TICKET BOOKING

Ram and Ghosal wants to book ticket online from Kolkata to Delhi but they got curious on how the booking works, can you help them understand how the booking works through a code?

PROGRAM:-

```
// C program for the above approach
#include <conio.h>
#include <stdio.h>
#include <stdlib.h>
#include <string.h>

// Defining Structure
typedef struct mynode {
        char name[20];
        char gen[6];
        int age;
        struct mynode* link;
} Node;

Node* start = NULL;

void details(int);
int seat(int);
int cal(int, int, int);
void bill(int, int);

// Global variables
char source[20], des[20], train[40];
char station[40], cla[40];
int time1, time2, a[55];

// Driver Code
void main()
{
        int i, j, a1, a2, b, c, int x = 0, d, e, r;
        char o;
        printf("Enter Number Of Passengers: ");
        fflush(stdin);
        scanf("%d", &j);
```

```
// Calling details() function with
// argument number of passenger
details(j);
printf("Enter The Source Place: ");
fflush(stdin);
gets(source);
printf("Enter The Destination Place: ");
gets(des);
printf("\t\tThe Following Trains "
        "Are Available.....\n");
printf("\t\t1. Rajdhani Express.."
        ".......10:00 "
        "a.m........Sealdah Station\n");
printf("\t\t2. Satabdi Express..."
        ".......05:00 "
        "p.m........Howrah Station\n");
printf("\t\t3. Humsafar Express..."
        ".......11:00 "
        "p.m........Kolkata Chitpur"
        " Station\n");
printf("\t\t4. Garib-Rath Express"
        "........05:00 "
        "p.m........Sealdah Station\n");
printf("\t\t5. Duronto Express..."
        "........07:00 "
        "a.m........Santraganchi"
        "Station\n");
scanf("%d", &i);
do {
        switch (i) {
        case 1: {
                strcpy(train,
                        "Rajdhani Express");
                strcpy(station,
                        "Sealdah Station");
                time1 = 10;
                time2 = 00;
                a1 = 2099;
                a2 = 1560;

                // Calling cal() function
                // with the three argument
                // and return value
```

```
        d = cal(a1, a2, j);
        printf("Total Bill Amount:"
               " %d\n",
               d);
}; break;
case 2: {
        strcpy(train,
               "Satabdi Express");
        strcpy(station,
               "Howrah Station");
        time1 = 05;
        time2 = 00;
        a1 = 1801;
        a2 = 981;

        // Calling cal() function with
        // three argument & return value
        d = cal(a1, a2, j);
        printf("Total Bill Amount:"
               "%d\n",
               d);
}; break;
case 3: {
        strcpy(train,
               "Humsafar Express");
        strcpy(station,
               "Kolkata Chitpur Express");
        time1 = 11;
        time2 = 00;
        a1 = 2199;
        a2 = 1780;

        // Calling cal() function with
        // three argument & return value
        d = cal(a1, a2, j);
        printf("Total Bill Amount: %d\n", d);
}; break;
case 4: {
        strcpy(train, "Garib-Rath Express");
        strcpy(station, "Sealdah Station");
        time1 = 05;
        time2 = 00;
        a1 = 1759;
        a2 = 1200;
```

```
                        // Calling cal() function with
                        // three argument & return value
                        d = cal(a1, a2, j);
                        printf("Total Bill Amount: %d\n", d);
                }; break;
                case 5: {
                        strcpy(train, "Duronto Express");
                        strcpy(station, "Santraganchi Station");
                        time1 = 07;
                        time2 = 00;
                        a1 = 2205;
                        a2 = 1905;

                        // Calling cal() function with
                        // three argument & return value
                        d = cal(a1, a2, j);
                        printf("Total Bill Amount: %d\n", d);
                }; break;
                default:
                        printf("Enter Correct choice.....\n");
                        x = 1;
                        break;
                }
        } while (x);
        printf("Now Book Your Seats......\n");

        // Calling seat() function with number
        // of passenger
        seat(j);

        // Calling bill() function with
        // the number of passenger
        // and amount argument
        bill(d, j);
}

// Function for calculation of amount
int cal(int y1, int y2, int h)
{
        int b, c, i, t, r, n;
        printf("\t\tEnter Your Choice......\n");
        printf("\t\t1. Slepper Class....\n");
        printf("\t\t2. A.C Class.......\n");
```

```
        scanf("%d", &i);
        switch (i) {
        case 1: {
                strcpy(cla, "Slepper Class");
                b = y2 * h;
                c = b + (b * 0.18);
        } break;
        case 2: {
                printf("\t\tEnter Your Choice....\n");
                printf("\t\t1. 3A Class....\n");
                printf("\t\t2. 2A Class....\n");
                printf("\t\t3. 1st Class A.C.....\n");
                scanf("%d", &n);
                switch (n) {
                case 1: {
                        strcpy(cla, "3A Class");
                        b = y1 * h;
                        c = b + (b * 0.18);
                } break;
                case 2: {
                        strcpy(cla, "2A Class");
                        b = (y1 + 1000) * h;
                        c = b + (b * 0.18);
                } break;
                case 3: {
                        strcpy(cla, "1st Class A.C.");
                        b = (y1 + 5000) * h;
                        c = b + (b * 0.18);
                } break;
                default: {
                        printf("\t\tEnter Right Choice......\n");
                }
                }
        } break;
        default: {
                printf("\t\tEnter Right Choice......\n");
        }
        }
        return c;
}

// Function for taking details
// of passengers
void details(int k)
```

```
{
	int i, a;
	char val[20], gen[6];
	for (i = 1; i <= k; i++) {
		printf("Enter The %dth Passenger Name: ", i);
		fflush(stdin);
		gets(val);
		printf("Enter The %dth Passenger Gender: ", i);
		fflush(stdin);
		gets(gen);
		printf("Enter The %dth Passenger Age: ", i);
		fflush(stdin);
		scanf("%d", &a);

		// Calling add_node() function
		add_node(val, gen, a);
	}
}

// Function to add details in node
// for each passengers
void add_node(char lol[20], char der[6], int b)
{
	Node *newptr = NULL, *ptr;
	newptr = (Node*)malloc(sizeof(Node));
	strcpy(newptr->name, lol);
	strcpy(newptr->gen, der);
	newptr->age = b;
	newptr->link = NULL;
	if (start == NULL)
		start = newptr;
	else {
		ptr = start;
		while (ptr->link != NULL)
			ptr = ptr->link;
		ptr->link = newptr;
	}
}

// Function for choosing seats
int seat(int p)
{
	int i;
	printf("\t		-:SEAT MATRIX:-	\n");
```

```
        printf("\t(U) (M)         (L) (L) "
                " (U)\n\n");
        printf("\t01 02 03\t04          "
                "05\n\n");
        printf("\t06 07 08\t09          "
                "10\n");
        printf("\t11 12 13\t14          "
                "15\n\n");
        printf("\t16 17 18\t19          "
                "20\n");
        printf("\t21 22 23\t24          "
                "25\n\n");
        printf("\t26 27 28\t29          "
                "30\n");
        printf("\t31 32 33\t34          "
                "35\n\n");
        printf("\t36 37 38\t39          "
                "40\n");
        printf("\t41 42 43\t44          "
                "45\n\n");
        printf("\t46 47 48\t49          "
                "50\n");
        printf("\t51 52 53\t54          "
                "55\n\n");
        printf("\t56 57 58\t59          "
                "60\n");
        printf("\tEnter Seat Numbers: \n");
        for (i = 0; i < p; i++)
                scanf("%d", &a[i]);
}

// Function for printing receipt
void bill(int y, int j)
{
        int i;
        Node* ptr = start;
        for (i = 1; i <= j; i++) {
                printf("\t\t\%dst Passenger Name: ", i);
                puts(ptr->name);
                printf("\t\t%dst Passenger Gender: ", i);
                puts(ptr->gen);
                printf("\t\t%dst Passenger Age: %d\n\n", i,
                        ptr->age);
                ptr = ptr->link;
```

```
        }
        printf("\t\tSource Place: ");
        puts(source);
        printf("\t\tDestination Place: ");
        puts(des);
        printf("\t\tThe Boarding Station: ");
        puts(station);
        printf("\t\tTrain Is: ");
        puts(train);
        printf("\t\tAllocated Class: ");
        puts(cla);
        printf("\t\tBoarding Time: %d:%d\n", time1, time2);
        printf("\t\tTotal Bill Amount: %d\n", y);
        printf("\t\tAllocated Seats Are: \n");
        for (i = 0; i < j; i++) {
                printf("\t\t%d ", a[i]);
        }
        printf("\n");
        printf("\t\t\t\tThank You.....\n");
}
```

INPUT:-

```
Enter The 1th Passenger Name: Sounetra Ghosal
Enter The 1th Passenger Gender: Male
Enter The 1th Passenger Age: 21
Enter The 2th Passenger Name: Ram
Enter The 2th Passenger Gender: Male
Enter The 2th Passenger Age: 30
Enter The Source Place: Kolkata
Enter The Destination Place: Delhi
               The Following Trains Are Available.....
               1. Rajdhani Express.........10:00 a.m........Sealdah Station
               2. Satabdi Express..........05:00 p.m........Howrah Station
               3. Humsafar Express..........11:00 p.m........Kolkata Chitpur Station
               4. Garib-Rath Express.........05:00 p.m........Sealdah Station
               5. Duronto Express............07:00 a.m.........Santraganchi Station
1
               Enter Your Choice......
               1. Slepper Class....
               2. A.C Class.......
1
Total Bill Amount: 3681
Now Book Your Seats......
                        -:SEAT MATRIX:-
       (U)     (M)             (L)     (L)             (U)

       01      02              03      04              05

       06      07              08      09              10
       11      12              13      14              15

       16      17              18      19              20
       21      22              23      24              25

       26      27              28      29              30
       31      32              33      34              35

       36      37              38      39              40
       41      42              43      44              45

       46      47              48      49              50
       51      52              53      54              55
```

OUTPUT :-

```
1st Passenger Name: Sounetra Ghosal
1st Passenger Gender: Male
1st Passenger Age: 21

2st Passenger Name: Ram
2st Passenger Gender: Male
2st Passenger Age: 30

Source Place: Kolkata
Destination Place: Delhi
The Boarding Station: Sealdah Station
Train Is: Rajdhani Express
Allocated Class: 3A Class
Boarding Time: 10:0
Total Bill Amount: 4953
Allocated Seats Are:
3                4
                 Thank You.....
```

RESULT :-

Hence they are able to book tickets and could understand how this booking process works.

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