

**PROJECT REPORT**

A report submitted in partial fulfillment of the requirements for the

**Project**

School of Computer Science & Engineering By

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Academic Year: 2023-2024



School of Computer Science & Engineering

**CERTIFICATE**

This is to certify that the “**Project Report**”

On

# “BUS RESERVATION SYSTEM”

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is work done by him/her and submitted during the 2023 –2024 academic year, in partial fulfillment of the **Project.**

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# DECLARATION

I the undersigned solemnly declare that the report of the project work entitled **“BUS RESERVATION SYSTEM”** which is carried out under the supervision of **Mrs.Veena Mali** I assert that the statements made and conclusions drawn are an outcome of the project work. I further declare that to the best of my knowledge and belief that the project report does not contain any part of any work which has been submitted for the award of any other degree/diploma/certificate in this University or any other University.

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# ACKNOWLEDGMENT

First, I would like to thank my Head of the School **Ms. Deepika Patil** for constructive criticism throughout my project. I would like to thank Department Project Guide **Mrs.Veena Mali** for support and advices to get and complete internship in above said organization. It is indeed with a great sense of pleasure and immense sense of gratitude that I acknowledge the help of these individuals. I am extremely grateful to my department staff members and friends who helped me in successful completion of this project.



# ABSTRACT

# The Bus Reservation Program is a comprehensive software application designed to streamline and simplify the process of booking and managing bus tickets for both passengers and bus operators. In today's fast-paced world, efficient transportation systems are vital, and this program aims to enhance the user experience and optimize the operations of bus companies.

# By implementing the Bus Reservation Program, bus companies can enhance their operational efficiency and provide a convenient and reliable service to passengers. This abstract provides an overview of the program's key features and its potential to revolutionize the bus reservation process for the benefit of both passengers and bus operators.

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**INTRODUCTION**

Bus reservation refers to the process of booking seats or tickets for a bus journey in advance. It is a convenient and efficient way for travelers to secure their seats on a bus, ensuring a comfortable and hasslefree travel experience. Bus reservation systems are typically offered by bus companies, travel agencies, or online platforms, allowing passengers to choose their preferred date, time, and seating options for their trip. This service is widely used for both short-distance and long-distance travel and has become an essential part of modern transportation, providing convenience and peace of mind to passengers.

## **PROBLEM DEFINITION**

Develop a bus reservation system that allows users to efficiently book, manage, and monitor bus seat reservations for a transportation company. The system should provide an easy-to-use interface for both customers and administrators while ensuring data security and reliability. The primary goal is to streamline the bus reservation process, making it convenient for passengers and improving the efficiency of bus management for the company.

**SCOPE**

**1.**Enable customers to search for available buses, select preferred routes, and reserve seats for specific dates and times.

**2.**Provide a seat selection feature and real-time seat availability information.

**3.**Generate confirmation emails or tickets upon successful reservations.

**4.**Maintain a database of available bus routes, schedules, and associated information, including departure and arrival times, stops, and fares.

**5.**Display routes and schedules in a user-friendly interface for easy access.

**6.**Monitor seat availability in real-time to prevent overbooking.

**7.**Provide customer support options, such as FAQs, chat support, or a helpdesk, for users who encounter issues with reservations or payments.

**8.**Include a contact system for reporting problems or requesting assistance.

**PROBLEM IDENTIFICATION**

Problem identification for a bus reservation program involves recognizing the issues or challenges that a transportation company, its customers, and its operations face, which can be addressed and improved through the implementation of such a program. Here are common problems and challenges that a bus reservation program can help resolve.

# OBJECTIVES

# 1.Seat Reservation: The primary objective is to allow passengers to reserve specific seats or berths on a bus for a particular journey.

# 2. Convenience: To provide convenience to passengers by allowing them to book bus tickets from the comfort of their homes or on the go via various booking channels such as websites, mobile apps, or inperson at ticket counters.

# 3. Time-Saving: To save passengers time by reducing the need to stand in long queues at bus stations, especially during peak travel seasons.

# 4. Choice of Routes and Operators: To offer passengers a variety of bus routes, operators, and schedules to choose from, catering to their preferences and needs.

# 5. Availability Information: To provide real-time information about seat availability, bus schedules, and pricing, helping passengers make informed decisions.

# 6. Cancellation and Refund: To facilitate easy cancellation and refund processes in case passengers need to change their travel plans.

# 7. User Profiles: To allow passengers to create profiles, store their information, and manage their booking history for future reference and booking convenience.

# 8. Accessibility: To make the reservation system accessible to people with disabilities, ensuring inclusivity in transportation services.

# 9. Security: To ensure the security of passengers' personal and payment information through secure encryption and data protection measures.

# SYSTEM REQUIREMENTS SPECIFICATION

## Software Requirement:

* Turbo C
* Microsoft Visual Studio Code
* Dev C++

## **HARDWARE REQUIREMENT**

* Computer or laptop
* Intel(R) Core(TM) i3-Processor
* RAM-1 GB Minimum
* Storage-100GB

# METHODOLOGY

# ALGORITHM :

# Step 1. START

# Step 2. Display welcome message.

# Step 3. login to the bus reservation system by username and password

# Step 4. Displays main main options

# Step 5. enter choice from main menu options

# Step 6. Reserve a ticket with name and and seat number

# Step 7. Choose a bus among all the available buses.

# Step 8. Display the ticket details

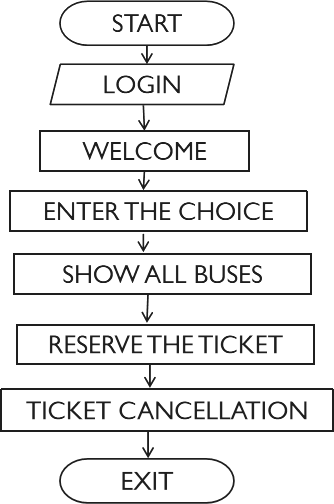
# Step 9. Display ticket reservation confirmation.

# Step 10. Enter the choice exit ,it will end the program.

# Step 11. Save the ticket reservation information in file.

# Step 12. END.

**FLOW DIAGRAM(FLOW CHART)**



## **SOURCE CODE**

#include<iostream>

#include<fstream>

#include<stdlib.h>

#include<string.h>

using namespace std;

typedef struct{

char name[50];

int bus\_num;

int seat\_num;

}pd;

void reservation(void);

void viewdetails(void);

void cancel(void);

void print ticket (char name[],int,int,float);

void specificbus(int);

float charge(int);

void login();

int main()

{

cout<<"\t\t| |\n";

cout<<"\t\t| ----------------------------- |\n";

cout<<"\t\t| BUS RESERVATION SYSTEM |\n";

cout<<"\t\t| ----------------------------- |\n";

cout<<"\t\t| |\n";

login();

int menu\_choice,choice\_return;

start:

cout<<"\n1>> Reserve A Ticket";

cout<<"\n------------------------";

cout<<"\n2>> View All Buses";

cout<<"\n------------------------";

cout<<"\n3>> Cancel Reservation";

cout<<"\n------------------------";

cout<<"\n4>> Exit";

cout<<"\n------------------------";

cout<<"\n\n-->";

cin>>menu\_choice;

switch(menu\_choice)

{

case 1:

reservation();

break;

case 2:

viewdetails();

break;

case 3:

cancel();

break;

case 4:

return(0);

break;

default:

cout<<"\nInvalid choice";

}

goto start;

return(0);

}

void viewdetails(void)

{

cout<<"------------------------------------------------------------------------------------------";

cout<<"\nbs.No\tDrivers name \tDestinations \tCharges \tTime\n";

cout<<"------------------------------------------------------------------------------------------";

cout<<"\n4738\tSagarDesai\tKasaba Bawada To Talsande\t\t120\t8.20Am";

cout<<"\n4854\tShashikantChougule \tFulewadi To Talsande \t\t130\t8am";

cout<<"\n7506\tSachin Vade \tarud sagaon To Talsande \t\t130\t7:30am";

cout<<"\n4855\tShivajiRanage \tKalamba To Talsande \t\t150\t7:30am";

cout<<"\n4850\tSandip Divtankarm \tIchalkaranji To Talsande \t\t140\t7am";

cout<<"\n4839\tRajat Patel \tHupari To Talsande \t\t140\t7:45am";

cout<<"\n2376\tSunil Jakahale \tWaliwade To Talsande \t\t125\t7:50am";

cout<<"\n4236\tDipak Chavan \tSatave To Talsande \t\t85 \t7:30am\n";

}

void reservation(void)

{

char confirm;

int i=0;

float charges;

pd passdetails;

fstream seats\_reserved;

seats\_reserved.open("seats\_reserved",ios::out);

cout<<"\nEnter Your Name:> ";

fflush(stdin);

gets(passdetails.name);

cout<<"\nChoose seat Number:> ";

cin>>passdetails.seat\_num;

cout<<"\n\n>>Press Enter To View Available Buses<< ";

viewdetails();

cout<<"\n\nEnter bus number:> ";

start1:

cin>>passdetails.bus\_num;

if(passdetails.bus\_num>=0076 && passdetails.bus\_num<=7506)

{

charges=charge(passdetails.bus\_num);

printticket(passdetails.name,passdetails.seat\_num,passdetails.bus\_num,charges);

}

else

{

cout<<"\nInvalid bus Number! Enter again--> ";

goto start1;

}

cout<<"\n\nConfirm Ticket (y/n):>";

start:

cin>>confirm;

if(confirm == 'y')

{

seats\_reserved<<"---> Customer Information <---\n";

seats\_reserved<<"1. |Name: "<<passdetails.name<<"\t"<<"|Seat Number: "<<passdetails.seat\_num

<<"\t"<<"|Bus Number: "<<passdetails.bus\_num<<"\t"<<"|Charges: "<<charges<<endl;

cout<<"=======================";

cout<<"\n\n Congratulation...... Your Reservation Done.......Happy Journey!\n\n";

cout<<"=======================";

}

else

{

if(confirm=='n'){

cout<<"\nReservation Not Done!";

}

else

{

cout<<"\nInvalid choice entered! Enter again-----> ";

goto start;

}

}

seats\_reserved.close();

}

float charge(int bus\_num)

{

if (bus\_num==4738)

{

return 120.0;

}

if (bus\_num==4854)

{

return(130.0);

}

if (bus\_num==7506)

{

return(130.0);

}

if (bus\_num==4855)

{

return(150.0);

}

if (bus\_num==4850)

{

return(140.0);

}

if (bus\_num==4839)

{

return(140.0);

}

if (bus\_num==2376)

{

return(125.0);

}

if (bus\_num==4236)

{

return(85.0);

}

}

void printticket(char name[],int seat\_num,int bus\_num,float charges)

{

cout<<"-------------------\n";

cout<<"\tTICKET\n";

cout<<"-------------------\n\n";

cout<<"Name :\t"<<name;

cout<<"\nSeat Number :\t"<<seat\_num;

cout<<"\nBus Number :\t"<<bus\_num;

specificbus(bus\_num);

cout<<"\nCharges :\t"<<charges;

}

void specificbus(int bus\_num)

{

if (bus\_num==4738)

{

cout<<"\nDrivers Name:\tSagar desai";

cout<<"\nDestination :\tKasaba Bawada To Talsande";

cout<<"\nDeparture :\t8:20am ";

}

if (bus\_num==4854)

{

cout<<"\nDrivers Name:\tShashikant Chougule";

cout<<"\nDestination :\tFulewadi TO Talsande";

cout<<"\nDeparture :\t8am";

}

if (bus\_num==7506)

{

cout<<"\nDrivers Name:\tSachin vade";

cout<<"\nDestination :\tSarud Sagaon To Talsande ";

cout<<"\nDeparture :\t7:30am";

}

if (bus\_num==4855)

{

cout<<"\nDrivers Name:\tShivaji Ranage";

cout<<"\nDestination :\tKalamba To Talsande";

cout<<"\nDeparture :\t7:30am ";

}

if (bus\_num==4850)

{

cout<<"\nDrivers Name:\tSandip Divtankar";

cout<<"\nDestination :\tIchalkaranji To Talsande";

cout<<"\nDeparture :\t7am";

}

if (bus\_num==4839)

{

cout<<"\nDrivers Name:\tRajat Patel";

cout<<"\nDestination :\tHupari To Talsande";

cout<<"\nDeparture :\t7:45am ";

}

if (bus\_num==2376)

{

cout<<"\nDrivers Name:\tSunil Jakahale";

cout<<"\nDestination :\twaliwade To Talsande";

cout<<"\nDeparture :\t7:50am ";

}

if (bus\_num==4236)

{

cout<<"\nDrivers Name:\tDipak Chavan";

cout<<"\nDestination :\tsatave TO Talsande";

cout<<"\nDeparture :\t7:30am ";

}

}

void login()

{

int a=0,i=0;

char uname[10],c=' ';

char pword[10],code[10];

char user[10];

char pass[10];

do

{

cout<<"\n ======================= LOGIN FORM =======================\n ";

cout<<" \n ENTER USERNAME:-";

cin>>uname;

cout<<" \n ENTER PASSWORD:-";

cin>>pass;

i=0;

if(strcmp(uname,"admin")==0 && strcmp(pass,"admin123")==0)

{

cout<<" \n\n\n WELCOME TO OUR SYSTEM !! YOUR LOGIN IS SUCCESSFUL";

break;

}

else

{

cout<<"\n SORRY !!!! LOGIN IS UNSUCESSFUL";

a++;

}

}

while(a<=3);

if (a>3)

{

cout<<"\nSorry you have entered the wrong username and password !!!";

}

}

void cancel(void)

{

int busnum;

cout<<"Enter the bus number: \n";

cin>>busnum;

cout<<"\n\nCancelled";

}

**RESULT**

# CONCLUSION

# In conclusion, the development and implementation of a bus reservation program are essential for addressing a multitude of challenges faced by transportation companies and their customers. By providing a systematic solution to problems such as manual booking processes, overbooking, limited access to information, and inefficient administrative tasks, a bus reservation program offers numerous benefits to both the service providers and their clientele.

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