

## BATCH\_01\_PBL\_TICKET\_BOOKING.c

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1  #include<stdio.h>
2  #include<stdlib.h>
3  #include<stddef.h>
4  #include<string.h>
5  struct ticket_booking
6  {
7      char name[50];
8      int bus_num;
9      int num_of_tickets;
10 };
11 void clear_screen()
12 {
13     printf("\033[H\033[J");    //ANSI escape code to clear the screen //ANSI stands for the
    American National Standards Institute
14 }
15 void available_buses()
16 {
17     clear_screen();
18     printf("| Bus no | Bus name | Destination | Fare | Time |\n");
19     printf("-----\n");
20     printf("| 533101 | Bus A | Kakinada to Visakhapatnam | Rs.500 | 9am |\n");
21     printf("| 533102 | Bus B | Kakinada to Vizianagaram | Rs.500 | 11am |\n");
22     printf("| 533103 | Bus C | Rajahmundry to Vizianagaram | Rs.450 | 3pm |\n");
23     printf("| 533104 | Bus D | Visakhapatnam to Rajahmundry | Rs.450 | 8pm |\n");
24     printf("| 533105 | Bus E | Vizianagaram to Kakinada | Rs.500 | 10pm |\n");
25 }
26 void print_bus(int bus_num)
27 {
28     switch(bus_num)
29     {
30         case 533101:
31             printf("Bus : Bus A\n");
32             printf("Destination : Kakinada to Visakhapatnam\n");
33             printf("Departure : 9am\n");
34             break;
35         case 533102:
36             printf("Bus : Bus B\n");
37             printf("Destination : Kakinada to Vizianagaram\n");
38             printf("Departure : 11am\n");
39             break;
40         case 533103:
41             printf("Bus : Bus C\n");
42             printf("Destination : Rajahmundry to Vizianagaram\n");
43             printf("Departure : 3pm\n");
44             break;
45         case 533104:
46             printf("Bus : Bus D\n");
47             printf("Destination : Visakhapatnam to Rajahmundry\n");
48             printf("Departure : 8pm\n");
49             break;
50         case 533105:
51             printf("Bus : Bus E\n");
52             printf("Destination : Vizianagaram to Kakinada\n");
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53         printf("Departure           : 10pm\n");
54         break;
55     default:
56         printf("Invalid bus number!!\n");
57         break;
58     }
59 }
60 float fare(int bus_num, int num_of_tickets)
61 {
62     return (bus_num == 533103 || bus_num == 533104) ? (float)(num_of_tickets * 450) : (float)
(num_of_tickets * 500);
63 }
64 void print_ticket(struct ticket_booking *details, float charge)
65 {
66     clear_screen();
67     printf("=====\n");
68     printf("                DETAILS\n");
69     printf("=====\n");
70     printf("Name           : %s\n", details->name);
71     printf("Number of tickets : %d\n", details->num_of_tickets);
72     printf("Bus number      : %d\n", details->bus_num);
73     print_bus(details->bus_num);
74     printf("Fare           : Rs/- %.2f\n", charge);
75 }
76 void book()
77 {
78     char confirm;
79     struct ticket_booking *details=(struct ticket_booking *)malloc(sizeof(struct
ticket_booking));
80     printf("Enter your name : ");
81     scanf("%[^\n]s",details->name);
82     printf("Enter number of tickets : ");
83     scanf("%d",&details->num_of_tickets);
84     printf("Press enter to view all available buses.\n");
85     getchar();      //Consume newline
86     getchar();      //Wait for key press
87     clear_screen();
88     available_buses();
89     printf("Enter bus number : ");
90     scanf("%d",&details->bus_num);
91     if(details->bus_num >= 533101 && details->bus_num <= 533105)
92     {
93         float charge=fare(details->bus_num,details->num_of_tickets);
94         print_ticket(details,charge);
95         printf("Are you sure you want to confirm? (y/n) : ");
96         scanf(" %c",&confirm);
97         if(confirm=='y' || confirm=='Y')
98         {
99             printf("Booking successful! Wishing you a happy journey.\n");
100             free(details);
101             exit(0);
102         }
103         else
104         {
105             printf("Booking not successful! Please try again.\n");
106             free(details);
107             exit(0);

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108     }
109 }
110 else
111 {
112     printf("Invalid bus number! Booking failed.\n");
113     free(details);
114     exit(0);
115 }
116 }
117 int main()
118 {
119     int choice;
120     do
121     {
122         clear_screen();
123         printf("=====\n");
124         printf("        WELCOME TO TICKET BOOKING SYSTEM\n");
125         printf("=====\n");
126         printf("1. Book a ticket\n");
127         printf("2. Available buses\n");
128         printf("3. Exit\n");
129         printf("Enter your choice (1-3) : ");
130         scanf("%d",&choice);
131         switch(choice)
132         {
133             case 1:
134                 book();
135                 break;
136             case 2:
137                 available_buses();
138                 printf("Press any key to go back to main menu.\n");
139                 getchar(); // Consume newline
140                 getchar(); // Wait for key press
141                 break;
142             case 3:
143                 exit(0);
144             default:
145                 printf("Invalid choice! Please enter a valid choice.\n");
146                 exit(0);
147         }
148     }while(1);
149     return 0;
150 }
151

```