FLIGHT MANAGEMENT SYSTEM

<u>INTRODUCTION</u>

One of the most common modes of travel is travelling by air. Customers who wish to travel by air nowadays have a variety of airlines and a range of timings to choose from.

The modern airline system provides a base that assists with a variety of airline management tasks and service customer needs from the time of initial reservation through completion of the flight.

<u>FEATURES</u>

- Free Account
- Selection among Large no of Airways
- Full detailed Flights
- Easy to Get Flights
- Easy to edit and view your Personal Information
- User Friendly
- Secure

<u>WORKFLOW</u>

This program has two parts. The first part is user and the second part is administrator. User part is used as a front end and administrator as the back end. Administrator is used by airline authority.

The system allows the airline passenger to search for flights that are available between the two travel cities, namely the "Departure city" and "Arrival city". The system also allows the customer to cancel his/her reservation, if any problem occurs.

The main purpose of this program is to reduce the manual errors involved in the airline reservation process and make it convenient for the customers to book the flights as when they require such that they can utilize this software to make reservations, modify reservations or cancel a particular reservation.

<u>CODING</u>

1. CREATE_TABLE.py

```python
import mysql.connector as ms
conn=ms.connect(host="localhost", user="root", passwd="1234", db="airlines",
charset="utf8")
curs=conn.cursor()
if conn.is_connected():
    print("connected")
else:
print("not connected")

def air_schedule():
queryschedule="""create table schedule
    (FNumvarchar(20) NOT NULL PRIMARY KEY,
Fnamevarchar(50),
Depttimevarchar(10),
Arrivaltimevarchar(10),
    Departure varchar(50),
    Destination varchar(50),
    Fare integer
    )"""
curs.execute(queryschedule)
print("Table Schedule Created")
    return




def passenger_create():
querypass="""create table passenger
    (pass_idvarchar(60) NOT NULL PRIMARY KEY,
cust_namevarchar(40),
FNumvarchar(20),
    Gender varchar(10), #CHECK IN("Female","Male","Others"),
MobileNovarchar(20)
    )"""
curs.execute(querypass)
print("Table Passenger Created")
    return


def ticket():
queryticket='''create table Ticket_Table
    (Ticket_IDvarchar(20) NOT NULL PRIMARY KEY,
Fnumvarchar(20),
pass_idvarchar(60),
no_passengers integer,
```

```
Final_farevarchar(30),
    foreign key(pass_id) references passenger(pass_id),
    foreign key(FNum) references schedule(FNum)
    )'''
curs.execute(queryticket)
print("Table Ticket Created")
    return

air_schedule()
passenger_create()
ticket()
```

2. INSERT_TABLE.py

```
import mysql.connector as ms
conn=ms.connect(host="localhost",      user="root",      passwd="1234",      db="airlines",
charset="utf8")
curs=conn.cursor()
if conn.is_connected():
    print("connected")
else:
print("not connected")

def insert_schedule():
    curs=conn.cursor()
    x='''insert into schedule values
        ("F01","Indigo","9:00","12:00","Delhi","Mumbai",2000),
        ("F02","SpiceJet","11:00","13:00","Hyderabad","Mumbai",2500),
        ("F03","Indigo","3:00","6:00","Lucknow","Goa",2500),
        ("F04","AirIndia","18:00","20:00","Bangaluru","Meghalaya",3000),
        ("F05","SpiceJet","9:00","13:00","Jammu","Gujarat",3000)
        '''
curs.execute(x)

conn.commit()
curs.close()
print("Flight Schedule Created")



def insert_passenger():
    curs=conn.cursor()
    y='''insert into passenger values
        ("P1","Priyanshu","F01","Male",9879158284),
```

```
        ("P2","Jiya","F04","Female",9879158268),
        ("P3","Riya","F05","Others",8896157266),
        ("P4","Himanshu","F03","Male",9899150264),
        ("P5","Preeti","F04","Female",9879158534),
        ("P6","Bhavya","F01","Female",987654364),
        ("P7","Garima","F02","Female",9999870294),
        ("P8","Divang","F04","Male",7890159298),
        ("P9","Jai","F02","Male",9871654329),
        ("P10","Shivam","F05","Male",7853429579)
        '''
curs.execute(y)

conn.commit()
curs.close()
print("Passenger Details Created")



insert_schedule()
insert_passenger()
```

3. FLIGHT.py

```
import mysql.connector as ms
conn=ms.connect(host="localhost", user="root", passwd="1234", db="airlines",
charset="utf8")
'''
Functions are created to add a flight, update a flight, delete a flight, display flight schedule,
'''
def add_flight():
    curs=conn.cursor()
    Fnum=input("Enter the Flight Number:")
    Fname=input("Enter the Flight Name:")
    Depttime=input("Enter the Departure Time:")
    Arrivaltime=input("Enter the Arrival Time")
    Departure=input("Enter the Departure Place")
    Destination=input("Enter the Destination:")
    Fare=input("Enter fare:")

    query='''insert into schedule values \
        ('%s','%s','%s','%s','%s','%s','%s')''' %
(Fnum,Fname,Depttime,Arrivaltime,Departure,Destination,Fare)
```

```python
    curs.execute(query)
    conn.commit()
    curs.close()
    print("Flight row inserted")


def update_flight():
    curs=conn.cursor()
    Fnum=input("Enter the Flight Number:")
    Fname=input("Enter the Flight Name:")
    Depttime=input("Enter the Departure Time:")
    Arrivaltime=input("Enter the Arrival Time")
    Departure=input("Enter the Departure Place")
    Destination=input("Enter the Destination:")
    Fare=input("Enter fare:")


    query1="update schedule set
Fname=%s,Depttime=%s,Arrivaltime=%s,Departure=%s,Destination=%s where Fnum=%s"
    curs.execute(query1,(Fname,Depttime,Arrivaltime,Departure,Destination,Fnum))
    conn.commit()
    curs.close()
    print("Row updated")


def delete_flight():
    curs=conn.cursor()
    Fnum=input("Enter the flight number")

    curs.execute("select * from schedule where Fnum='%s'"%Fnum)
    record=curs.fetchall()
    print("The record to be deleted:")
    print(record)
    confirm=input("Do you want to delete the record?")
    if confirm=="yes" or "YES":
        curs.execute("delete from schedule where Fnum='%s'"%Fnum)
        conn.commit()
        print(curs.rowcount,"Record(s) deleted successfully")
    else:
        print("Delete operation cancelled")
        curs.close()

def display_flight():
    curs=conn.cursor()
    query=("select * from schedule")
    curs.execute(query)
```

```python
        data=curs.fetchall()

        for row in data:
            print("_____")
            print("Fnum =\t\t\t ", row[0], )
            print("Fname =\t\t\t ", row[1])
            print("Depttime= \t\t\t", row[2])
            print("Arrivaltime =\t\t\t ", row[3], "\n")
            print("Departure = \t\t\t", row[4], "\n")
            print("Destination = \t\t\t", row[5], "\n")
            print("Fare = \t\t\t", row[6], "\n")
            print("_____")


def search_flight():
    curs=conn.cursor()
    Fnum=input("Enter flight number\t")

    curs.execute("select * from schedule where Fnum='%s'"%Fnum)
    data=curs.fetchall()
    for (Fnum,Fname,Depttime,Arrivaltime,Departure,Destination) in data:
        print("_____")
        print("Flight Number:\t\t\t", Fnum)
        print("Flight Name:\t\t\t", Fname )
        print("Departure time:\t\t\t",Depttime )
        print(" Time of arrival :\t\t\t",Arrivaltime)
        print("Departure place:\t\t\t", Departure )
        print("Destination :\t\t\t", Destination )
        print("Fare :\t\t\t", Fare )
        print("_____")

def search_flight_bill(FNum):
    curs=conn.cursor()
    curs.execute("select * from schedule where FNum='%s'" %FNum)
    data=curs.fetchall()
    return data
```

4. PASSENGER.py

```python
import mysql.connector as ms
conn=ms.connect(host="localhost", user="root", passwd="1234", db="airlines",
charset="utf8")



def add_passenger():
    curs=conn.cursor()
```

```python
    pass_id=input("Enter the Passenger ID:")
    cust_name=input("Enter the Passenger Name:")
    Fnum=input("Enter the Flight Number:")
    Gender=input("Enter the gender:")
    MobileNo=int(input("Enter mobile number:"))

    query='''insert into passenger() values \
        ('%s','%s','%s','%s','%s')''' % (pass_id,cust_name,Fnum,Gender,MobileNo)


    curs.execute(query)
    conn.commit()
    curs.close()
    print("passenger row inserted")

def update_passenger():
    curs=conn.cursor()
    pass_id=input("enter passenger id")
    cust_name=input("Enter the Passenger Name:")
    Fnum=input("Enter the Flight Number:")
    Gender=input("Enter the gender:")
    MobileNo=int(input("Enter mobile number:"))

    query1="update passenger set cust_name=%s,Fnum=%s,Gender=%s,MobileNo=%s where pass_id=%s"
    curs.execute(query1,(cust_name,Fnum,Gender,MobileNo,pass_id))
    conn.commit()
    curs.close()
    print("Row updated")



def delete_passenger():
    curs=conn.cursor()
    pass_id=input("Enter the passenger ID")

    curs.execute("select * from passenger where pass_id='%s'"%pass_id)
    record=curs.fetchall()
    print("The record to be deleted:")
    print(record)
    confirm=input("Do you want to delete the record?")
    if confirm=="yes" or "YES":
        curs.execute("delete from passenger where pass_id='%s'"%pass_id)
        conn.commit()
        print(curs.rowcount,"Record(s) deleted successfully")
    else:
```

```python
        print("Delete operation cancelled")
        curs.close()



def display_passenger() :
    curs=conn.cursor()
    query=("select * from passenger")
    curs.execute(query)
    data=curs.fetchall()

    for row in record:
        print("_____")
        print("pass_id =\t\t ", row[0], )
        print("cust_name =\t\t ", row[1])
        print("Fnum= \t\t", row[2])
        print("Gender =\t\t ", row[3], "\n")
        print("MobileNo = \t\t", row[4], "\n")
        print("_____")



def search_passenger():
    curs=conn.cursor()
    pass_id=input("Enter Passenger ID:")

    curs.execute("select * from passenger where pass_id='%s'"%pass_id)
    data=curs.fetchall()
    for (pass_id,cust_name,Fnum,Gender,MobileNo) in data:
        print("_____")
        print(" Passenger ID:\t\t", pass_id)
        print("Customer Name:\t\t", cust_name )
        print("Flight Number:\t\t",Fnum  )
        print(" Gender :\t\t", Gender)
        print("Mobile Number:\t\t", MobileNo )
        print("_____")



def search_passenger_ticket(pass_id):
    curs=conn.cursor()
    curs.execute("select * from passenger where pass_id='%s'" %pass_id)
    data=curs.fetchall()
    return data
```

5. TICKET.py

```python
import mysql.connector as ms
import flight
import passenger
conn=ms.connect(host="localhost", user="root", passwd="1234", db="airlines",
charset="utf8")

if conn.is_connected():
    print("connected")
else:
    print("not connected")


def book_ticket():
    db=ms.connect(host="localhost", user="root", passwd="1234", db="airlines",
charset="utf8")
    curs=conn.cursor()

    tnum=input("Enter your ticket ID")
    FNum=input("Enter flight number\t")
    foundrec=flight.search_flight_bill(FNum)
    print(foundrec)
    fare=foundrec[0][6]
    print("fare is:", fare)

    pass_id=input("Enter Passenger number\t")
    foundrec1=passenger.search_passenger_ticket(pass_id)
    print(foundrec1)


    a='''select p.pass_id, a.FNum
        from passenger p, schedule a,
        ticket_table tt where
        p.pass_id=tt.pass_id and
        a.FNum=tt.FNum and
        tt.pass_id= "%s"''' %tnum
    curs.execute(a)
    record=curs.fetchall()
    print(record)
    no_passenger= int(input("enter number of passenger"))
    finalfare=no_passenger*fare

    myquery="insert into Ticket_Table values('%s', '%s', '%s', %d, '%s')" %(tnum,
FNum, pass_id,no_passenger,finalfare)
    curs.execute(myquery)
    conn.commit()
    print("ticket booked")
```

```python
def cancel_ticket():
    tnum=input("enter your ticket ID")
    db=ms.connect(host="localhost", user="root", passwd="1234", db="airlines",
charset="utf8")
    curs=conn.cursor()

    myquery="""delete from Ticket_Table where Ticket_ID='%s'"""%(tnum)
    curs.execute(myquery)
    conn.commit()
    print("cancelled")
```

6. MENU_AIRLINES.py

```python
import mysql.connector as ms
import flight
import passenger
conn=ms.connect(host="localhost", user="root", passwd="1234", db="airlines",
charset="utf8")

if conn.is_connected():
    print("connected")
else:
    print("not connected")


def book_ticket():
    db=ms.connect(host="localhost", user="root", passwd="1234", db="airlines",
charset="utf8")
    curs=conn.cursor()

    tnum=input("Enter your ticket ID")
    FNum=input("Enter flight number\t")
    foundrec=flight.search_flight_bill(FNum)
    print(foundrec)
    fare=foundrec[0][6]
    print("fare is:", fare)

    pass_id=input("Enter Passenger number\t")
    foundrec1=passenger.search_passenger_ticket(pass_id)
    print(foundrec1)


    a='''select p.pass_id, a.FNum
        from passenger p, schedule a,
        ticket_table tt where
```

```python
                p.pass_id=tt.pass_id and
                a.FNum=tt.FNum and
                tt.pass_id= "%s""" %tnum
        curs.execute(a)
        record=curs.fetchall()
        print(record)
        no_passenger= int(input("enter number of passenger"))
        finalfare=no_passenger*fare

        myquery="insert into Ticket_Table values('%s', '%s', '%s', %d, '%s')" %(tnum,
FNum, pass_id,no_passenger,finalfare)
        curs.execute(myquery)
        conn.commit()
        print("ticket booked")

def cancel_ticket():
    tnum=input("enter your ticket ID")
    db=ms.connect(host="localhost", user="root", passwd="1234", db="airlines",
charset="utf8")
    curs=conn.cursor()

    myquery="""delete from Ticket_Table where Ticket_ID='%s'"""%(tnum)
    curs.execute(myquery)
    conn.commit()
    print("cancelled")
```

<u>OUTPUT</u>

```
connected
Table Schedule Created
Table Passenger Created
Table Ticket Created

connected
Flight Schedule Created
Passenger Details Created
```

```
Menu
1. Admin
2. User
Enter Your choice1
OPTIONS FOR THE ADMIN
1. Add a new flight
2. Update a flight
3. Cancel a flight
4. Display flight schedule
5. Add a passenger
6. Update a passenger's details
7. Delete a passenger's details
8. Display the passenger list
9. Search for a passenger
Enter your choice1
Enter the Flight Number:F06
Enter the Flight Name:Vistara
Enter the Departure Time:6:30
Enter the Arrival Time9:00
Enter the Departure PlaceKerala
Enter the Destination:Punjab
Enter fare:3500
Flight row inserted
Do you want to continue y/ny
Menu
1. Admin
2. User
Enter Your choice1
OPTIONS FOR THE ADMIN
1. Add a new flight
2. Update a flight
3. Cancel a flight
4. Display flight schedule
5. Add a passenger
6. Update a passenger's details
7. Delete a passenger's details
8. Display the passenger list
9. Search for a passenger
Enter your choice2
Enter the Flight Number:F02
Enter the Flight Name:SpiceJet
Enter the Departure Time:11:00
Enter the Arrival Time13:00
Enter the Departure PlaceHyderabad
Enter the Destination:Mumbai
Enter fare:4000
Row updated
Do you want to continue y/ny
Menu
1. Admin
2. User
Enter Your choice1
OPTIONS FOR THE ADMIN
1. Add a new flight
2. Update a flight
3. Cancel a flight
4. Display flight schedule
5. Add a passenger
6. Update a passenger's details
```

```
7. Delete a passenger's details
8. Display the passenger list
9. Search for a passenger
Enter your choice3
Enter the flight numberF03
The record to be deleted:
[('F03', 'Indigo', '3:00', '6:00', 'Lucknow', 'Goa', 2500)]
Do you want to delete the record?yes
1 Record(s) deleted successfully
Do you want to continue y/ny
Menu
1. Admin
2. User
Enter Your choice1
OPTIONS FOR THE ADMIN
1. Add a new flight
2. Update a flight
3. Cancel a flight
4. Display flight schedule
5. Add a passenger
6. Update a passenger's details
7. Delete a passenger's details
8. Display the passenger list
9. Search for a passenger
```

Fnum =	F01
Fname =	Indigo
Depttime=	9:00
Arrivaltime =	12:00
Departure =	Delhi
Destination =	Mumbai
Fare =	2000

Fnum =	F02
Fname =	SpiceJet
Depttime=	11:00
Arrivaltime =	13:00
Departure =	Hyderabad
Destination =	Mumbai
Fare =	2500

Fnum =	F04
Fname =	AirIndia
Depttime=	18:00
Arrivaltime =	20:00
Departure =	Bangaluru
Destination =	Meghalaya
Fare =	3000

```
_____
Fnum =                    F05
Fname =                   SpiceJet
Depttime=                       9:00
Arrivaltime =                  13:00

Departure =                    Jammu

Destination =                  Gujarat

Fare =             3000


_____
_____
Fnum =                    F06
Fname =                   Vistara
Depttime=                       6:30
Arrivaltime =                   9:00

Departure =                    Kerala

Destination =                  Punjab

Fare =             3500


_____
Do you want to continue y/ny
Menu
1. Admin
2. User
Enter Your choice1
OPTIONS FOR THE ADMIN
1. Add a new flight
2. Update a flight
3. Cancel a flight
4. Display flight schedule
```

```
5. Add a passenger
6. Update a passenger's details
7. Delete a passenger's details
8. Display the passenger list
9. Search for a passenger
Enter your choice7
Enter the passenger IDP1
The record to be deleted:
[('P1', 'Priyanshu', 'F01', 'Male', '9879158284')]
Do you want to delete the record?YES
1 Record(s) deleted successfully
```

```
8. Display the passenger list
9. Search for a passenger
Enter your choice8
```

pass_id =		P10
cust_name =		Shivam
Fnum=	F05	
Gender =		Male
MobileNo =		7853429579

pass_id =		P11
cust_name =		Shweta
Fnum=	F06	
Gender =		Female
MobileNo =		9876598765

pass_id =		P2
cust_name =		Jiya
Fnum=	F04	
Gender =		Female
MobileNo =		9879158268

```
_____
pass_id =                      P3
cust_name =                    Riya
Fnum=              F05
Gender =                       Others

MobileNo =                     8896157266


_____
_____
pass_id =                      P4
cust_name =                    Himanshu
Fnum=              F03
Gender =                       Male

MobileNo =                     9899150264


_____
_____
pass_id =                      P5
cust_name =                    Preeti
Fnum=              F04
Gender =                       Female

MobileNo =                     9879158534


_____
_____
pass_id =                      P6
cust_name =                    Bhavya
Fnum=              F01
Gender =                       Female

MobileNo =                     987654364


_____
```

```
pass_id =                        P7
cust_name =                      Garima
Fnum=                  F02
Gender =                         Female

MobileNo =                       9999870294

_____

_____
pass_id =                        P8
cust_name =                      Divang
Fnum=                  F04
Gender =                         Male

MobileNo =                       7890159298

_____

_____
pass_id =                        P9
cust_name =                      Jai
Fnum=                  F02
Gender =                         Male

MobileNo =                       9871654329

_____
Do you want to continue y/ny
Menu
1. Admin
2. User
Enter Your choice1
OPTIONS FOR THE ADMIN
1. Add a new flight
2. Update a flight
3. Cancel a flight
4. Display flight schedule
5. Add a passenger
6. Update a passenger's details
7. Delete a passenger's details
8. Display the passenger list
9. Search for a passenger
Enter your choice9
Enter Passenger ID:P4

_____
 Passenger ID:                   P4
Customer Name:                   Himanshu
Flight Number:                   F03
 Gender :                        Male
Mobile Number:                   9899150264

_____
Do you want to continue y/ny
```

```
1. Admin
2. User
Enter Your choice2
OPTIONS FOR THE USER
1. Book ticket
2. Cancel ticket
3. Exit
Enter your choice1
Enter your ticket IDT002
Enter flight number      F04
[('F04', 'AirIndia', '18:00', '20:00', 'Bangaluru', 'Meghalaya', 3000)]
fare is: 3000
Enter Passenger number  P5
[('P5', 'Preeti', 'F04', 'Female', '9879158534')]
[]
enter number of passenger3
ticket booked
Do you want to continue y/ny
Menu
1. Admin
2. User
Enter Your choice2
OPTIONS FOR THE USER
1. Book ticket
2. Cancel ticket
3. Exit
Enter your choice1
Enter your ticket IDT008
Enter flight number      F01
[('F01', 'Indigo', '9:00', '12:00', 'Delhi', 'Mumbai', 2000)]
fare is: 2000
Enter Passenger number  P6
[('P6', 'Bhavya', 'F01', 'Female', '987654364')]
[]
enter number of passenger6
ticket booked
Do you want to continue y/ny

1. Admin
2. User
Enter Your choice2
OPTIONS FOR THE USER
1. Book ticket
2. Cancel ticket
3. Exit
Enter your choice2
enter your ticket IDT002
cancelled
```

```
mysql> select * from ticket_table;
+-----------+-------+---------+---------------+------------+
| Ticket_ID | Fnum  | pass_id | no_passengers | Final_fare |
+-----------+-------+---------+---------------+------------+
| T002      | F04   | P4      |             5 | 15000      |
| T006      | F05   | P3      |             7 | 21000      |
| T008      | F01   | P6      |             6 | 12000      |
+-----------+-------+---------+---------------+------------+
```

```
mysql> select * from passenger;
+---------+-----------+------+--------+------------+
| pass_id | cust_name | FNum | Gender | MobileNo   |
+---------+-----------+------+--------+------------+
| P10     | Shivam    | F05  | Male   | 7853429579 |
| P11     | Shweta    | F06  | Female | 9876598765 |
| P2      | Jiya      | F04  | Female | 9879158268 |
| P3      | Riya      | F05  | Others | 8896157266 |
| P4      | Himanshu  | F03  | Male   | 9899150264 |
| P5      | Preeti    | F04  | Female | 9879158534 |
| P6      | Bhavya    | F01  | Female | 987654364  |
| P7      | Garima    | F02  | Female | 9999870294 |
| P8      | Divang    | F04  | Male   | 7890159298 |
| P9      | Jai       | F02  | Male   | 9871654329 |
+---------+-----------+------+--------+------------+
```

```
mysql> select * from schedule;
+------+----------+----------+-------------+-----------+-------------+------+
| FNum | Fname    | Depttime | Arrivaltime | Departure | Destination | Fare |
+------+----------+----------+-------------+-----------+-------------+------+
| F01  | Indigo   | 9:00     | 12:00       | Delhi     | Mumbai      | 2000 |
| F02  | SpiceJet | 11:00    | 13:00       | Hyderabad | Mumbai      | 2500 |
| F04  | AirIndia | 18:00    | 20:00       | Bangaluru | Meghalaya   | 3000 |
| F05  | SpiceJet | 9:00     | 13:00       | Jammu     | Gujarat     | 3000 |
| F06  | Vistara  | 6:30     | 9:00        | Kerala    | Punjab      | 3500 |
+------+----------+----------+-------------+-----------+-------------+------+
5 rows in set (0.00 sec)
```