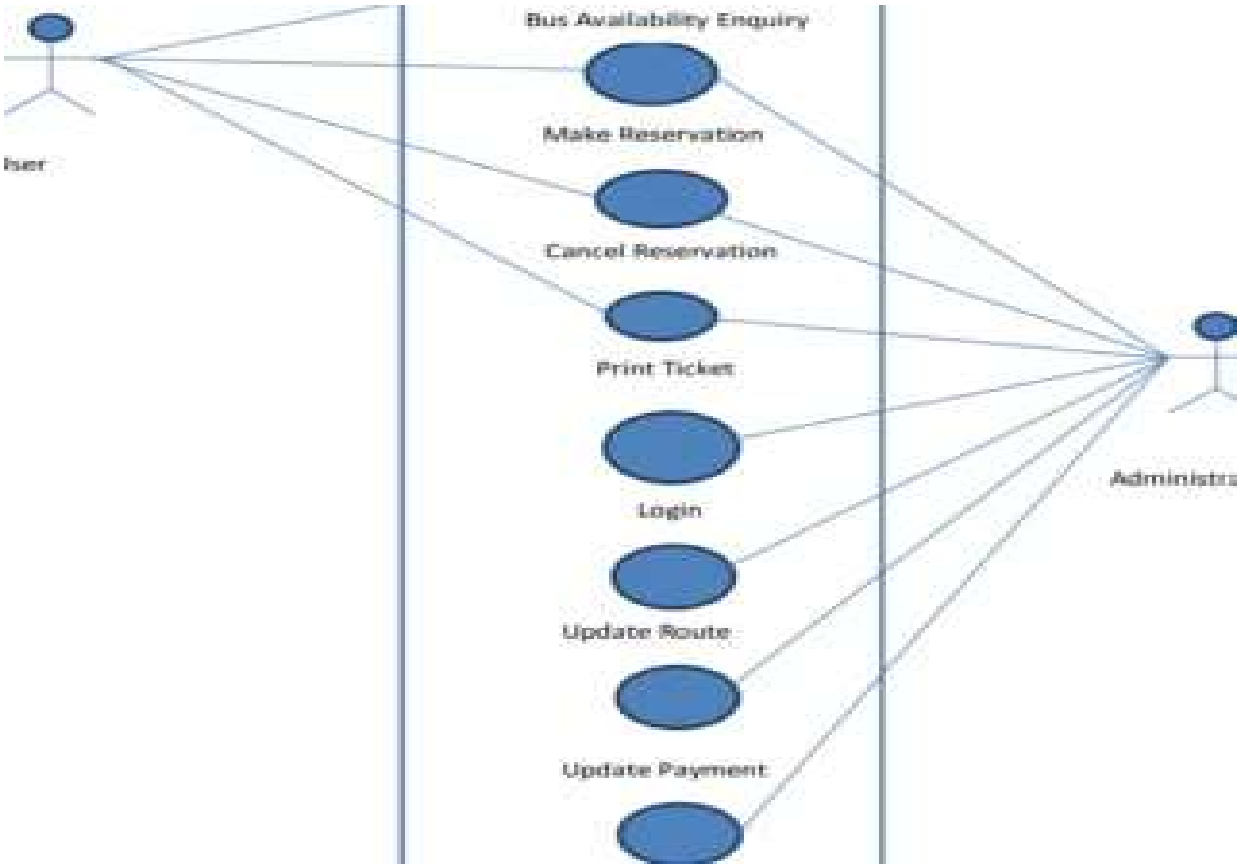
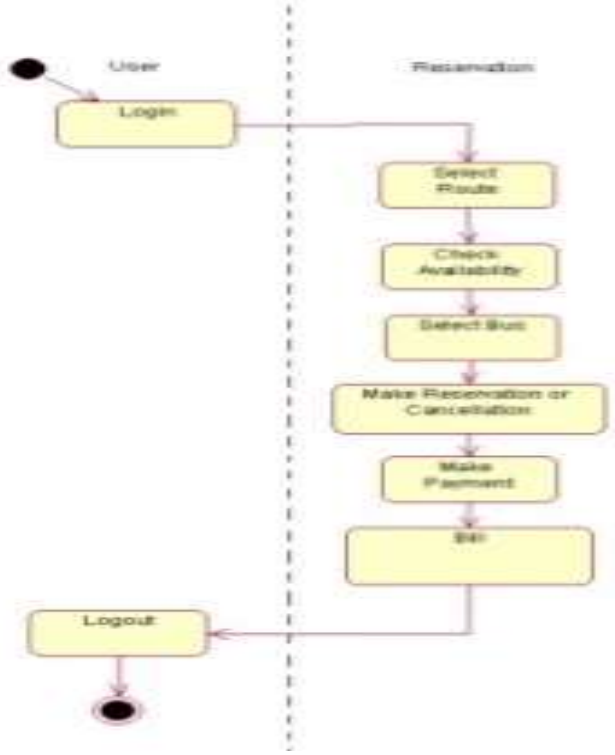


Figure 3.4 Admin view of Online Bus Ticket Reservation System

USE CASE DIAGRAM :-



ACTIVITY DIAGRAM :



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SYSTEM DESIGN

System Design:

The design document that we will develop during this phase is the blueprint of the software. It describes how the solution to the customer problem is to be built. Since solution to complex problems isn't usually found in the first try, iterations are most likely required. This is true for software design as well. For this reason, any design strategy, design method, or design language must be flexible and must easily accommodate changes due to iterations in the design. Any technique or design needs to support and guide the partitioning process in such a way that the resulting sub-problems are as independent as possible from each other and can be combined easily for the solution to the overall problem. Sub-problem independence and easy combination of their solutions reduces the complexity of the problem. This is the objective of the partitioning process.

Scheduling:-

Scheduling of a software project does not differ greatly from scheduling of any multitask engineering effort. Therefore, generalized project scheduling tools and techniques can be applied with little modification to software projects

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CONCLUSIONS

This project has been a rewarding experience in more than one way. The entire project work has enlightened us in the following areas.

a) We have gained an insight into the working of the HOSPITAL. This represents a typical real world situation.

b) Our understanding of database design has been strengthened this is because in order to generate the final reports of database designing has to be properly followed.

c) Scheduling a project and adhering to that schedule creates a strong sense of time management.

d) Sense of teamwork has developed and confidence of handling real life project has increased to a great extent.

e) Initially, there were problem with the validation but with discussions, we were to implement validations.

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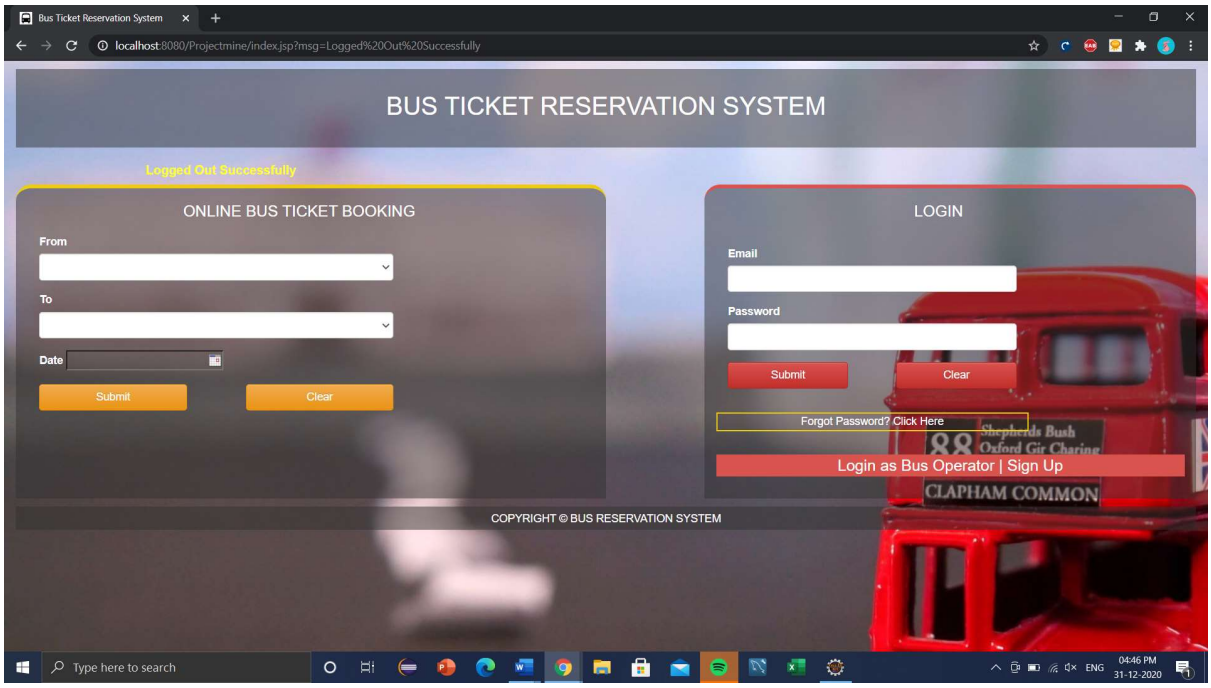
REFERENCES

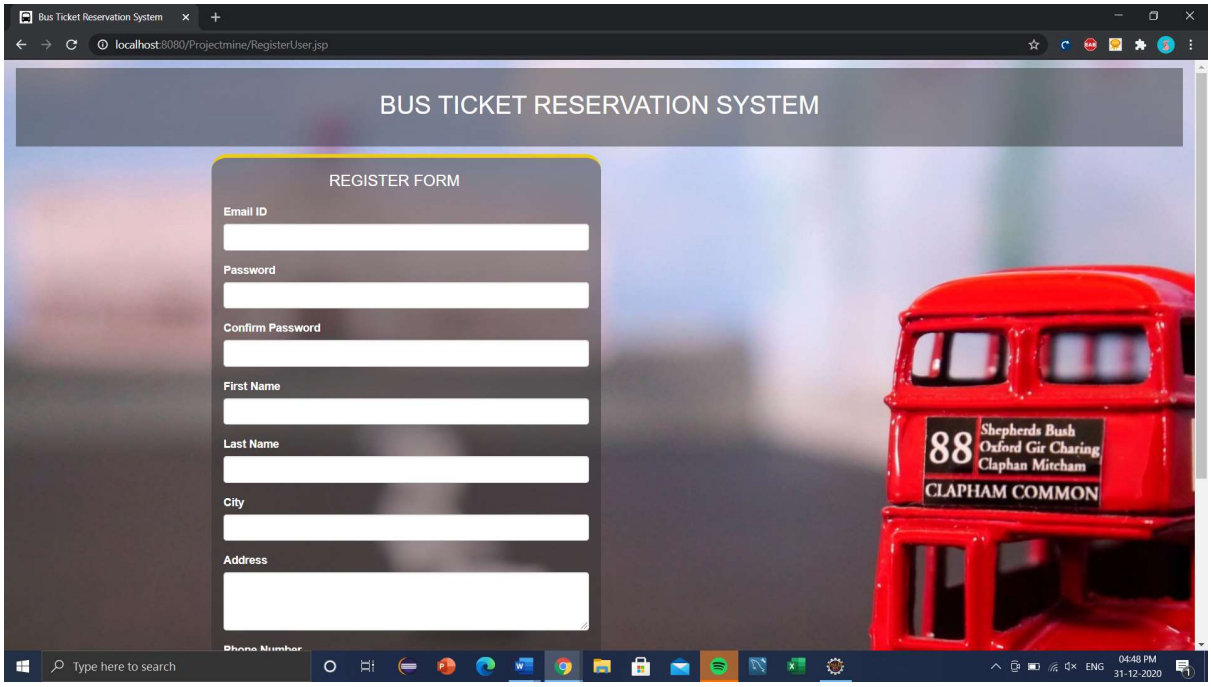
- www.researchgate.com
- www.w3schools.com
- www.javatpoint.com

APPENDIX-1

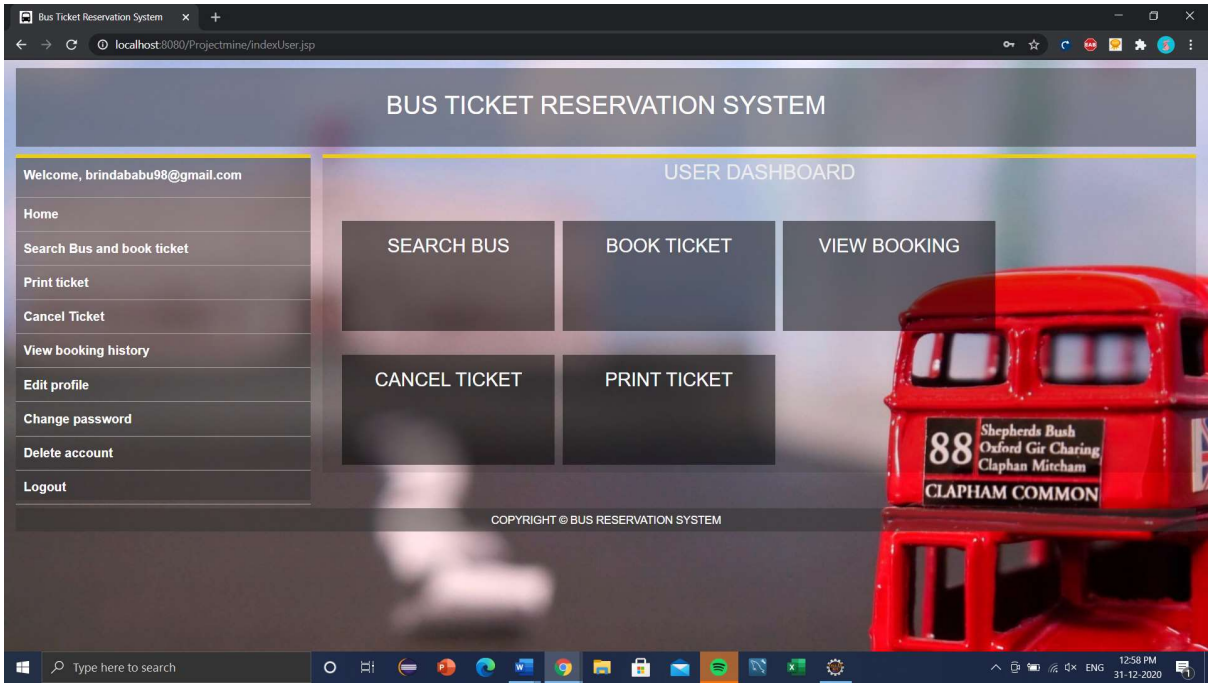
SNAPSHOTS



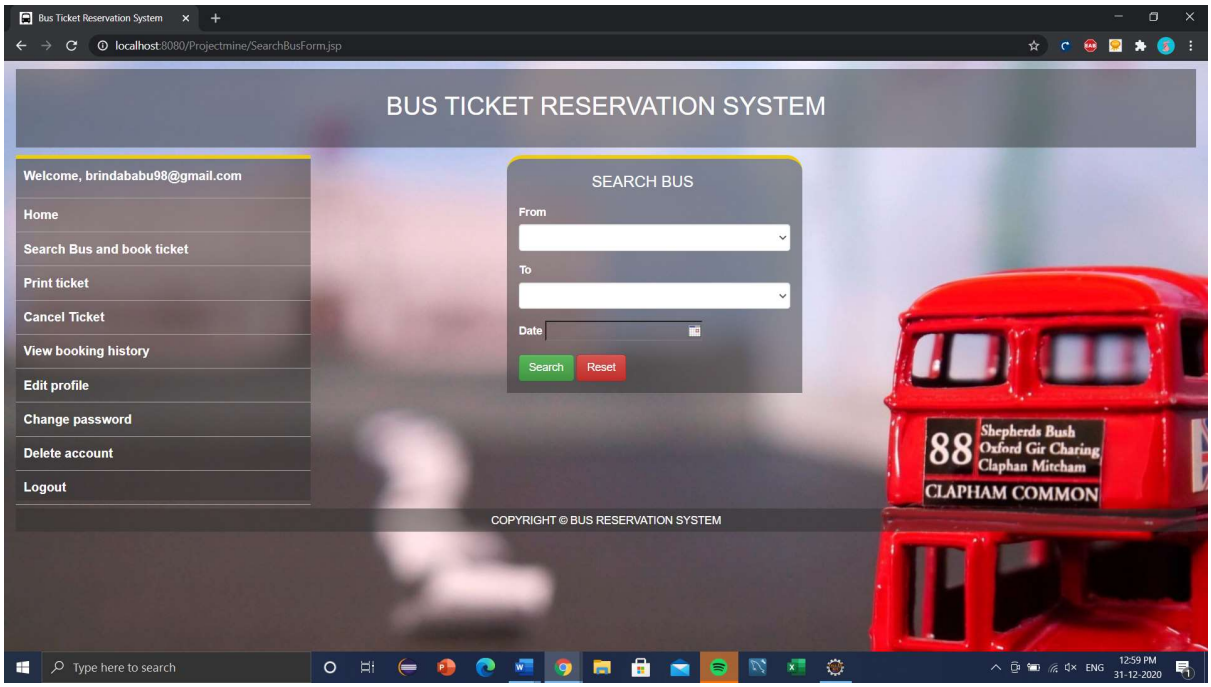
LOGIN PAGE



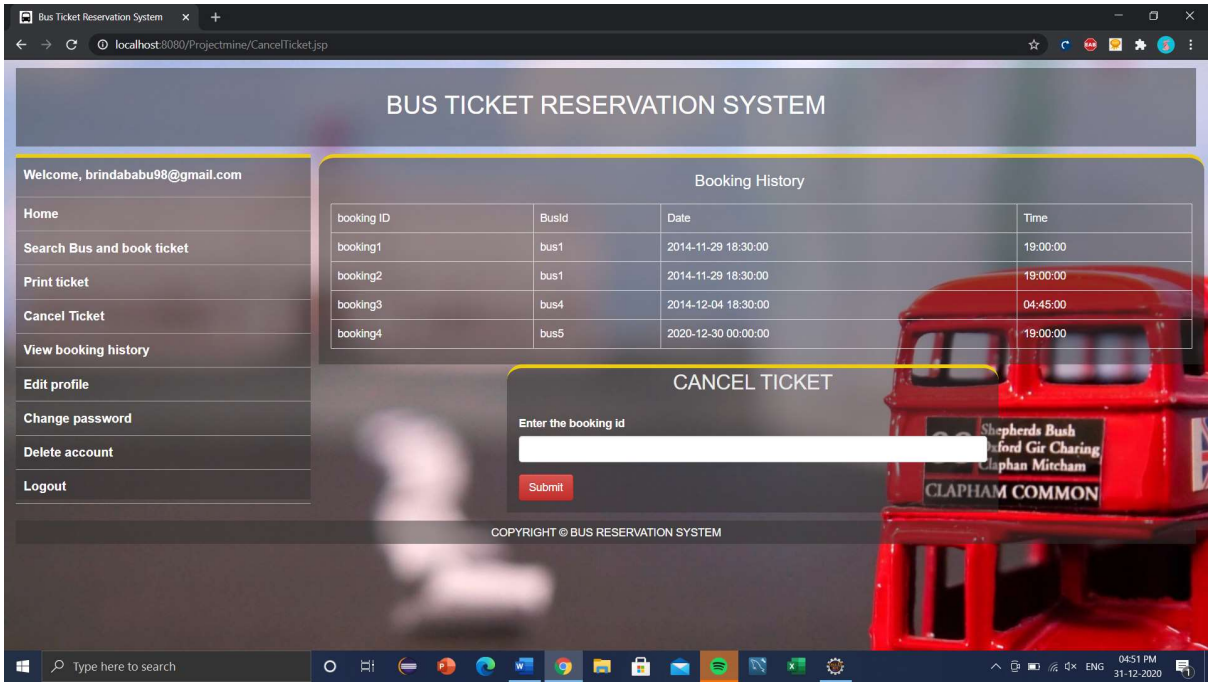
REGISTRATION PAGE



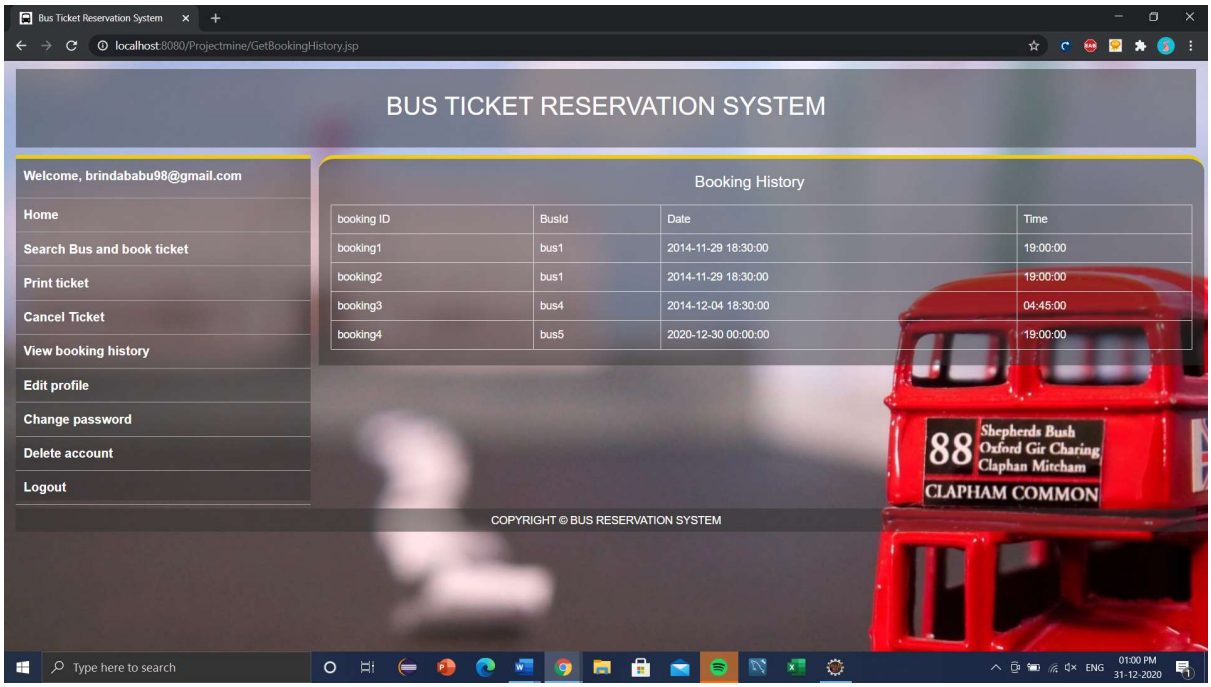
USER REGISTRATION



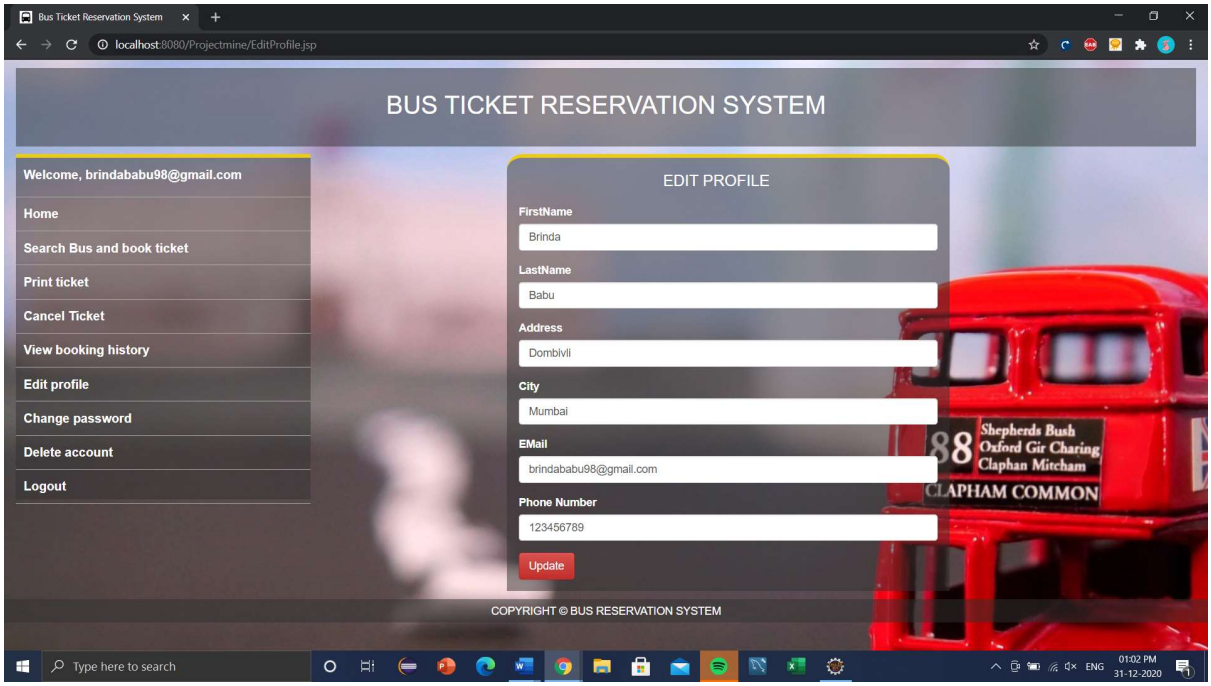
SEARCH BUS



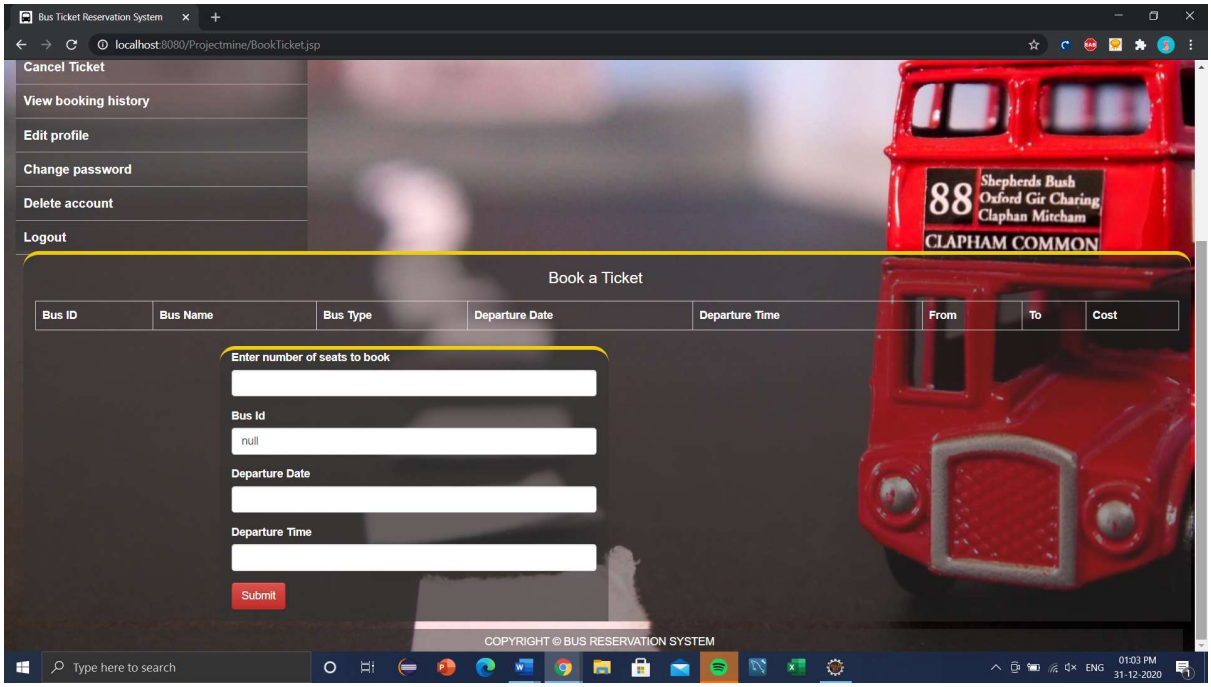
CANCEL TICKET



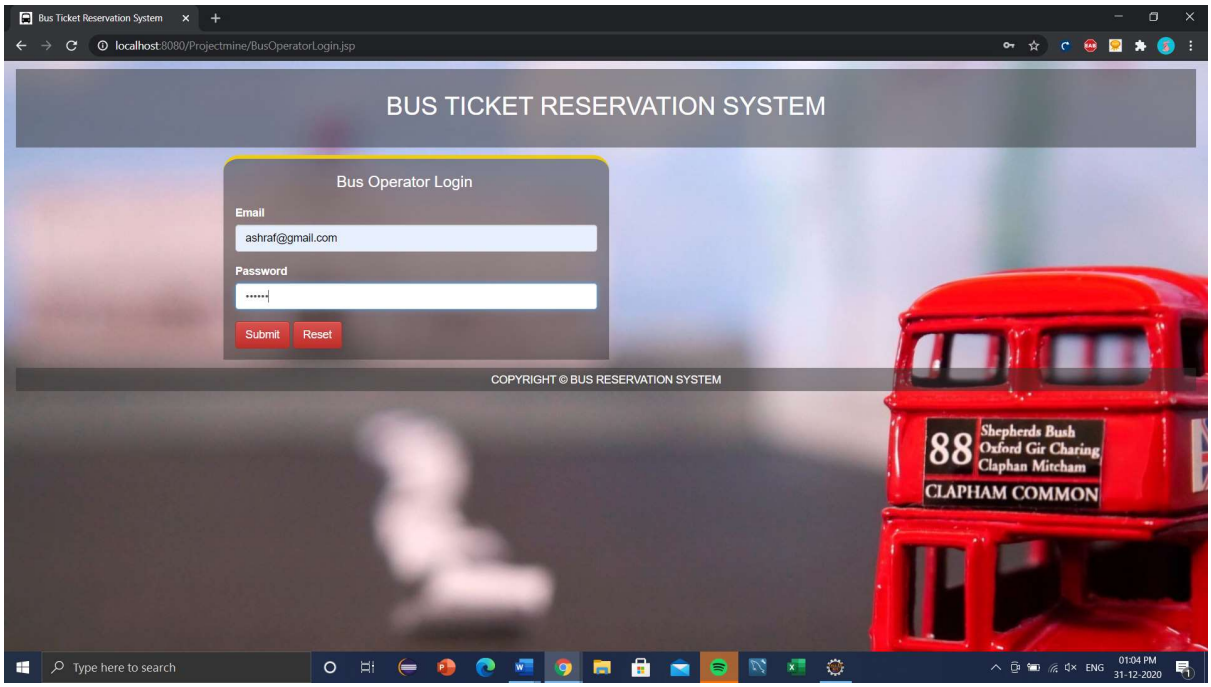
BOOKING HISTORY



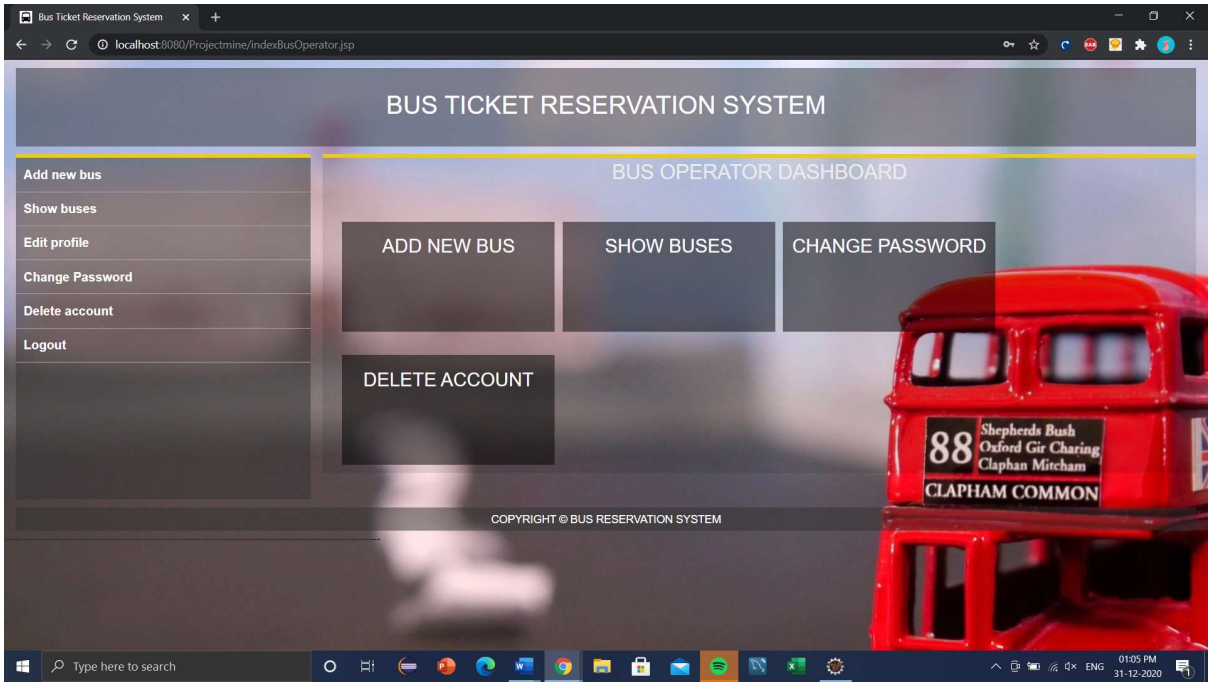
EDIT USER PROFILE



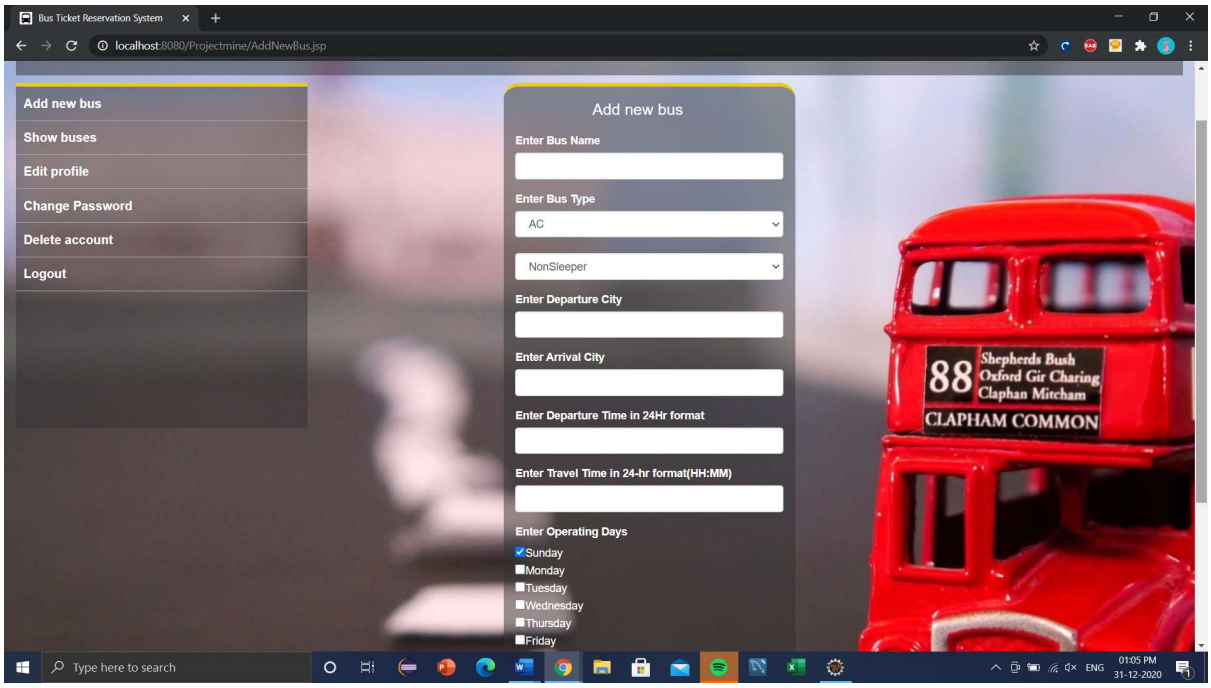
BOOK TICKET



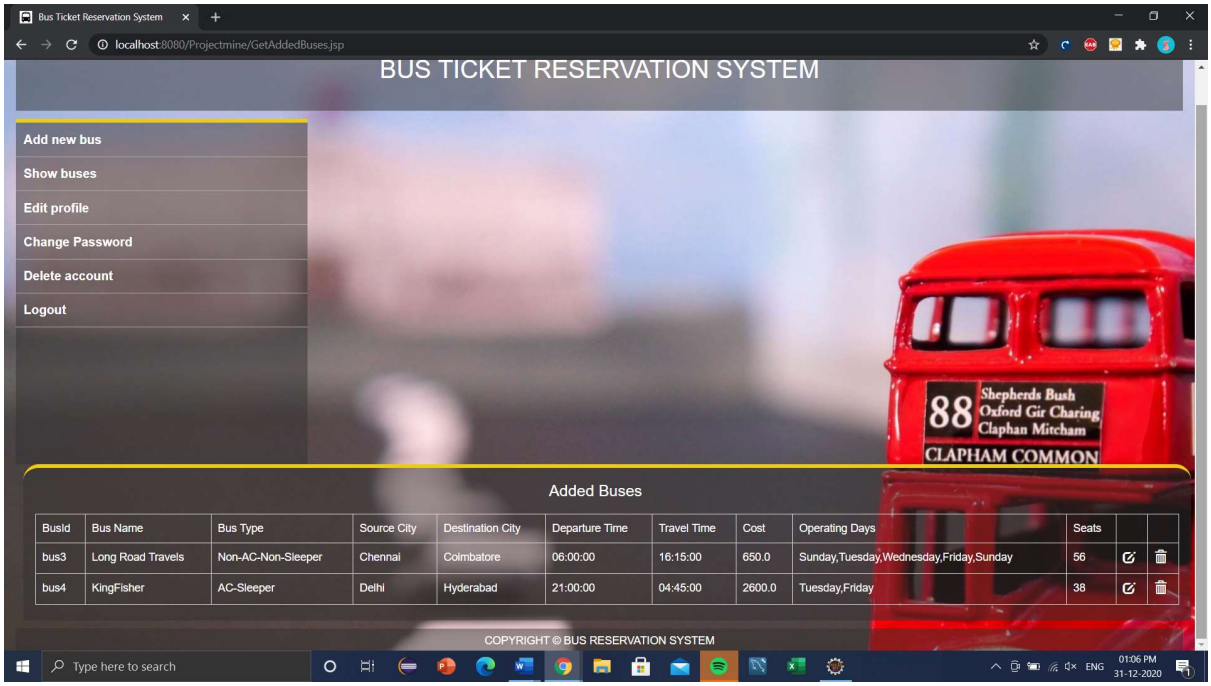
ADMIN LOGIN AS BUS OPERATOR



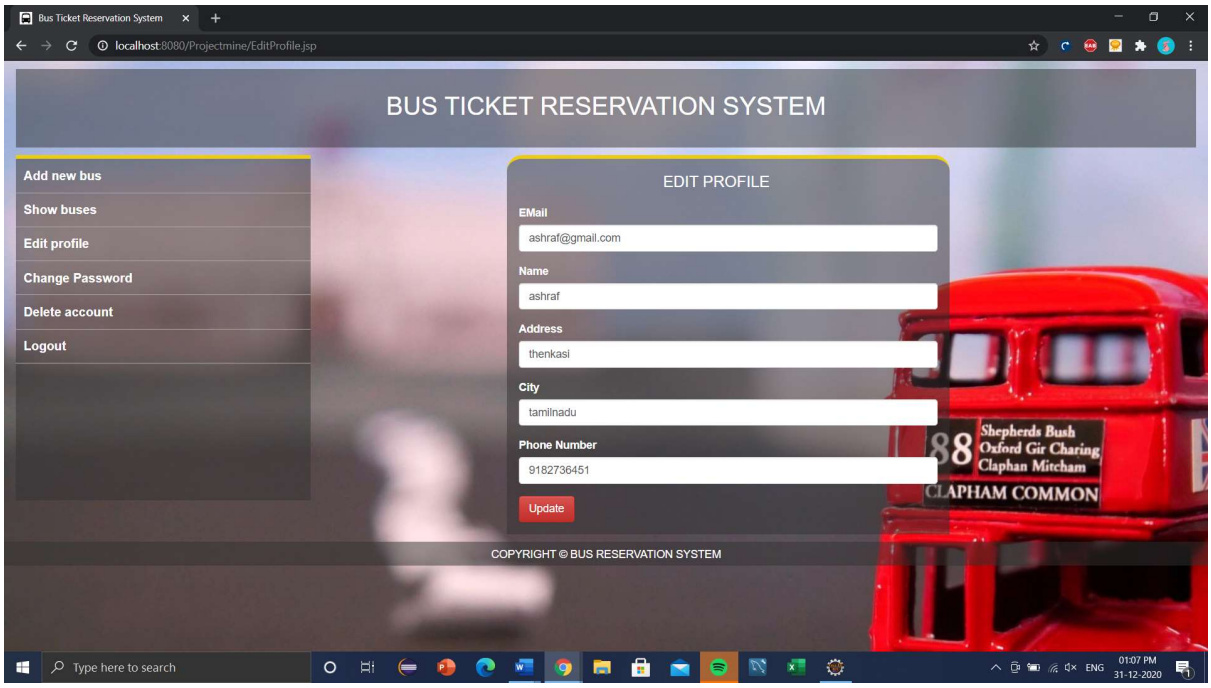
ADMIN DASHBOARD



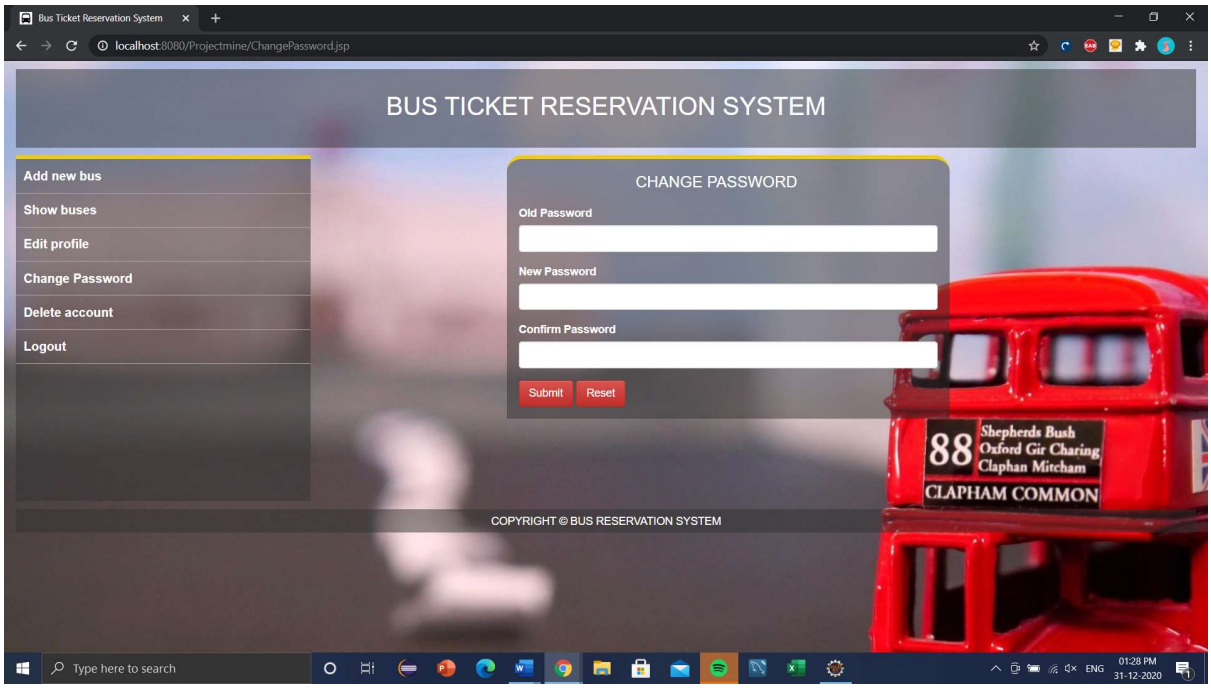
ADD NEW BUS BY ADMIN



SHOW ADDED BUSES



ADMIN EDIT PROFILE



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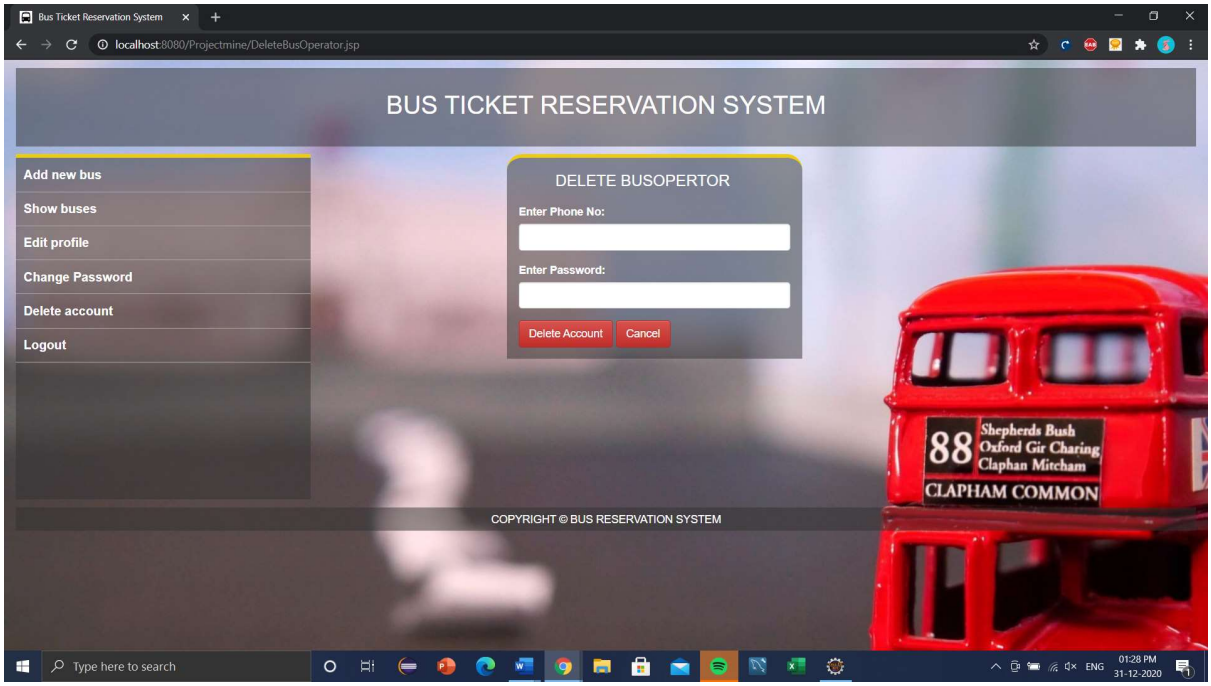

DELETE BUS OPERATOR