B.M.S COLLEGE OF ENGINEERING BENGALURU
Autonomous Institute, Affiliated to VTU

SPC AAT Report on

Bus Reservation System

Submitted in partial fulfilment of the requirements for AAT

Bachelor of Engineering in
Artificial Intelligence and Machine Learning

Submitted by:

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B.M.S COLLEGE OF ENGINEERING

DEPARTMENT OF ARTIFICIAL INTELLIGENCE

AND MACHINE LEARNING

DECLARATION

We, students of 1st Semester, B.E, Department of AIML , BMS College of Engineering, Bangalore, hereby declare that, this AAT Project entitled " Bus Reservation System" has been carried out in Department of AIML , BMS College of Engineering, Bangalore during the academic semester Oct 2024 – Jan 2025. We also declare that to the best of our knowledge and belief, the AAT Project report is not from part of any other report by any other students.

Student Name Student Signature

1.AJAY A

2. ARJUN SV

BMS COLLEGE OF ENGINEERING

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CERTIFICATE

This is to certify that the AAT Project titled "Bus Reservation System" has been carried out by AJAY A (1BM25AI076-T) and ARJUN SV (1BM25AI073-T)during the academic year 2025-2026.

Signature of the Faculty in Charge

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1.INTRODUCTION

The program titled **"Bus Reservation System"** allows users to make a simple reservation by entering details such as the starting point, destination, and distance of their trip. It then automatically calculates the total fare based on a fixed rate charged per kilometre.

The program uses the **struct Reservation** structure to store and manage trip information:

- **from** – starting point of the journey
- **destination** – destination point
- **distance** – total distance of the trip in kilometres
- **price** – total cost calculated

It also uses the **time.h** library to fetch the current system time and display it as the ticket issue date. After taking inputs, it prints a formatted **bus ticket**, showing all trip details and the total amount to be paid.

ALGORITHM

1. Start.
2. Declare structure and variables.
    - Define structure Reservation with members: from, destination, distance, price.
    - Declare variable my Trip of type Reservation.
    - Declare rate PerKm as float and assign 8.21.

3.Get current date and time.

- Declare variable now of type time_t.
- Set now = time(NULL).
- Get date string using dateString = ctime(&now).

4.Display title.

- Print --- Bus Reservation & Costing ---.

5.Input trip details.

- Prompt and read starting point into myTrip.from.
- Prompt and read destination into myTrip.destination.
- Prompt and read distance (in km) into myTrip.distance.

6.Compute ticket price.

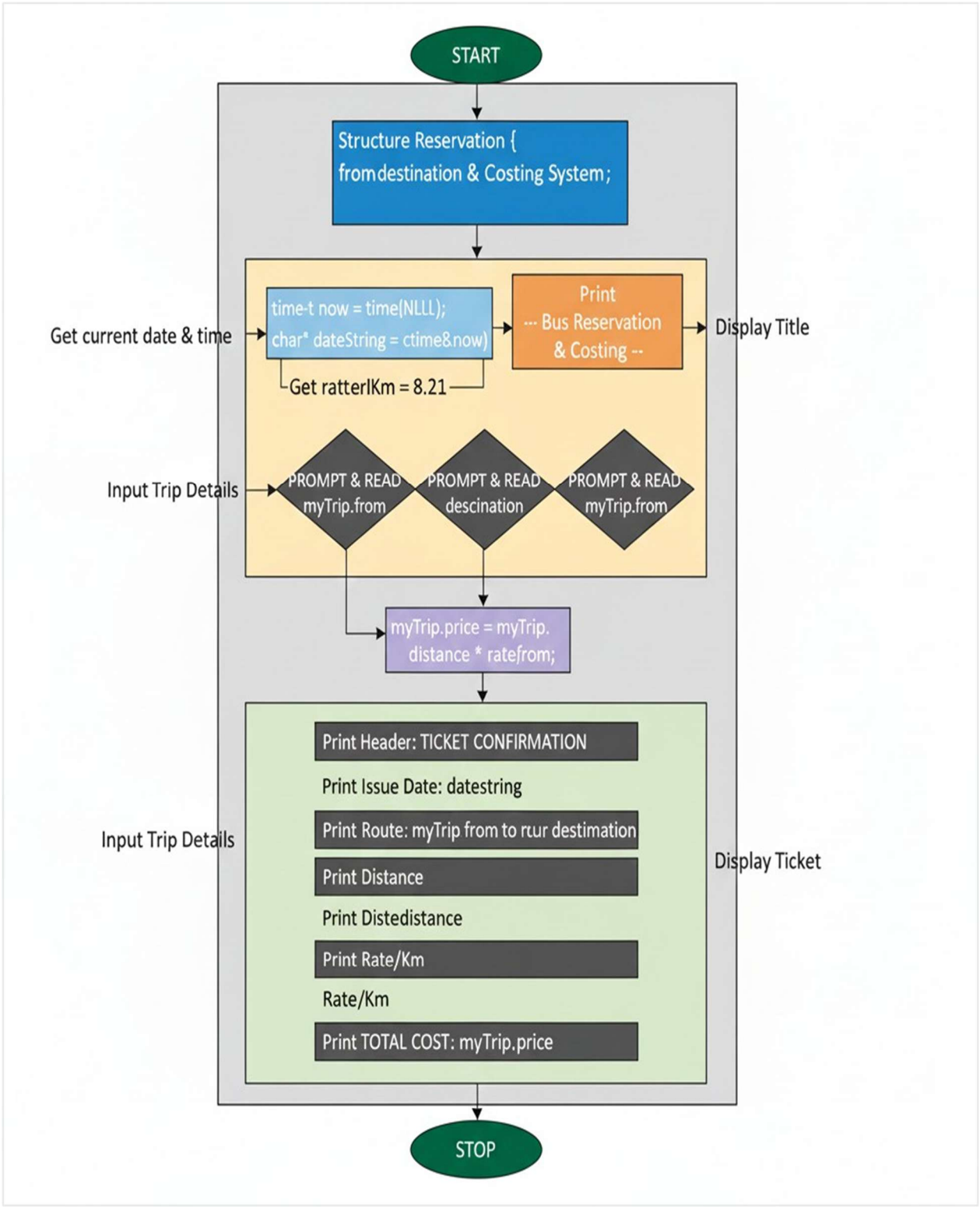
- Set myTrip.price = myTrip.distance * ratePerKm.

7.Display ticket.

- Print header lines showing ticket confirmation.
- Print issue date using dateString.
- Print route as myTrip.from to myTrip.destination.
- Print distance, rate per km, and total cost using myTrip.price.

8.Stop.

3. FLOWCHART


START
Structure Reservation {
fromdestination & Costing System;
Get current date & time
time-t now = time(NLLL);
char* dateString = ctime&now)
Print
--- Bus Reservation
& Costing --
Display Title
Get ratterIKm = 8.21
Input Trip Details
PROMPT & READ
myTrip.from
PROMPT & READ
descination
PROMPT & READ
myTrip.from
myTrip.price = myTrip.
distance * rate/rom;
Print Header: TICKET CONFIRMATION
Print Issue Date: datestring
Input Trip Details
Print Route: myTrip from to rıur destimation
Print Distance
Print Distedistance
Print Rate/Km
Rate/Km
Print TOTAL COST: myTrip.price
Display Ticket
STOP

4. SOURCE CODE

```
#include <stdio.h>
#include <time.h>

struct Reservation {
    char from[50];
    char destination[50];
    float distance;
    float price;
};

int main() {
    struct Reservation myTrip;
    float ratePerKm = 8.21;

    time_t now = time(NULL);
    char* dateString = ctime(&now);

    printf("--- Bus Reservation & Costing ---\n");

    printf("Enter Starting Point: ");
    scanf("%s", myTrip.from);

    printf("Enter Destination: ");
    scanf("%s", myTrip.destination);

    printf("Enter Distance (in km): ");
    scanf("%f", &myTrip.distance);


    myTrip.price = myTrip.distance * ratePerKm;
```

```
    printf("\n================================");
    printf("\n      BUS TICKET CONFIRMED    ");
    printf("\n================================");
    printf("\nIssued on:   %s", dateString);
    printf("Route:       %s to %s", myTrip.from, myTrip.destination);
    printf("\nDistance:    %.2f km", myTrip.distance);
    printf("\nRate/Km:     %.2f", ratePerKm);
    printf("\n-----------------------------");
    printf("\nTOTAL COST:  %.2f", myTrip.price);
    printf("\n================================\n");

    return 0;
}
```

5. RESULTS (Output)

```
--- Bus Reservation & Costing ---
Enter Starting Point: Chennai
Enter Destination: Hosur
Enter Distance (in km): 330

==================================
      BUS TICKET CONFIRMED
==================================
Issued on:   Tue Dec 23 16:15:00 2025
Route:       Chennai to Hosur
Distance:    330.00 km
Rate/Km:     8.21
------------------------------
TOTAL COST:  2709.30
==================================
```

6.REFERENCES

The reference for the bus reservation system code is based on widely available educational examples and tutorials for implementing basic ticket booking systems in C. These examples can be found on popular programming and tutorial websites such as:

- GeeksforGeeks: Bus Reservation System in C with features like seat booking, cancellation, and status display.
- Study tonight: Projects and tutorials on bus reservation systems using C language.
- GitHub repositories hosting simple bus reservation system projects in C with source code available for learning.
- Educational project sites like Project Geek and Scribd, which provide mini projects and detailed explanations of bus reservation systems.

These references provide foundational ideas and source code templates for building interactive console-based reservation systems using arrays, loops, conditionals, and menu-driven input handling in C.