

**FINAL STAGE PROJECT SUBMISSION
REPORT
LAB BATCH-231 (TUESDAY)**

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Introduction

Our program deals with the reservation of tickets of a bus system. This program is consist of several features which can be used in all bus services like reservation of current and advance tickets, cancellation of already reserved ticket, enquiry about the route and the status of the booked tickets. Passenger list and rules of the bus service are some of the additional features. Our program shows the complete details of the route between the two stations, their arrival and departure time.

We are using 4 buses in our service. The origination of journey is Mumbai and they will go to four destinations namely Bangalore, Ahemdabad, Bhopal and Goa. We have associated four files, one for each bus, Bus1.txt, Bus2.txt, Bus3.txt and Bus4.txt respectively. Every passenger details are stored in corresponding file regardless of date. When needed, information can be read from or written into these files and displayed on the output screen.

Brief Description of Different Modules & Programs

i) Use of Classes in our project : We have used a single class named 'bus'. This includes all the data variables and member functions needed for this project. All the different aspects of the users details are stored in variables like name, age, sex, seatno, ticketno ,date and month .Member functions uses these variables for computation and perform their respective tasks

```
class bus
```

```
{
```

```
int seatno;    /*seat no will be allocated to the user in a specific manner such that only empty seats  
               are allocated to the users*/
```

```
char name[30]; //name of the users who come for reservation*/
```

```
int age;
```

```
char sex;    // M/F. Although it does not catch the error if character other than M/F are input.
```

```
int date;    //Date of the journey. Dates are not validated. Any integer is accepted as dates.
```

```
int month;   //Month of the journey. Months are not validated. Any integer is accepted as month
```

```
int ticketno; //Ticket number is calculated using seatno, date, month and choice of destination
```

```
public:
```

```
fnReservation(int);
```

```
fnCancellation();
```

```
fnSeatno(int,int,int);
```

```
fnShowTicket(int,int,int,int);
```

```
fnEnquiry();
```

```
fnTicketStatus();
```

```
fnPassengerList();
```

```
fnRules();
```

```
fnBusRunningInfo();
```

```
fnSeatAvailability();
```

```
}
```

User needs to continuously enter his details as the program proceeds. He needs to enter his personal details at the time of reservation. Ticketno is the main tool using which he can get the available facilities.

ii) Use of Functions in Our Project:

```
void fnMainScreen();
```

```
/*this function shows the initial screen or main menu*/
```

```
Void fnprintline();
```

```
/*this function displays a bunch of '*' (asterisk) in a line to differentiate different part of the display*/
```

```
void fnreservation(int);
```

```
//user will give his choice 1/2/3/4 and we will work on respective destination
```

```
void fncancellation( );
```

```
/*for cancelling a booked ticket. User needs to input his choice of destination and ticket no. and this function will cancel the ticket if the entries are valid, otherwise it will display an error message. After cancellation the seat will be shown vacant for further reservation*/
```

```
void fnenquiry( );
```

```
/*under enquiry we are going to work with features like seat availability ,bus running information, rules, passenger list, ticket status*/
```

```
/*as the user opt for enquiry, choices for several sub-enquiries will be displayed and he need to choose among them, depending upon his requirement.*/
```

```
void fnseatavailability( );
```

```
/* this comes under enquiry section. On a particular date in a particular bus we will show the number of seat vacant and occupied. User needs to enter the date and destination choice on which he wants to see the availability. This function will show the no. of seats vacant. If full, a message will be displayed.*/
```

```
void fnBusRunninginfo( );
```

```
/*this comes under enquiry section. User needs to enter the destination choice and the system will display the complete route, stoppage and duration of journey.*/
```

```
void fnRules( );
```

```
// this comes under enquiry section. It will only show the rules of travelling.
```

```
void fnPassengerlist( );
```

```
/*this comes under administrative section. ) n a particular date in a particular bus it will show the list of the passenger and their details.*/
```

```
Void fnTicketStatus( );
```

```
/*this comes under enquiry section. whenever user comes to enquire his ticket, user needs to input destination choice and ticket no. and it will display the total information of his/her reservation*/
```

```
void fnShowTicket(int,int,int,int);
```

```
//when the reservation is complete; it will display the ticket in a pre-defined //fashion. It will take three parameters Destination choice, Seat no. and Ticket no.
```

```
void fnseatno(int,int,int);
```

```
// this function deals with the allotment of the seats.
```

Division Of Functions Among the Members

Function	Member
fnReservation	Gaurav Kumar
fnCancellation	Dev Narayan
fnEnquiry	Gourab Bhattacharya
fnSeatAvailability	Gourab Bhattacharya
fnTicketStatus	Debanjan Guha Roy
fnPassangerlist	Gaurav Mani
fnShowTicket	Devesh Kumar
fnSeatNo	Dev Narayan
fnRules	Gaurav Mani
fnBusRunningInfo	Dan Singh Meena
FnPrintLine	Dev Narayan
fnMainScreen	Dev Narayan

Software Specification Requirement

The user and the administrator must have the following requirements: -

1. Ubuntu OS.
2. The input keys must be typed in the terminal.

Status of Completion

The assigned program is now complete and RUNNING SUCCESSFULLY. It is ready for future use.

We decided to work with 4 buses and coded our program accordingly. But our project was not showing the required details because variables 'date' and 'month' were dynamically changing its value all over the program. Our TA suggested that it is very difficult to make improvement in the existing program and maybe we need to code another one. So, we decided to code our project without 'date' and 'month', i.e., removing the two most important variables of our program. We were finally able to code the same that works fine without any date and month. Then we had enough time to think upon the logic to include 'date' and 'month' in different way. After many ups and downs, we finally succeeded in coding another one, this time including 'date' and 'month'.

Changes Made From That Mentioned in SRS

We stick to what we had stated in first stage SRS Document, except that we could not work on graphics (EZ Windows) due to insufficient time.

Further, we are submitting two codes, one including date and month and another excluding them. This is because our code was not working with date and month variables initially.

Ideas for Future Work

- Extrapolation to n-number of buses & n-number of routes.
 - Designing the functions for administrative purpose.
 - Providing the user with the choice to reserve his ticket from any bus-stop in a particular route (as now, reservation is only from Mumbai to destination stop).
 - Concession for students and elderly persons.
 - Providing the user to choose AC/ Non-AC buses.
 - Using graphics for user interface.
-

Peer Review

Member	Claimed Marks	Peer Marks
Dev Narayan	10	10
Debanjan Guha Roy	6	7
Gaurav Kumar	8	9
Gourab Bhattacharya	5	6
Devesh Kumar	6	6
Dan Singh Meena	5	4
Gaurav Mani	7	4

Working Hours

Member	Discussions	Design	Programming	Testing	Documentation	Misc.	Total
Dev Narayan	27	22	5	15	4	2	73
Debanjan Guha Roy	26	5	2	2	5	4	42
Gaurav Kumar	27	10	2	15	2	1	55
Gourab Bhattacharya	26	3	1	2	2	1	33
Devesh Kumar	22	4	1	2	2	1	32
Dan Singh Meena	9.30	1	0	0	1	0	11.30
Gaurav Mani	16	1	0	0	1	3	21