SOURCE CODE

#PROJECT DONE FOR THE SUBMISSION OF AISSCE BOARD PRACTICAL EXAMINATION

RAILWAY TICKET RESERVATION SYSTEM

#INCLUDING HEADER FILES.

```
import matplotlib.pyplot as plt
import mysql.connector as sc
import numpy as np
```

#DEFINITION FOR HOME PAGE

```
def R_Homepage():
    print('**********************************')
    print("WELCOME TO INDIAN RAILWAY")
    print("**********************************")
    print("1. ADD TRAIN DETAILS")
    print("2. UPDATE TRAIn DETAILS")
    print("3. CANCELL TRAIN DETAILS")
    print("4. SEARCH TRAIn DETAILS")
    print("5.TICKET BOOKING")
    print("6. CANCEL TICKET BOOKING")
    print("7. SEARCH BOOKING DETAILS")
```

```
print("8. REPORT ")
op=int(input("Enter your option:"))
if op==1:
    AddTrain()
elif op==2:
    UpdateTrain()
elif op==3:
    RemoveTrain()
elif op==4:
    SearchTrain()
elif op==5:
    TicketBooking()
elif op==6:
    CancelTicket()
elif op==7:
    SearchBooking()
elif op==8:
    Report()
else:
    print("Invalid option")
```

#Definition for the Login ()

```
def Login():
    print("\n\n\n\n")
    print("**************************")
    print("WELCOME TO INDIAN RAILWAY")
    print("**************************")
    user=input("Enter USer Name:")
    pas=input("Enter password:")
    if user=='Admin' and pas=='mgm':
        print("SUCCESSFUULY LOGGED!!!!!!")
        R_Homepage()
    else:
        print("INCORRECT CREDENTIALS")
        Login()
```

#Definition for AddTrain() function

```
def AddTrain():
    print("\n\n\n\n")
    print("**************************")
    print("WELCOME TO INDIAN RAILWAY")
    print("**************************")
    print("ADD TRAIN DETAILS")
    T_id=input("Enter Train ID ")
```

```
    T_name=input("Enter Train NAme:")
    T_startloc=input("Enter Starting Location:")
    T_endloc=input("Enter Ending location:")
    T_starttime=input("Enter starting time:")
    T_endtime=input("Enter ending time:")
    T_noofac=int(input("Enter number of AC "))
    T_noofsleeper=int(input("Enter no of sleepers"))
    T_noofgeneral=int(input("Enter no of general"))
    T_priceac=int(input("Amount of AC ticket"))
    T_pricesleeper=int(input("Enter price of sleeper"))
    T_pricegeneral=int(input("Enter price of general"))

conn=sc.connect(host="localhost",user="root",password="mgm",database="ip12")
    mycursor=conn.cursor()
    query="insert into train
values('{}','{}','{}','{}','{}','{}',{},{},{},{},{},{})".format(T_id,T_name,T_startloc,
T_endloc,T_starttime,T_endtime,T_noofac,T_noofsleeper,T_noofgeneral,T_pricea
c,T_pricesleeper,T_pricegeneral)
    mycursor.execute(query)
    conn.commit()
    print("SUCCESSFULLY ADD TRAIN DETAILS !!!!!!")
    conn.close()
```

#Definition of UpdateTrain() function

```
def UpdateTrain():
    print("\n\n\n\n")
    print("**************************")
    print("WELCOME TO INDIAN RAILWAY")
    print("**************************")
    print("UPDATE  TRAIN DETAILS")
    T_id=input("Enter Train ID  to be updated ")
    T_starttime=input("Enter updated starting time:")
    T_endtime=input("Enter updated ending time:")
    T_noofac=int(input("Enter updated number of AC "))
    T_noofsleeper=int(input("Enter updated no of sleepers"))
    T_noofgeneral=int(input("Enter updated  no of general"))
    T_priceac=int(input("Enter updated Amount of AC ticket"))
    T_pricesleeper=int(input("Enter updated price of sleeper"))
    T_pricegeneral=int(input("Enter updated price of general"))

conn=sc.connect(host="localhost",user="root",password="mgm",database="ip12")
    mycursor=conn.cursor()
    query="update  train set
starttime='{}',endtime='{}',NoofAC={},noofsleeper={},noofgeneral={},priceAc={
},pricesleeper={},pricegeneral={} where
Tid='{}'".format(T_starttime,T_endtime,T_noofac,T_noofsleeper,T_noofgeneral,T
_priceac,T_pricesleeper,T_pricegeneral,T_id)
```

```
    mycursor.execute(query)
    conn.commit()
    print("SUCCESSFULLY UPDATED  TRAIN DETAILS !!!!!!")
    conn.close()
```

#Definition for the RemoveTrain() function

```
def RemoveTrain():
    print("\n\n\n\n")
    print("**************************")
    print("WELCOME TO INDIAN RAILWAY")
    print("**************************")
    print("REMOVE   TRAIN DETAILS")
    T_id=input("Enter Train ID  to be removed  ")

conn=sc.connect(host="localhost",user="root",password="mgm",database="ip12")
    mycursor=conn.cursor()
    query="delete from train where Tid='{}'".format(T_id)
    mycursor.execute(query)
    conn.commit()
    print("SUCCESSFULLY REMOVED   TRAIN DETAILS !!!!!!")
    conn.close()
```

#Definition for SEarch Train details.

```
def SearchTrain():
    print("\n\n\n\n")
    print("**************************")
    print("WELCOME TO INDIAN RAILWAY")
    print("**************************")
    print("SEARCH   TRAIN DETAILS")
    T_id=input("Enter Train ID  to be Search   ")

conn=sc.connect(host="localhost",user="root",password="mgm",database="ip12")
    mycursor=conn.cursor()
    query="select *  from train where Tid='{}'".format(T_id)
    mycursor.execute(query)
    myrecord=mycursor.fetchall()
    for x in myrecord:
        print(x)
    conn.close()
```

#Definition for TicketBooking() function

```
def TicketBooking():
    print("\n\n\n\n")
    print("**************************")
    print("WELCOME TO INDIAN RAILWAY")
```

```
    print("*****************************")
    print("TICKET BOOKING SECTION ")

conn=sc.connect(host="localhost",user="root",password="mgm",database="ip12")
    mycursor=conn.cursor()
    query="select *  from train "
    mycursor.execute(query)
    myrecord=mycursor.fetchall()

print("TID\t\tTname\t\tSTARTINGPOINT\t\tENDLOC\t\tSTARTTIME\t\tENDTI
ME\t\tNOOFAC\t\tNOOFsleeper\t\tNOOFgeneral\t\tPRICEAC\t\tPRICESLEEPE
R\t\tPRICEGENERAL\t\t\n")
    for x in myrecord:

print(x[0],'\t\t',x[1],"\t\t",x[2],"\t\t",x[3],"\t\t",x[4],"\t\t",x[5],"\t\t",x[6],"\t\t",x[7],"\t
\t",x[8],"\t\t",x[9],"\t\t",x[10],"\t\t",x[11],"\n")
    conn.close()
    Tid=input("Enter ID of the TRain you are Booking")
    tname=input("Enter name of the train")
    adharnouser=int(input("Enter your Ahdar No"))
    name=input("Enter your name")
    age=int(input("Enter your age"))
    typeticket=input("Enter type of Ticket(AC/Sleeper/General)")
    startloc=input("Starting location")
    endloc=input("Enter Destination location")
```

```
conn=sc.connect(host="localhost",user="root",password="mgm",database="ip12")
    fare=0
    mycursor=conn.cursor()
    query="select *  from train where Tid='{}'".format(Tid)
    mycursor.execute(query)
    myrecord=mycursor.fetchall()
    for x in myrecord:
        if typeticket=="AC":
            fare=x[9]
            n=x[6]-1
            query2="update train set noofAC={} where Tid='{}'".format(n,Tid)
        elif typeticket=="Sleeper":
            fare=x[10]
            n=x[7]-1
            query2="update train set noofsleeper={} where Tid='{}'".format(n,Tid)
        elif typeticket=="General":
            fare=x[11]
            n=x[8]-1
            query2="update train set noofgeneral={} where Tid='{}'".format(n,Tid)

    mycursor.execute(query2)
    conn.commit()
```

```
    conn.close()
    if age>=60 or age<=10:
        fare=fare-fare*50/100
    else:
        fare=fare

conn=sc.connect(host="localhost",user="root",password="mgm",database="ip12")
    mycursor=conn.cursor()
    query="insert into trainbooking
values('{}','{}',{},'{}',{},'{}','{}','{}',{})".format(Tid,tname,adharnouser,name,age,t
ypeticket,startloc,endloc,fare)
    mycursor.execute(query)
    conn.commit()
    print("SUCCESSFULLY DONE TICKEt BOOKING !!!!!!")
    conn.close()
```

Definition for SearchBooking() function

```
def SearchBooking():
    print("\n\n\n\n")
    print("****************************")
    print("WELCOME TO INDIAN RAILWAY")
    print("****************************")
    print("TICKET BOOKING SECTION ")
    ano=int(input("Enter your adhar number for checking"))
```

```
conn=sc.connect(host="localhost",user="root",password="mgm",database="ip12")
    mycursor=conn.cursor()
    query="select *  from trainbooking where adharno_user={}".format(ano)
    mycursor.execute(query)
    myrecord=mycursor.fetchall()
    for x in myrecord:
        print(x)
    else:
        print("No Booking in this Adhar No")
    conn.close()
```

#Definition for CancelTicket() function

```
def CancelTicket():
    print("\n\n\n\n")
    print("***************************")
    print("WELCOME TO INDIAN RAILWAY")
    print("***************************")
    print("TICKET BOOKING SECTION ")
    ano=int(input("Enter your adhar number for cancellation"))

conn=sc.connect(host="localhost",user="root",password="mgm",database="ip12")
```

```
mycursor=conn.cursor()
query1="select * from trainbooking where adharno_user={}".format(ano)
mycursor.execute(query1)
myrecord=mycursor.fetchall()
for x in myrecord:
    tid=x[0]
    tickettype=x[5]
query3="select * from train where Tid='{}'".format(tid)
mycursor.execute(query3)
myrecord2=mycursor.fetchall()
for x in myrecord2:
    if tickettype=="AC":
        acno=x[6]+1
        query4="update train set noofAC={} where Tid='{}'".format(acno,tid)
    elif tickettype=="Sleeper":
        slno=x[7]+1
        query4="update train set noofsleeper={} where Tid='{}'".format(slno,tid)
    elif tickettype=="GEneral":
        gno=x[8]+1
        query4="update train set noofgeneral={} where Tid='{}'".format(gno,tid)
query="delete  from trainbooking where adharno_user={}".format(ano)
mycursor.execute(query)
conn.commit()
```

```
    mycursor.execute(query4)
    conn.commit()
    conn.close()
#DEfinition of  Report()   function
def  Report():
    print("\n\n\n\n")
    print("**************************")
    print("WELCOME TO INDIAN RAILWAY")
    print("**************************")
    print("TICKET BOOKING SECTION ")
    print("Different Types of REports are")
    print("1. Report BAsed on Type of seat and no of seats avilable in each type")
    print("2. Report Based on price of each Type of seat ")
    print("3. Report based on type of ticket booking ")
    op=int(input("Enter your option:"))
    if op==1:
        print("\n\n\n\n")
        print("**************************")
        print("WELCOME TO INDIAN RAILWAY")
        print("**************************")
        print("TICKET BOOKING SECTION ")
        tid=input("Enter train id:")
```

```
        query="select * from Train where tid='{}'".format(tid)
conn=sc.connect(host="localhost",user="root",password="mgm",database="ip12")
        mycursor=conn.cursor()
        mycursor.execute(query)
        myrecord=mycursor.fetchall()
        x=["AC","Sleeper","General"]
        y=[]
        y1=0
        y2=0
        y3=0
        for i in myrecord:
            y1=i[6]
            y2=i[7]
            y3=i[8]
        y.append(y1)
        y.append(y2)
        y.append(y3)
        plt.bar(x,y)
    elif op==2:
        print("\n\n\n\n")
        print("****************************")
        print("WELCOME TO INDIAN RAILWAY")
        print("****************************")
```

```
        print("TICKET BOOKING SECTION ")
        tid=input("Enter train id:")
        query="select * from Train where tid='{}'".format(tid)

conn=sc.connect(host="localhost",user="root",password="mgm",database="ip12")
        mycursor=conn.cursor()
        mycursor.execute(query)
        myrecord=mycursor.fetchall()
        x=["AC","Sleeper","General"]
        y=[]
        y1=0
        y2=0
        y3=0
        for i in myrecord:
            y1=i[9]
            y2=i[10]
            y3=i[11]
        y.append(y1)
        y.append(y2)
        y.append(y3)
        plt.bar(x,y)
    elif op==3:
        print("\n\n\n\n")
```

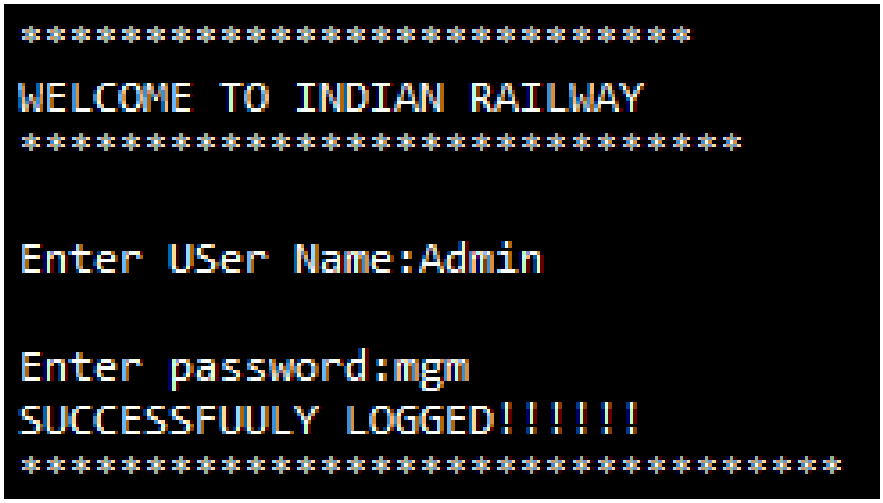
```
        print("**************************")
        print("WELCOME TO INDIAN RAILWAY")
        print("**************************")
        print("TICKET BOOKING SECTION ")
        tid=input("Enter train id:")
        query="select typeofseat,count(*) from Trainbooking group by typeofseat"

conn=sc.connect(host="localhost",user="root",password="mgm",database="ip12")
        mycursor=conn.cursor()
        mycursor.execute(query)
        myrecord=mycursor.fetchall()
        x=[]
        y=[]
        for i in myrecord:
            x.append(i[0])
            y.append(i[1])
        plt.bar(x,y,width=0.5)
        ply.xlabel("type of seat")
        plt.ylabel("no of seats booked on each type")
```

#Calling main section

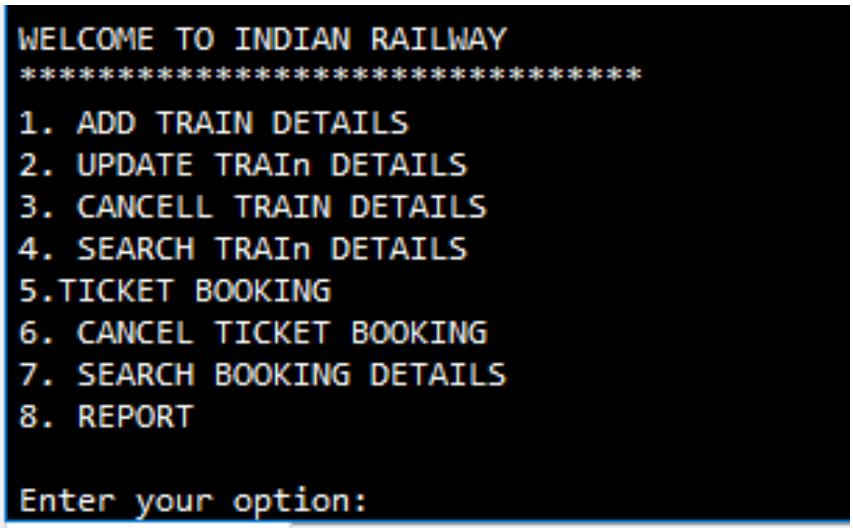
```
Login()
```

SCREEN SHOTS

Login Section:



Home page:



Add Train Details

```
**************************
WELCOME TO INDIAN RAILWAY
*****************************
ADD TRAIN DETAILS

Enter Train ID T900

Enter Train NAme:Maveli

Enter Starting Location:Trivandrum

Enter Ending location:Mumbai

Enter starting time:10 am

Enter ending time:1 pm

Enter number of AC 200

Enter no of sleepers150

Enter no of general300

Amount of AC ticket600

Enter price of sleeper400

Enter price of general200
SUCCESSFULLY ADD TRAIN DETAILS !!!!!!
```

Update Train Details

```
**************************
WELCOME TO INDIAN RAILWAY
*****************************
UPDATE  TRAIN DETAILS

Enter Train ID  to be updated T300

Enter updated starting time:10

Enter updated ending time:9

Enter updated number of AC 300

Enter updated no of sleepers400

Enter updated  no of general250

Enter updated Amount of AC ticket600

Enter updated price of sleeper400

Enter updated price of general300
SUCCESSFULLY UPDATED  TRAIN DETAILS !!!!!!
```

Remove Train Details

```
**************************
WELCOME TO INDIAN RAILWAY
******************************
REMOVE    TRAIN DETAILS

Enter Train ID  to be removed  T!00
SUCCESSFULLY REMOVED   TRAIN DETAILS !!!!!!
```

Search Train Details

```
****************************
WELCOME TO INDIAN RAILWAY
******************************
SEARCH    TRAIN DETAILS

Enter Train ID  to be Search   T900
('T900', 'Maveli', 'Trivandrum', 'Mumbai', '10 am', '1 pm', 200, 150, 300, 600, 400, 200)
```

Ticket Booking:

```
*************************
WELCOME TO INDIAN RAILWAY
*****************************
TICKET BOOKING SECTION
TID             Tname           STARTINGPOINT           ENDLOC          STARTTIME               ENDTIME         NOOFAC
NOOFsleeper             NOOFgeneral             PRICEAC         PRICESLEEPER            PRICEGENERAL

300              Venad           Delhi           Trivandrum              12              1 pm            100             200
300             500             300             200

T200             Rajadhani              Trivandrum              Banglore                16:00           18:00           3
12              2               250             1000            300

T900             Maveli                 Trivandrum              Mumbai                  10 am           1 pm            200
150             300             600             400             200


Enter ID of the TRain you are BookingT900

Enter name of the trainMaveli

Enter your Ahdar No123

Enter your nameRahul

Enter your age17

Enter type of Ticket(AC/Sleeper/General)AC

Starting locationTrivandrum

Enter Destination locationMumbai
SUCCESSFULLY DONE TICKEt BOOKING !!!!!!
```

Search Booking details

```
**************************
WELCOME TO INDIAN RAILWAY
**************************
TICKET BOOKING SECTION

Enter your adhar number for checking123
('T900', 'Maveli', 123, 'Rahul', 17, 'AC', 'Trivandrum', 'Mumbai', 600)
No Booking in this Adhar No
```

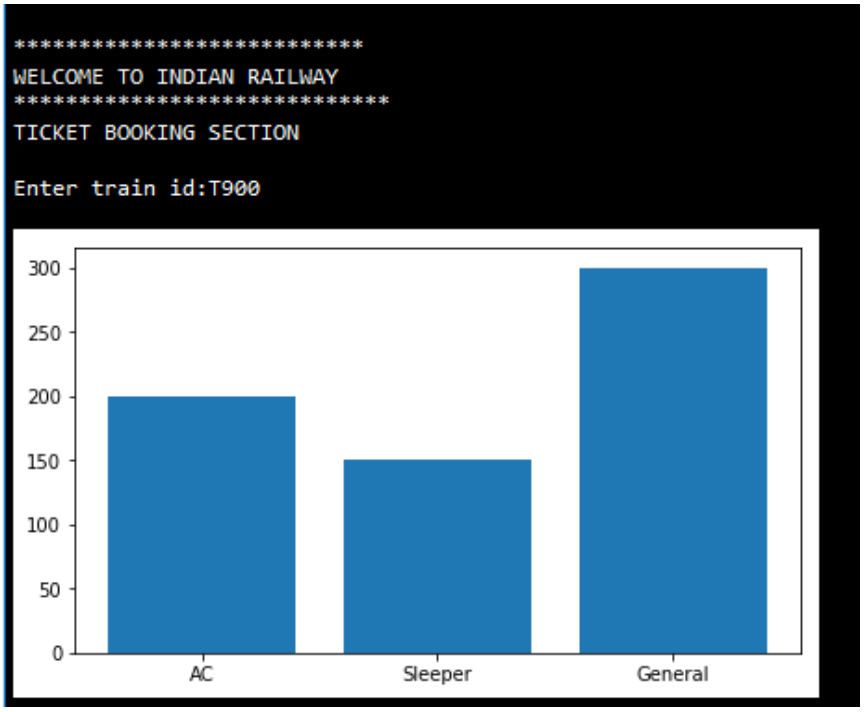
Cancellation of Ticket Booking:

```
******************************
WELCOME TO INDIAN RAILWAY
******************************
TICKET BOOKING SECTION

Enter your adhar number for cancellation123
```

Report Section:

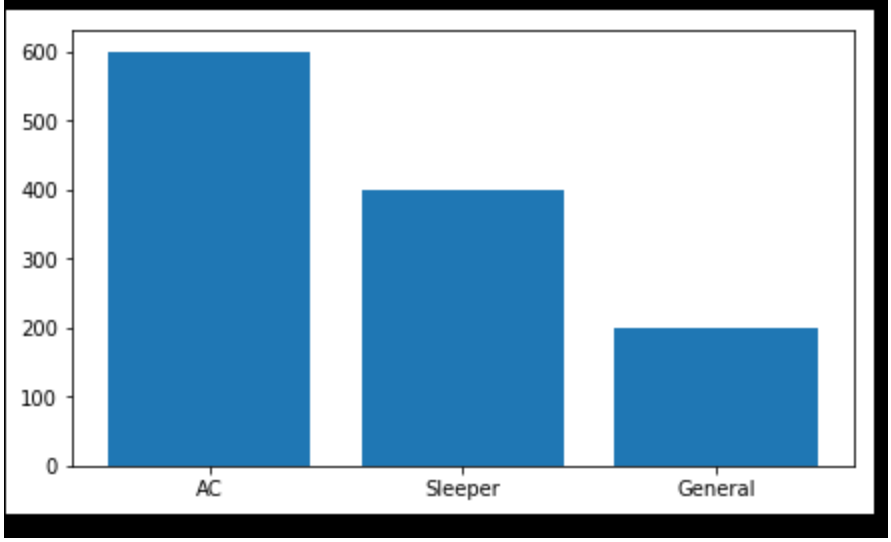
```
**************************
WELCOME TO INDIAN RAILWAY
**************************
TICKET BOOKING SECTION
Different Types of REports are
1. Report BAsed on Type of seat and no of seats avilable in each type
2. Report Based on price of each Type of seat
3. Report based on type of ticket booking

Enter your option:1
```

Report Based on Type of seat

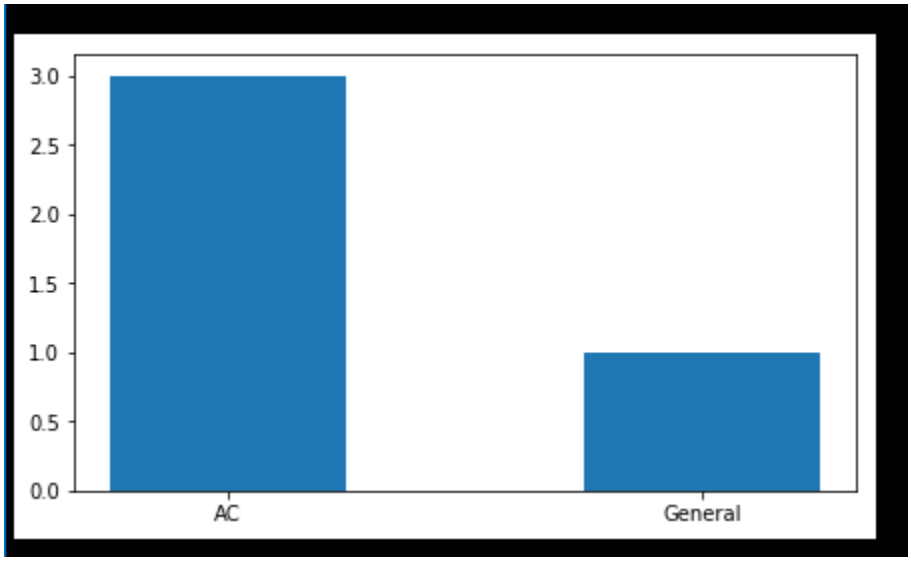


Report Based on Price

```
**************************
WELCOME TO INDIAN RAILWAY
******************************
TICKET BOOKING SECTION

Enter train id:T900
```



Report Based on type of Ticket booking.



CONCLUSION

This project was completed on time and is found working effectively under all circumstances that may arise in real environment. The program objective specifies on the requirement is believed to be met. Using the facilities and functionalities of python and mysql , the program has been developed in neat manner.

This program is simple and user friendly. The speed and accuracy are maintained in proper way. Testing of the program has given good result.

The program is done with an insight into necessary modifications that is required in the future.

BIBLIOGRAPHY

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