

```
// 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[100];
```

```
    char gen[20];
```

```
    int age;
```

```
    struct mynode *link;
```

```
} Node;
```

```
Node *start = NULL;
```

```
void details(int);
```

```
int seat(int);
```

```
int cal(int, int, int);
```

```
void bill(int, int);
```

```
void add_node(char lol[100], char der[20], int b);
```

```
// Global variables
```

```
char source[100], des[100], 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(c1a, "3A Class");  
        b = y1 * h;  
        c = b + (b * 0.18);  
    }  
    break;  
    case 2:  
    {  
        strcpy(c1a, "2A Class");  
        b = (y1 + 1000) * h;  
        c = b + (b * 0.18);  
    }  
    break;  
    case 3:  
    {
```

```

        strcpy(c1a, "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[100], gen[20];
for (i = 1; i <= k; i++)
{
    printf("Enter The %dth Passenger Name: ", i);
    fflush(stdin);
    scanf("%s", val);
    printf("Enter The %dth Passenger Gender: ", i);
    fflush(stdin);
    scanf("%s", 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[100], char der[20], 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\t\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;
    FILE *fptr = fopen("bill.txt", "w");
    for (i = 1; i <= j; i++)
    {
        printf("%dst Passenger Name: %s\n", i, ptr->name);
        fprintf(fptr, "%dst Passenger Name: %s\n", i, ptr-
>name);

        printf("%dst Passenger Gender: %s\n", i, ptr->gen);
        fprintf(fptr, "%dst Passenger Gender: %s\n", i, ptr->gen);
        printf("%dst Passenger Age: %d\n\n", i, ptr->age);
        fprintf(fptr, "%dst Passenger Age: %d\n\n", i, ptr->age);
        ptr = ptr->link;
    }

    printf("Source Place: %s\n", source);
    fprintf(fptr, "Source Place: %s\n", source);
    printf("Destination Place: %s\n", des);

```

```
fprintf(fp, "Destination Place: %s\n", des);
printf("The Boarding Station: %s\n", station);
fprintf(fp, "The Boarding Station: %s\n", station);
printf("Train Is: %s\n", train);
fprintf(fp, "Train Is: %s\n", train);
printf("Allocated Class: %s\n", cla);
fprintf(fp, "Allocated Class: %s\n", cla);
printf("Boarding Time: %d:%d\n", time1, time2);
fprintf(fp, "Boarding Time: %d:%d\n", time1, time2);
printf("Total Bill Amount: %d\n", y);
fprintf(fp, "Total Bill Amount: %d\n", y);
printf("Allocated Seats Are: \n");
fprintf(fp, "Allocated Seats Are: \n");
for (i = 0; i < j; i++)
{
    printf("%d ", a[i]);
    fprintf(fp, "%d ", a[i]);
}
printf("\n");
fprintf(fp, "\n");
printf("Thank You.....\n");
fprintf(fp, "Thank You.....");
fclose(fp);
}
```