

```
1 import java.util.ArrayList;
2 import java.util.List;
3 import java.util.Scanner;
4
5 class BusTicketBooking {
6     private static final int AC_TICKET_PRICE
7         = 300;
8     private static final int
9         NON_AC_TICKET_PRICE = 90;
10    private static final int
11        DISCOUNT_THRESHOLD = 35;
12    private static final int
13        DISCOUNT_PERCENTAGE = 30;
14    private static final int TOTAL_SEATS = 40
15    ;
16
17    private static List<String> acBuses = new
18        ArrayList<>();
19    private static List<String> nonAcBuses =
20        new ArrayList<>();
21    private static List<String>
22        availableSeats = new ArrayList<>();
23
24    public static void main(String[] args) {
25        initializeBuses();
26        initializeSeats();
27
28        Scanner scanner = new Scanner(System.
29            in);
30
31        System.out.println("Welcome to the
32            bus ticket booking system!");
33
34        System.out.println("Please select
35            your preference:");
```

```
25         System.out.println("1. AC");
26         System.out.println("2. Non-AC");
27         int preference = scanner.nextInt();
28
29         if (preference == 1) {
30             displayBuses(acBuses);
31         } else if (preference == 2) {
32             displayBuses(nonAcBuses);
33         } else {
34             System.out.println("Invalid
preference selected. Exiting the program.");
35             return;
36         }
37
38         System.out.println("Please select a
bus:");
39         List<String> selectedBuses = (
preference == 1) ? acBuses : nonAcBuses;
40         int busSelection = scanner.nextInt();
41
42         if (busSelection < 1 || busSelection
> selectedBuses.size()) {
43             System.out.println("Invalid bus
selection. Exiting the program.");
44             return;
45         }
46
47         String selectedBus = selectedBuses.
get(busSelection - 1);
48
49         System.out.println("Please select a
time slot:");
50         System.out.println("1. 9 am");
51         System.out.println("2. 12 pm");
52         System.out.println("3. 3 pm");
```

```
53         System.out.println("4. 6 pm");
54         int timeSlot = scanner.nextInt();
55
56         System.out.println("Please select
your seat preference:");
57         System.out.println("W - Window seat"
);
58         System.out.println("A - Aisle seat");
59         String seatPreference = scanner.next
();
60
61         int ticketPrice;
62         if (preference == 1) {
63             ticketPrice = AC_TICKET_PRICE;
64         } else {
65             ticketPrice = NON_AC_TICKET_PRICE
;
66         }
67
68         displayAvailableSeats();
69
70         System.out.println("Please enter the
seat number:");
71         int seatNumber = scanner.nextInt();
72
73         if (seatNumber < 1 || seatNumber >
TOTAL_SEATS || !availableSeats.contains(
String.valueOf(seatNumber))) {
74             System.out.println("Invalid seat
selection. Exiting the program.");
75             return;
76         }
77
78         if (seatNumber >= DISCOUNT_THRESHOLD
&& seatNumber <= 50) {
```

```
79         double discountAmount = (
    ticketPrice * DISCOUNT_PERCENTAGE) / 100.0;
80         ticketPrice -= discountAmount;
81     }
82
83     System.out.println("Thank you for
    booking with us!");
84     System.out.println("Your ticket
    details:");
85     System.out.println("Bus Type: " + (
    preference == 1 ? "AC" : "Non-AC"));
86     System.out.println("Bus name: " +
    selectedBus);
87     System.out.println("Bus Time: " +
    getTimeSlot(timeSlot));
88     System.out.println("Seat Number: "
    + seatNumber);
89     System.out.println("Ticket Price: Rs
    . " + ticketPrice);
90 }
91
92 private static void initializeBuses() {
93     acBuses.add("AC 1");
94     acBuses.add("AC 2");
95     acBuses.add("AC 3");
96
97     nonAcBuses.add("State Bus 1");
98     nonAcBuses.add("State Bus 2");
99     nonAcBuses.add("State Bus 3");
100 }
101
102 private static void initializeSeats() {
103     for (int i = 1; i <= TOTAL_SEATS; i
    ++ ) {
104         availableSeats.add(String.
```

```
104 valueOf(i));
105     }
106 }
107
108     private static void displayBuses(List<
String> buses) {
109         System.out.println("Available Buses
:");
110         for (int i = 0; i < buses.size(); i
++) {
111             System.out.println((i + 1) +
". " + buses.get(i));
112         }
113     }
114
115     private static void
displayAvailableSeats() {
116         System.out.println("Available Seats
:");
117         for (String seat : availableSeats) {
118             System.out.print(seat + " ");
119         }
120         System.out.println();
121     }
122
123     private static String getTimeSlot(int
timeSlot) {
124         switch (timeSlot) {
125             case 1:
126                 return "9 am";
127             case 2:
128                 return "12 pm";
129             case 3:
130                 return "3 pm";
131             case 4:
```

```
132             return "6 pm";
133         default:
134             return "Invalid Time Slot";
135     }
136 }
137 }
138
```