AIRLINE TICKET BOOKING SYSTEM

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1.) <u>SCOPE</u>

This project Airline Ticket Booking System is to provide help to the user to book their flight tickets without visiting booking counters or to any other booking vendors.
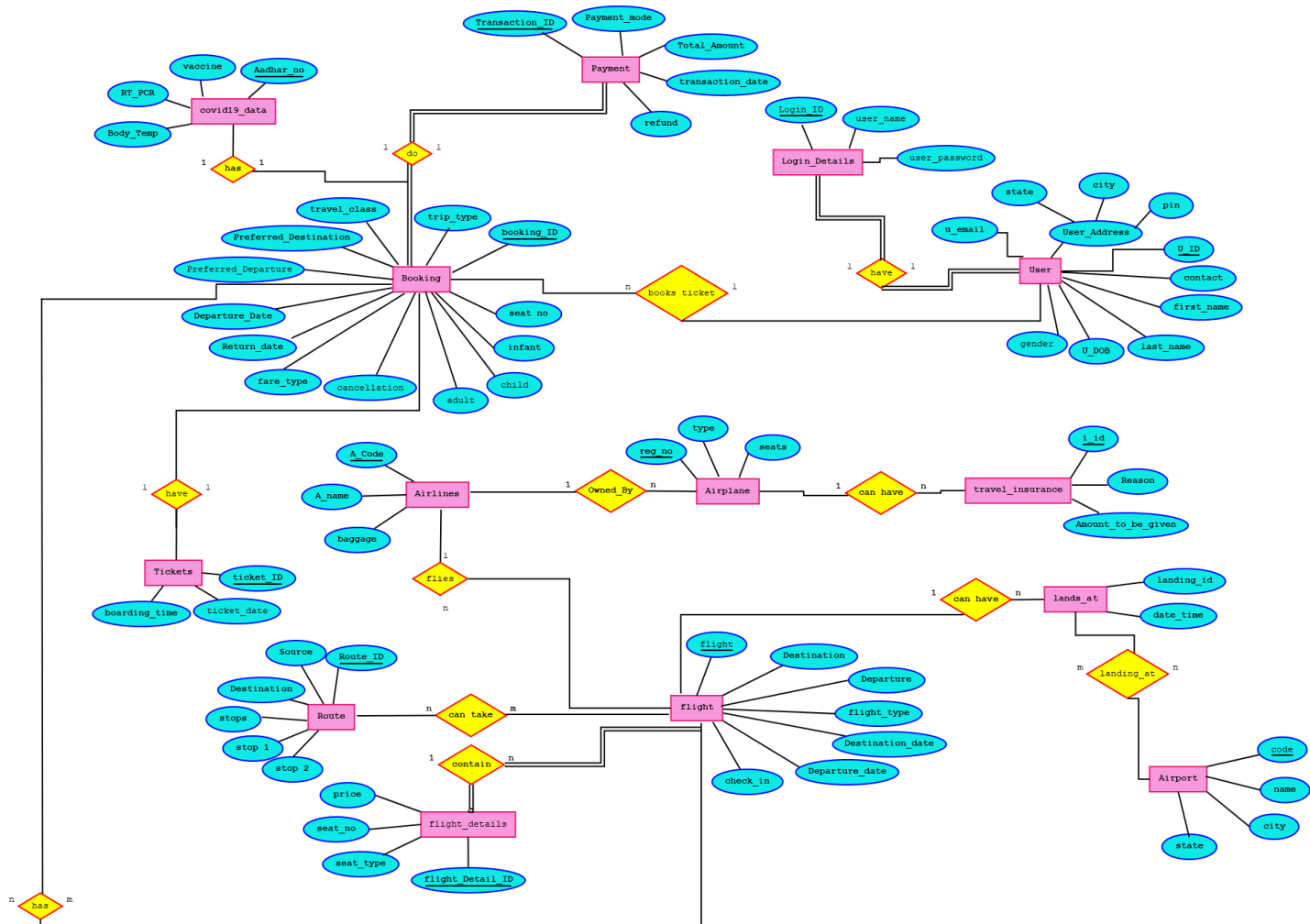
2.) <u>DESCRIPTION</u>

This system provides options for viewing different flights available with different timings for a particular date and provides customers with the facility to book a ticket, booking tickets in advance, modify or cancel a particular reservation but it does not provide the customers with details of cost of the ticket.

It can also manage all the information about the customers, booking enquiry, reservations. Users can view the status and schedule of a flight directly online. It also provides time to time information related to airlines schedules.
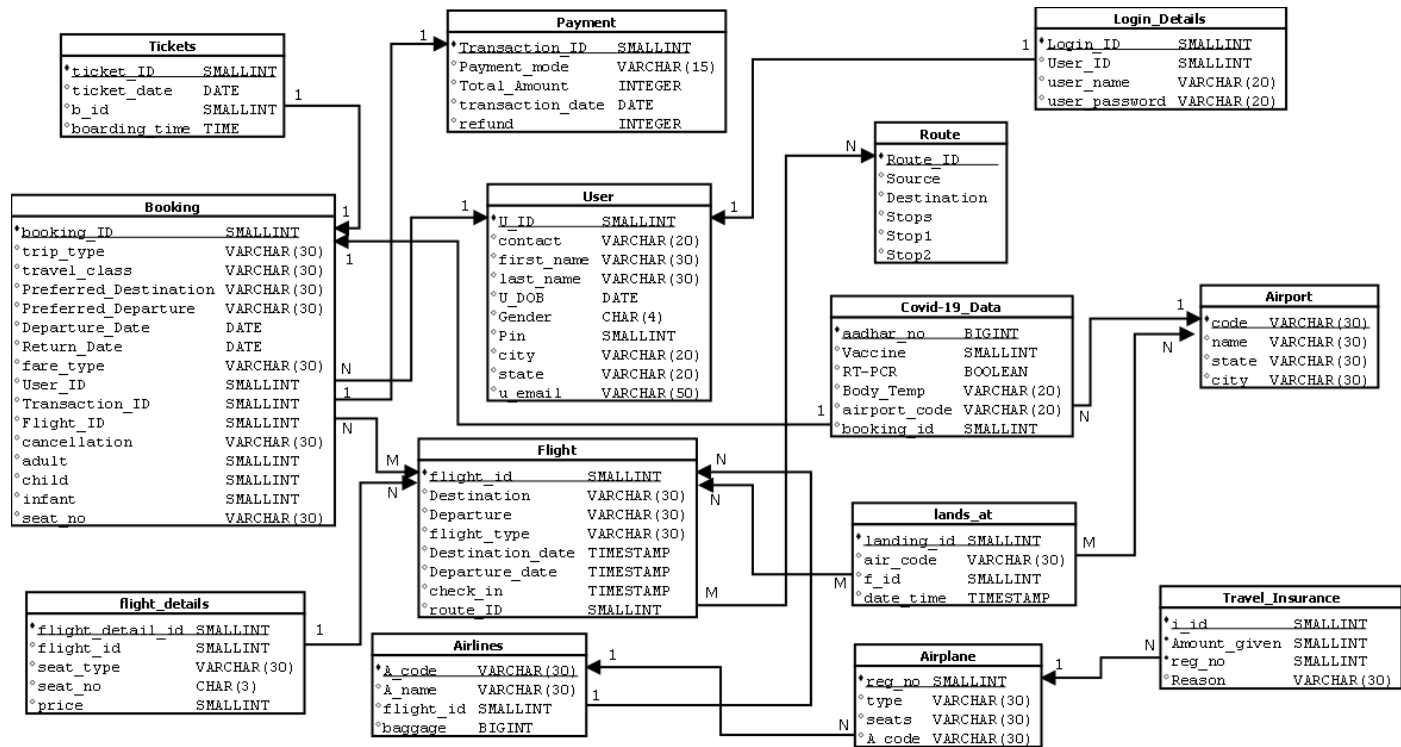
It tracks all the details about the airline booking, ticket booking. It can keep the records of the employee details, daily attendance and salary calculations of the employee.

It also tracks Airlines landing on Airports and Passengers Covid-19 data and also tracks all the routes of different airlines, it also tracks the insurance part of the flight.

3.) ENTITY - RELATIONSHIP DIAGRAM (ERD)

4.) RELATIONAL SCHEMA

Tickets
- ticket_ID   SMALLINT
- ticket_date   DATE
- b_id   SMALLINT
- boarding_time   TIME

Payment
- Transaction_ID   SMALLINT
- Payment_mode   VARCHAR(15)
- Total_Amount   INTEGER
- transaction_date   DATE
- refund   INTEGER

Login_Details
- Login_ID   SMALLINT
- User_ID   SMALLINT
- user_name   VARCHAR(20)
- user_password   VARCHAR(20)

Route
- Route_ID
- Source
- Destination
- Stops
- Stop1
- Stop2

Booking
- booking_ID   SMALLINT
- trip_type   VARCHAR(30)
- travel_class   VARCHAR(30)
- Preferred_Destination   VARCHAR(30)
- Preferred_Departure   VARCHAR(30)
- Departure_Date   DATE
- Return_Date   DATE
- fare_type   VARCHAR(30)
- User_ID   SMALLINT
- Transaction_ID   SMALLINT
- Flight_ID   SMALLINT
- cancellation   VARCHAR(30)
- adult   SMALLINT
- child   SMALLINT
- infant   SMALLINT
- seat_no   VARCHAR(30)

User
- U_ID   SMALLINT
- contact   VARCHAR(20)
- first_name   VARCHAR(30)
- last_name   VARCHAR(30)
- U_DOB   DATE
- Gender   CHAR(4)
- Pin   SMALLINT
- city   VARCHAR(20)
- state   VARCHAR(20)
- u_email   VARCHAR(50)

Covid-19_Data
- aadhar_no   BIGINT
- Vaccine   SMALLINT
- RT-PCR   BOOLEAN
- Body_Temp   VARCHAR(20)
- airport_code   VARCHAR(20)
- booking_id   SMALLINT

Airport
- code   VARCHAR(30)
- name   VARCHAR(30)
- state   VARCHAR(30)
- city   VARCHAR(30)

Flight
- flight_id   SMALLINT
- Destination   VARCHAR(30)
- Departure   VARCHAR(30)
- flight_type   VARCHAR(30)
- Destination_date   TIMESTAMP
- Departure_date   TIMESTAMP
- check_in   TIMESTAMP
- route_ID   SMALLINT

lands_at
- landing_id   SMALLINT
- air_code   VARCHAR(30)
- f_id   SMALLINT
- date_time   TIMESTAMP

flight_details
- flight_detail_id   SMALLINT
- flight_id   SMALLINT
- seat_type   VARCHAR(30)
- seat_no   CHAR(3)
- price   SMALLINT

Airlines
- A_code   VARCHAR(30)
- A_name   VARCHAR(30)
- flight_id   SMALLINT
- baggage   BIGINT

Airplane
- reg_no   SMALLINT
- type   VARCHAR(30)
- seats   VARCHAR(30)
- A_code   VARCHAR(30)

Travel_Insurance
- i_id   SMALLINT
- Amount_given   SMALLINT
- reg_no   SMALLINT
- Reason   VARCHAR(30)

5.) FUNCTIONAL DEPENDENCIES AND NORMALIZATION

1. TICKETS

- Functional Dependencies:

    {b_id}   → {ticket_id, ticket_date, boarding_time}

CANDIDATE KEY	→	{b_id}
PRIME ATTRIBUTE	→	{b_id}
NON–PRIME ATTRIBUTE	→	(ticket_id, ticket_date, boarding_time)

BCNF : YES
Reason : LHS is a Super Key and RHS depends on the Super Key

2. PAYMENT

- Functional Dependencies:

    {transaction_id} → {payment_mode, total_amount, transaction_date, refund}

CANDIDATE KEY	→	{transaction_id}
PRIME ATTRIBUTE	→	{transaction_id}
NON–PRIME ATTRIBUTE	→	{payment_mode, total_amount, transaction_date, refund}

BCNF : YES
Reason : LHS is a Super Key and RHS depends on the Super Key

3.   LOGIN DETAILS

- Functional Dependencies:

   {login_id} → {user_id, user_name, user_password}

CANDIDATE KEY	→	{login_id}
PRIME ATTRIBUTE	→	{login_id}
NON–PRIME ATTRIBUTE	→	{user_id, user_name, user_password}

BCNF : YES
Reason : LHS is a Super Key and RHS depends on the Super Key

4.   ROUTE

- Functional Dependencies :

   {route_id} → {source, destination, stops, stop1, stop2}

CANDIDATE KEY	→	{route_id}
PRIME ATTRIBUTE	→	{route_id}
NON–PRIME ATTRIBUTE	→	{source, destination, stops, stop1, stop2}

BCNF : YES
Reason : LHS is a Super Key and RHS depends on the Super Key

5. USER

- Functional Dependencies :

  {u_id} → {contact, first_name, last_name, u_dob, Gender,
  u_adress, u_email, pin, city}

CANDIDATE KEY → {u_id}
PRIME ATTRIBUTE → {u_id}
NON–PRIME ATTRIBUTE → {contact, first_name, last_name, u_dob,
Gender,u_email, pin, city}

BCNF : YES
Reason : LHS is a Super Key and RHS depends on the Super Key

6. BOOKING

- Functional Dependencies :

  {booking_id} → {trip_type, travel_class, preferred_destination,
  preferred_departure, departure_date, return_date,
  fare_type, user_id, transaction_id, flight_id,
  cancellation, adult, child, infant, seat_no}

CANDIDATE KEY → {booking_id}
PRIME ATTRIBUTE → {booking_id}
NON–PRIME ATTRIBUTE → {trip_type, travel_class, preferred_destination,
preferred_departure, departure_date, return_date,
fare_type, user_id, transaction_id, flight_id,
cancellation}

BCNF : YES
Reason : LHS is a Super Key and RHS depends on the Super Key

7. FLIGHT

- Functional Dependencies :

  {flight_id} → {destination, departure, flight_type, destination_time, departure_time, check_in, route_id}

CANDIDATE KEY   →   {flight_id}
PRIME ATTRIBUTE   →   {flight_id}
NON–PRIME ATTRIBUTE   →   {destination, departure, flight_type, destination_time, departure_time, check_in, route_id}

BCNF : YES
Reason : LHS is a Super Key and RHS depends on the Super Key

8. FLIGHT_DETAILS

- Functional Dependencies :

  {flight_id} ->   {flight_detail_id, seat_no, seat_type, price}

CANDIDATE KEY   →   {flight_id}
PRIME ATTRIBUTE   →   {flight_id}
NON–PRIME ATTRIBUTE   →   {flight_detail_id, seat_type, seat_no, price}

BCNF : YES
Reason : LHS is a Super Key and RHS depends on the Super Key

9. LANDS_AT

- Functional Dependency

  {flight_id, air_code} -> {landing_id, date_time}

  CANDIDATE KEY → {flight_id, air_code}
  PRIME ATTRIBUTE → {flight_id, air_code}
  NON–PRIME ATTRIBUTE → {landing_id, date_time}

BCNF : YES
Reason : LHS is a Super Key and RHS depends on the Super Key

10. Airport

- Functional Dependencies

  {code} → {name, state, city}
  {state} → {city}

  CANDIDATE KEY → {code}
  PRIME ATTRIBUTE → {code, state}
  NON-PRIME ATTRIBUTE → {name, city}

BCNF :
NO 3NF
    :
YES

Reason :
    BCNF : LHS is not a Super Key
    3NF : Prime Attribute determines Non-Prime Attribute

11.   Travel_Insurance

- Functional Dependencies :

{i_id) →   {Amount_given, reg_no, Reason}

CANDIDATE KEY ->   {i_id}
PRIME ATTRIBUTE ->   {i_id}
NON-PRIME ATTRIBUTE ->   {Amount_given, reg_no, Reason}

BCNF : YES
Reason : LHS is a Super Key and RHS depends on the Super Key

12.   Airplane

- Functional Dependencies :

{reg_no}   →   {type, seats, A_code}

CANDIDATE KEY   ->   {reg_no}
PRIME ATTRIBUTE   ->   {reg_no}
NON-PRIME ATTRIBUTE   ->   {type,seats,A_code}

BCNF : YES
Reason : LHS is a Super Key and RHS depends on the Super Key

13. Airlines

- Functional Dependencies :

{a_code} → {a_name, flight_id, baggage}

CANDIDATE KEY ->   {a_code}
PRIME ATTRIBUTE ->   {a_code}
NON-PRIME ATTRIBUTE ->   {a_name, flight_id, baggage}

BCNF : YES
Reason : LHS is a Super Key and RHS depends on the Super Key

14. Covid19_data

- Functional Dependencies
  {aadhar_no} -> {vaccine, rt_pcr, booking_id}

CANDIDATE KEY ->   {aadhar_no}
PRIME ATTRIBUTE ->   {aadhar_no}
NON-PRIME ATTRIBUTE ->   {vaccine, rt_pcr, booking_id}

BCNF : YES
Reason : LHS is a Super Key and RHS depends on the Super Key

6.) DDL SCRIPT

```
CREATE TABLE Payment(
transaction_id BIGINT,
payment_mode VARCHAR(30),
total_amount INTEGER,
transaction_date TIMESTAMP,
PRIMARY KEY(transaction_id)
);


create table user_table (
u_id BIGINT,
contact_no VARCHAR(50),
u_name VARCHAR(50),
u_dob DATE,
sex VARCHAR(50),
pin VARCHAR(50),
city VARCHAR(50),
state VARCHAR(50),
u_email VARCHAR(50),
PRIMARY KEY(u_id)
);



CREATE TABLE route(
route_id BIGINT,
source VARCHAR(30),
destination VARCHAR(30),
stops BIGINT,
stop1 VARCHAR(30),
stop2 VARCHAR(30),
PRIMARY KEY (route_id));



CREATE TABLE flight(
flight_id BIGINT,
departure VARCHAR(50),
destination VARCHAR(50),
flight_type VARCHAR(50),
departure_time TIMESTAMP,
destination_time TIMESTAMP,
check_in TIME,
route_id BIGINT,
PRIMARY KEY(flight_id),
FOREIGN KEY(route_id) REFERENCES route(route_id)
ON DELETE CASCADE ON UPDATE CASCADE
);



create table booking (
    booking_id VARCHAR(50),
    departure_date DATE,
    return_date DATE,
    trip_type VARCHAR(30),
    travel_class VARCHAR(50),
```

```sql
    preferred_destintion VARCHAR(50),
    preferred_departure VARCHAR(50),
    fare_type VARCHAR(50),
    adult SMALLINT,
    child SMALLINT,
    infant SMALLINT,
    seat_no VARCHAR(40),
    cancellation VARCHAR(50),
        user_id SMALLINT,
        transaction_id BIGINT,
        flight_id BIGINT,
    PRIMARY KEY(booking_id),
    FOREIGN KEY (user_id) REFERENCES user_table(u_id)
    ON DELETE CASCADE ON UPDATE CASCADE,
    FOREIGN KEY (transaction_id) REFERENCES payment(transaction_id)
    ON DELETE CASCADE ON UPDATE CASCADE,
    FOREIGN KEY (flight_id) REFERENCES flight(flight_id)
    ON DELETE CASCADE ON UPDATE CASCADE
);




CREATE TABLE login_details(
login_id BIGINT,
user_name VARCHAR(30),
user_password VARCHAR(30),
user_id BIGINT,
PRIMARY KEY(login_id),
FOREIGN KEY (user_id) REFERENCES user_table(u_id)
ON DELETE CASCADE ON UPDATE CASCADE
);




CREATE TABLE airlines(
a_code BIGINT,
a_name VARCHAR(30),
flight_id BIGINT,
baggage VARCHAR(10),
PRIMARY KEY (A_CODE),
FOREIGN KEY (flight_id) REFERENCES flight(flight_id)
ON DELETE CASCADE ON UPDATE CASCADE
);




create table ticket (
    ticket_id VARCHAR(50),
    ticket_date DATE,
    boarding_time TIME,
    b_id VARCHAR(50),
    PRIMARY KEY (ticket_id),
    FOREIGN KEY (b_id) REFERENCES booking(booking_id)
    ON DELETE CASCADE ON UPDATE CASCADE
);
```

```sql
CREATE TABLE airplane(
reg_no VARCHAR(20),
atype VARCHAR(30),
seats VARCHAR(30),
a_code BIGINT,
PRIMARY KEY(reg_no),
FOREIGN KEY(A_CODE) REFERENCES airlines(a_code)
ON DELETE CASCADE ON UPDATE CASCADE
);



CREATE TABLE airport(
code VARCHAR(20),
aname VARCHAR(50),
city VARCHAR(30),
state VARCHAR(30),
PRIMARY KEY(CODE)
);



CREATE TABLE travel_insurance(
i_id VARCHAR(20),
amount_given INTEGER,
reg_no VARCHAR(30),
reason VARCHAR(30),
PRIMARY KEY(i_id),
FOREIGN KEY(REG_NO) REFERENCES airplane(reg_no)
ON DELETE CASCADE ON UPDATE CASCADE
);


create table Covid19_Data(
aadhar_no BIGINT,
vaccine BIGINT,
RT_PCR BOOLEAN,
B_ID VARCHAR(50),
Body_Temp VARCHAR(20),
Airport_ID VARCHAR(20),
PRIMARY KEY(aadhar_no),

FOREIGN KEY(B_ID) REFERENCES booking(booking_id)
ON DELETE CASCADE ON UPDATE CASCADE,
FOREIGN KEY(Airport_ID) REFERENCES Airport(code)
ON DELETE CASCADE ON UPDATE CASCADE
);



create table lands_at(
landing_id BIGINT,
air_code VARCHAR(20),
f_id BIGINT,
date_time TIMESTAMP,
FOREIGN KEY(air_code) REFERENCES airport(code)
```

```
ON DELETE CASCADE ON UPDATE CASCADE,
FOREIGN KEY(f_id) REFERENCES flight(flight_id)
ON DELETE CASCADE ON UPDATE CASCADE
);




CREATE TABLE FLIGHT_DETAILS(
flight_detail_id SMALLINT,
flight_id SMALLINT,
seat_type VARCHAR(30),
seat_no varchar(3),
prices SMALLINT,
PRIMARY KEY(flight_detail_id),
FOREIGN KEY (flight_id) REFERENCES flight(flight_id)
ON DELETE CASCADE ON UPDATE CASCADE
);
```

7.) DML SCRIPT

```
INSERT INTO Payment VALUES (353998003586, ' Debit Card', 3500,'8/21/2021 22:15:09');
INSERT INTO Payment VALUES (344993972903, 'Netbanking', 4593, '8/3/2021 4:36:43');
INSERT INTO Payment VALUES (351437345078, 'Netbanking', 6726, '8/17/2021 3:38:18');
INSERT INTO Payment VALUES (354016789196, 'Credit Card', 6272, '9/1/2021 3:04:50');
INSERT INTO Payment VALUES (228114997137, 'Wallet', 1982, '4/13/2021 20:53:19');
INSERT INTO Payment VALUES (347724919386, 'Debit Card', 17611, '8/15/2021 0:20:10');
INSERT INTO Payment VALUES (227405038282, 'UPI', 1971, '4/11/2021 9:38:33');
INSERT INTO Payment VALUES (205062351789, 'Credit Card', 57979, '3/24/2021 3:47:35');
INSERT INTO Payment VALUES (154778722879, 'UPI', 5144, '2/22/2021 16:31:29');
INSERT INTO Payment VALUES (160224491268, 'Wallet', 2055, '3/6/2021 9:36:07');
INSERT INTO Payment VALUES (160224942921, 'Netbanking', 3206, '3/9/2021 4:23:18');
INSERT INTO Payment VALUES (157776967101, 'Netbanking', 2005, '2/28/2021 17:28:00');
INSERT INTO Payment VALUES (160224107795, 'Debit Card', 82905, '2/20/2021 7:36:09');
INSERT INTO Payment VALUES (132983831314, 'Debit Card', 2209, '2/9/2021 13:59:52');
INSERT INTO Payment VALUES (401837415137, 'Credit Card', 49666, '9/11/2021 18:56:30');
INSERT INTO Payment VALUES (096989001494, 'Debit Card', 126323, '1/12/2021 11:01:59');
INSERT INTO Payment VALUES (075996823206, 'Wallet', 1827, '1/3/2021 2:09:39');
INSERT INTO Payment VALUES (257261743782, 'Netbanking', 3439, '6/10/2021 0:27:35');
INSERT INTO Payment VALUES (367854575539, 'Debit Card', 73986, '8/16/2021 17:46:25');
```

```
insert into user_table (u_id, contact_no, u_name, u_dob, sex, pin, city, state, u_email) values (1, '191-664-9252', 'Kennith', '09/12/1985', 'Female', null, 'Delhi', null, 'kgierardi0@goodreads.com');
insert into user_table (u_id, contact_no, u_name, u_dob, sex, pin, city, state, u_email) values (2, '167-264-0900', 'Toby', '07/01/2012', 'Female', '959-2013', 'Gandhinagar', null, 'toloshin1@forbes.com');
insert into user_table (u_id, contact_no, u_name, u_dob, sex, pin, city, state, u_email) values (3, '304-340-5088', 'Brook', '01/01/1971', 'Male', '25709', 'Ahmedabad', 'Gujarat', 'bcusworth2@forbes.com');
insert into user_table (u_id, contact_no, u_name, u_dob, sex, pin, city, state, u_email) values (4, '419-135-7491', 'Matthus', '04/05/1972', 'Male', '8160', 'Jaipur', 'Rajasthan', 'mexeter3@cnet.com');
insert into user_table (u_id, contact_no, u_name, u_dob, sex, pin, city, state, u_email) values (5, '546-806-6874', 'Winslow', '11/18/1973', 'Male', null, 'Agra','Uttar Pradesh', 'wwoodland4@51.la');
insert into user_table (u_id, contact_no, u_name, u_dob, sex, pin, city, state, u_email) values (6, '422-630-4956', 'Ashlee', '07/01/1988', 'Female', null, 'Indore','Madhya Pradesh','acullinane5@seattletimes.com');
insert into user_table (u_id, contact_no, u_name, u_dob, sex, pin, city, state, u_email) values (7, '730-788-2756', 'Letta', '06/24/1985', 'Male', null, 'Jind','Haryana', 'lparratt6@weebly.com');
insert into user_table (u_id, contact_no, u_name, u_dob, sex, pin, city, state, u_email) values (8, '976-658-9862', 'Tory', '10/12/1957', 'Female', null, 'Ludhiana','Punjab', 'tstaddom7@engadget.com');
insert into user_table (u_id, contact_no, u_name, u_dob, sex, pin, city, state, u_email) values (9, '901-968-4600', 'Boony', '04/03/1997', 'Male', null, 'Delhi','Haryana', 'bgammel8@icio.us');
insert into user_table (u_id, contact_no, u_name, u_dob, sex, pin, city, state, u_email) values (10, '151-714-6006', 'Ches', '08/23/1972', 'Female', null, 'Bhopal','Madhya Pradesh', 'cgleasane9@mapquest.com');
insert into user_table (u_id, contact_no, u_name, u_dob, sex, pin, city, state, u_email) values (11, '162-865-6448', 'Stearne', '01/05/1982', 'Male', null, 'Mumbai','Maharashtra', 'shanfreya@apache.org');
insert into user_table (u_id, contact_no, u_name, u_dob, sex, pin, city, state, u_email) values (12, '668-923-3346', 'Nydia', '08/18/1970', 'Male', null, 'Hyderabad','Telangana', 'nmuggletonb@fema.gov');
insert into user_table (u_id, contact_no, u_name, u_dob, sex, pin, city, state, u_email) values (13, '511-479-3522', 'Helaina', '02/27/1954', 'Female', '3707', 'Patna','Bihar', 'hbrauntonc@businessweek.com');
insert into user_table (u_id, contact_no, u_name, u_dob, sex, pin, city, state, u_email) values (14, '172-714-0295', 'Merv', '02/23/1987', 'Female', null, 'Dispur','Assam', 'mtwintermand@g.co');
insert into user_table (u_id, contact_no, u_name, u_dob, sex, pin, city, state, u_email) values (15, '860-918-4318', 'Justina', '12/21/2009', 'Male', '88592','Gangtok','Sikkim', 'jmullise@globo.com');
insert into user_table (u_id, contact_no, u_name, u_dob, sex, pin, city, state, u_email) values (16, '685-928-2813', 'Leonora', '10/31/2015', 'Female', null, 'Kolkata','West Bengal','leverixf@europa.eu');
insert into user_table (u_id, contact_no, u_name, u_dob, sex, pin, city, state, u_email) values (17, '701-243-8500', 'Debera', '07/18/1985', 'Female', null, 'Raipur','Chhattisgarh', 'dmeaghg@cmu.edu');
```

```
insert into user_table (u_id, contact_no, u_name, u_dob, sex, pin, city, state, u_email) values (18, '560-339-3244', 'Merissa', '06/08/2007', 'Male', '4211', 'Srinagar','Jammu & Kashmir', 'mmasterh@google.it');
insert into user_table (u_id, contact_no, u_name, u_dob, sex, pin, city, state, u_email) values (19, '405-246-0827', 'Flint', '12/28/1995', 'Male', null, 'Panaji','Goa', 'fducarnei@webnode.com');
insert into user_table (u_id, contact_no, u_name, u_dob, sex, pin, city, state, u_email) values (20, '275-758-6193', 'Siouxie', '06/09/1984', 'Male', null, 'Dehradun','Uttarakhand', 'skruschevj@theglobeandmail.com');
insert into user_table (u_id, contact_no, u_name, u_dob, sex, pin, city, state, u_email) values (21, '275-758-6195', 'Rachit', '04/29/2000', 'Male', 221002, 'Varanasi','Uttar Pradesh', '202118015@daiict.ac.in');
insert into user_table (u_id, contact_no, u_name, u_dob, sex, pin, city, state, u_email) values (22, '275-758-6196', 'Jenil', '06/09/1984', 'Male', null, 'Dehradun','Uttarakhand', '202118034@daiict.ac.in');
insert into user_table (u_id, contact_no, u_name, u_dob, sex, pin, city, state, u_email) values (23, '275-758-6197', 'Akansha', '06/09/1999', 'Female', null, 'Ahmedabad','Uttarakhand', '202118017@daiict.ac.in');
insert into user_table (u_id, contact_no, u_name, u_dob, sex, pin, city, state, u_email) values (24, '275-758-6198', 'Dipshi', '05/06/1999', 'Female', null, 'Mumbai','Uttarakhand', '202118018@daiict.ac.in');
insert into user_table (u_id, contact_no, u_name, u_dob, sex, pin, city, state, u_email) values (25, '275-758-6199', 'Abhishek', '06/09/1980', 'Male', null, 'Allahabad','Uttar Pradesh', '202118004@daiict.ac.in');


insert into airport values('A980','Kempegowda Airport','Bengaluru','Karnataka');
insert into airport values('A981','Rajiv Gandhi Airport','Hyderabad','Telangana');
insert into airport values('A982','Visakhapatnam Airport','Visakhapatnam','Andhra Pradesh');
insert into airport values('A983','Indira Gandhi  Airport','New Delhi','Delhi');
insert into airport values('A984','Mangalore Airport','Mangalore','Karnataka');
insert into airport values('A985','Cochin Airport','Kochi','Kerala');
insert into airport values('A986','Calicut Airport','Kozhikode','Kerala');
insert into airport values('A987','Chhatrapati Shivaji Airport','Mumbai','Maharashtra');
insert into airport values('A988','Dr. Babasaheb Ambedkar Airport','Nagpur','Maharashtra');
insert into airport values('A989','Tulihal Airport','Imphal','Manipur');
insert into airport values('A990','Biju Patnaik Airport','Bhubaneswar','Odisha');
insert into airport values('A991','Jaipur Airport','Jaipur','Rajasthan');
insert into airport values('A992','Chennai Airport','Chennai','Tamil Nadu');
insert into airport values('A993','Coimbatore Airport','Coimbatore','Tamil Nadu');
insert into airport values('A994','Tiruchirapalli Airport','Tiruchirapalli','Tamil Nadu');
insert into airport values('A995','Chaudhary Charan Singh Airport','Lucknow','Uttar Pradesh');
insert into airport values('A996','Lal Bahadur Shastri Airport','Varanasi','Uttar Pradesh');
insert into airport values('A997','Gaya Airport','Gaya','Bihar');
insert into airport values('A998','Surat Airport','Surat','Gujarat');
insert into airport values('A999','Vadodara Airport','Vadodara','Gujarat');
insert into airport values('A970','Sardar Vallabhbhai Patel Airport','Ahmedabad','Gujarat');
insert into airport values('A971','Pune International Airport','Pune','Maharashtra');
insert into airport values('A972','Birsa Munda Airport','Ranchi','Jharkhand');
insert into airport values('A973','Subhash Chandra Bose Airport','Kolkata','West Bengal');
insert into airport values('A974','Raja Bhoj Airport','Bhopal','Madhya Pradesh');
insert into airport values('A975','Dehra Dun Airport','Dehra Dun','Dehra Dun');
insert into airport values('A976','Jay Prakash Narayan Airport','Patna','Bihar');


insert into route values ( 101, 'Patna' ,          'Chennai'      , 1      , 'Hyderabad'  , Null);
insert into route values ( 102, 'Varanasi'      , 'Patna'      , 0      , Null           , Null);
insert into route values ( 103, 'Lucknow'      , 'Mumbai'      , 0      , Null           , Null);
insert into route values ( 104, 'Surat'  ,'Mumbai'      , 0      , Null           , Null);
insert into route values ( 105, 'Lucknow' ,      'Delhi'  , 0      , Null, Null);
insert into route values ( 106, 'Lucknow' ,      'Coimbatore'  , 1      , 'Banglore',    Null);
insert into route values ( 107, 'Mumbai' ,       'Delhi' , 0,       Null,            Null);
insert into route values ( 108, 'Delhi' ,        'Tiruchirappalli' , 0      , Null, Null);
insert into route values ( 109, 'Kolkata' ,      'Bhubaneshwar' , 0,      Null,           Null);
insert into route values ( 110, 'Varanasi' ,     'Ahmedabad' , 1,       'Delhi', Null);
insert into route values ( 111, 'Mumbai' ,       'Hyderabad'   , 0,       Null,           Null);
```

insert into route values (112, 'Patna' ,   'Vishakhapatnam' , 1, 'Bhopal',   Null);
insert into route values (113, 'Nagpur' ,   'Delhi'   , 1,   'Jaipur',   Null);
insert into route values (114, 'Delhi' ,   'Varanasi'   , 0,   Null,   Null);
insert into route values (115, 'Bhopal' ,   'Delhi' , 0,   Null,   Null);
insert into route values (116, 'Mumbai' ,   'Surat' , 0,   Null,   Null);
insert into route values (117, 'Chennai' ,   'Delhi'   , 1,   'Bhopal',   Null);
insert into route values (118, 'Pune' ,   'Mumbai'   , 0,   Null,   Null);
insert into route values (119, 'Delhi' ,   'Nagpur'   , 0,   Null,   Null);
insert into route values (120, 'Lucknow' ,   'Manglore'   , 1,   'Banglore',   Null);
insert into route values (121, 'Shimla' ,   'Chennai' ,   2,   'Delhi',   'Hyderabad');
insert into route values (122, 'Jaipur' ,   'Kolkata'   , 2,   'Kanpur',   'Patna');
insert into route values (123, 'Patna' ,   'Mumbai'   , 1,   'Jaipur',   Null);

insert into flight values (8729, 'Patna', 'Chennai', 'non-commercial business aviation', '09/19/2021 09:40:00', '09/19/2021 22:30:00', '07:40:00', 101);
insert into flight values (5136, 'Varanasi', 'Patna', 'commercial flying', '10/01/2021 12:00:00', '10/01/2021 16:35:00', '10:00:00', 102);
insert into flight values (3425, 'Lucknow', 'Mumbai', 'other flying', '11/29/2021 03:30:00', '11/29/2021 05:50:00', '01:30:00', 103);
insert into flight values (4315, 'Surat', 'Mumbai', 'commercial flying', '07/07/2021 04:30:00', '07/07/2021 05:25:00', '02:30:00', 104);
insert into flight values (8431, 'Lucknow'', 'Delhi', 'commercial flying', '01/15/2021 08:30:00', '01/15/2021 09:40:00', '06:30:00', 105);
insert into flight values (2185, 'Delhi', 'Coimbatore', 'commercial flying', '01/24/2021 11:00:00', '01/25/2021 01:50:00', '09:00:00', 106);
insert into flight values (5132, 'Mumbai', 'Delhi', 'commercial flying', '02/18/2021 12:45:00', '02/18/2021 14:35:00', '10:45:00', 107);
insert into flight values (6238, 'Delhi', 'Tiruchirappalli', 'commercial flying', '03/15/2021 13:45:00', '03/16/2021 04:10:00', '11:45:00', 108);
insert into flight values (2092, 'Kolkata', 'Bhubaneshwar', 'intructional flying', '04/12/2021 06:40:00', '04/12/2021 07:50:00', '04:40:00', 109);
insert into flight values (4316, 'Varanasi', 'Ahmedabad', 'commercial flying', '04/22/2021 10:00:00', '04/22/2021 16:30:00', '08:00:00', 110);
insert into flight values (3802, 'Mumbai', 'Hyderabad', 'aerial work', '04/23/2021 11:45:00', '04/23/2021 13:00:00', '9:45:00', 111);
insert into flight values (6382, 'Patna', 'Vishakhapatnam', 'commercial flying', '04/24/2021 12:30:00', '04/25/2021 09:20:00', '10:30:00', 112);
insert into flight values (7376, 'Nagpur', 'Delhi', 'commercial flying', '04/15/2021 13:00:00', '04/15/2021 20:05:00', '11:00:00', 113);
insert into flight values (2999, 'Delhi', 'Varanasi', 'commercial flying', '08/08/2021 04:45:00', '08/08/2021 06:00:00', '02:45:00', 114);
insert into flight values (7740, 'Bhopal', 'Delhi', 'commercial flying', '06/19/2021 11:20:00', '06/19/2021 12:35:00', '9:20:00', 115);
insert into flight values (8235, 'Mumbai', 'Surat', 'non-commercial bussiness aviation', '08/25/2021 05:50:00', '08/25/2021 07:00:00', '3:50:00' ,116);
insert into flight values (3463, 'Chennai', 'Delhi', 'commercial flying', '09/19/2021 09:35:00', '09/19/2021 17:30:00', '07:35:00', 117);
insert into flight values (6052, 'Pune', 'Mumbai', 'pleasure flying', '09/04/2021 11:50:00', '09/04/2021 12:40:00', '09:50:00', 118);
insert into flight values (7708, 'Delhi', 'Nagpur', 'commercial flying', '09/15/2021 06:40:00', '09/15/2021 07:50:00', '04:40:00', 119);
insert into flight values (2272, 'Lucknow', 'Manglore', 'non-commercial business aviation', '08/15/2021 12:35:00', '08/15/2021 18:45:00', '10:35:00', 120);

insert into airlines (a_code, a_name, flight_id, baggage) values (9584, 'indigo', 8729, '15kg');
insert into airlines (a_code, a_name, flight_id, baggage) values (2385, 'air india', 5136, '20kg');
insert into airlines (a_code, a_name, flight_id, baggage) values (0058, 'spicejet', 3425, '15kg');

```
insert into airlines (a_code, a_name, flight_id, baggage) values (9761, 'gofirst', 4315, '20kg');
insert into airlines (a_code, a_name, flight_id, baggage) values (7247, 'vistara', 8431, '25kg');
insert into airlines (a_code, a_name, flight_id, baggage) values (8353, 'indigo', 2185, '15kg');
insert into airlines (a_code, a_name, flight_id, baggage) values (8539, 'indigo', 5132, '20kg');
insert into airlines (a_code, a_name, flight_id, baggage) values (7643, 'air india', 6238, '15kg');
insert into airlines (a_code, a_name, flight_id, baggage) values (2762, 'air asia', 2092, '15kg');
insert into airlines (a_code, a_name, flight_id, baggage) values (9598, 'spicejet', 4315, '20kg');
insert into airlines (a_code, a_name, flight_id, baggage) values (3334, 'gofirst', 3802, '15kg');
insert into airlines (a_code, a_name, flight_id, baggage) values (3232, 'vistara', 6382, '20kg');
insert into airlines (a_code, a_name, flight_id, baggage) values (9322, 'indigo', 7376, '15kg');
insert into airlines (a_code, a_name, flight_id, baggage) values (1083, 'vistara', 2999, '20kg');
insert into airlines (a_code, a_name, flight_id, baggage) values (9594, 'spicejet', 7740, '25kg');
insert into airlines (a_code, a_name, flight_id, baggage) values (9254, 'gofirst', 8235, '15kg');
insert into airlines (a_code, a_name, flight_id, baggage) values (9547, 'gofirst', 3463, '20kg');
insert into airlines (a_code, a_name, flight_id, baggage) values (4673, 'air india', 6052, '15kg');
insert into airlines (a_code, a_name, flight_id, baggage) values (5457, 'air asia', 7708,'15kg');
insert into airlines (a_code, a_name, flight_id, baggage) values (5560, 'spicejet', 2272, '20kg');


INSERT INTO airplane VALUES ('A501','Domestic' ,'800',9584);
INSERT INTO airplane VALUES ('A502','Domestic' ,'400',2385 );
INSERT INTO airplane VALUES ('A503','Domestic' ,'700',0058);
INSERT INTO airplane VALUES ('A504','Domestic' ,'500',9761 );
INSERT INTO airplane VALUES ('A505','Domestic' ,'600',7247);
INSERT INTO airplane VALUES ('A506','Domestic' ,'600',8353 );
INSERT INTO airplane VALUES ('A507','Domestic' ,'620',8539);
INSERT INTO airplane VALUES ('A508','Domestic' ,'670',7643);
INSERT INTO airplane VALUES ('A509','Domestic' ,'700', 2762);
INSERT INTO airplane VALUES ('A510','Domestic' ,'800',9598 );
INSERT INTO airplane VALUES ('A511','Domestic' ,'750',3334);
INSERT INTO airplane VALUES ('A512','Domestic' ,'720',3232 );
INSERT INTO airplane VALUES ('A513','Domestic' ,'780',9322);
INSERT INTO airplane VALUES ('A514','Domestic' ,'400',1083 );
INSERT INTO airplane VALUES ('A515','Domestic' ,'450',9594 );
INSERT INTO airplane VALUES ('A516','Domestic' ,'480',9254 );
INSERT INTO airplane VALUES ('A517','Domestic' ,'520',9547);
INSERT INTO airplane VALUES ('A518','Domestic' ,'550',4673 );
INSERT INTO airplane VALUES ('A519','Domestic' ,'740',5457 );
INSERT INTO airplane VALUES ('A520','Domestic' ,'790',5560);


INSERT INTO travel_insurance VALUES ('I101',4000 ,'A501','Flight Cancelled');
INSERT INTO travel_insurance VALUES ('I102',3000 ,'A502','Delayed Flight By Date');
INSERT INTO travel_insurance VALUES ('I103',3500 ,'A503','Missed Flight');
INSERT INTO travel_insurance VALUES ('I104',2500 ,'A504','Baggage Damage');
INSERT INTO travel_insurance VALUES ('I105',4000 ,'A505','Diverted Flight');
INSERT INTO travel_insurance VALUES ('I106',1000 ,'A506','Baggage Delay');
INSERT INTO travel_insurance VALUES ('I107',1500 ,'A507','Baggage Delay');
INSERT INTO travel_insurance VALUES ('I108',3500 ,'A508','Flight Missed');
INSERT INTO travel_insurance VALUES ('I109',1000 ,'A509','Delayed Flight By Date');
INSERT INTO travel_insurance VALUES ('I110',2000 ,'A510','Missed Flight');
INSERT INTO travel_insurance VALUES ('I111',2500 ,'A502','Baggage Damage');
INSERT INTO travel_insurance VALUES ('I112',3000 ,'A504','Diverted Flight');
INSERT INTO travel_insurance VALUES ('I113',3500 ,'A506','Flight Delay');
INSERT INTO travel_insurance VALUES ('I114',4000 ,'A508','Delayed Flight By Date');
INSERT INTO travel_insurance VALUES ('I115',1000 ,'A502','Missed Flight');
INSERT INTO travel_insurance VALUES ('I116',2000 ,'A504','Baggage Damage');
INSERT INTO travel_insurance VALUES ('I117',3500 ,'A506','Diverted Flight');
```

```
INSERT INTO travel_insurance VALUES ('I118',4000 ,'A508','Baggage Delay');
INSERT INTO travel_insurance VALUES ('I119',2000 ,'A502','Flight Cancelled');
INSERT INTO travel_insurance VALUES ('I120',2500 ,'A508','Missed Flight');
```

```
insert into booking (booking_id, departure_date, return_date, trip_type, travel_class, preferred_destintion,
preferred_departure, fare_type, adult, child, infant, seat_no, cancellation, user_id, transaction_id, flight_id)
values ('21-402-4309', '9/15/2021', null, 'one_way', 'Economy', 'Nagpur', 'Delhi',          'regular', 1, 0, 0,
'34B', 'No',                 1,         353998003586,                   '7708');
insert into booking (booking_id, departure_date, return_date, trip_type, travel_class, preferred_destintion,
preferred_departure, fare_type, adult, child, infant, seat_no, cancellation, user_id, transaction_id, flight_id)
values ('74-158-4202', '8/15/2021', null, 'one_way', 'Economy', 'Manglore', 'Lucknow',      'regular', 2, 0, 0,
'27A','No',                  2,         344993972903,                   '2272');
insert into booking (booking_id, departure_date, return_date, trip_type, travel_class, preferred_destintion,
preferred_departure, fare_type, adult, child, infant, seat_no, cancellation, user_id, transaction_id, flight_id)
values ('32-578-3738', '8/14/2021', '9/15/2021', 'round_trip', 'Economy', 'Mumbai', 'Pune', 'regular',1, 0, 0,
'26C', 'No',                 3,         351437345078,                   '6052');
insert into booking (booking_id, departure_date, return_date, trip_type, travel_class, preferred_destintion,
preferred_departure, fare_type, adult, child, infant, seat_no, cancellation, user_id, transaction_id, flight_id)
values ('00-115-8319', '9/15/2021', null, 'one_way', 'Economy', 'Delhi', 'Chennai',         'premium', 0, 2, 0,
'26B','No',                  4,         354016789196,                   '3463');
insert into booking (booking_id, departure_date, return_date, trip_type, travel_class, preferred_destintion,
preferred_departure, fare_type, adult, child, infant, seat_no, cancellation, user_id, transaction_id, flight_id)
values ('00-062-8924', '6/19/2021', null, 'one_way', 'Economy', 'Delhi', 'Bhopal',          'regular',1, 0, 0,
'26A','No',                  5,         228114997137,                   '7740');
insert into booking (booking_id, departure_date, return_date, trip_type, travel_class, preferred_destintion,
preferred_departure, fare_type, adult, child, infant, seat_no, cancellation, user_id, transaction_id, flight_id)
values ('56-695-7049', '8/25/2021', null, 'one_way', 'Business', 'Surat', 'Mumbai',         'regular', 2, 0, 0,
'4B','No',                   6,         347724919386,                   '8235');
insert into booking (booking_id, departure_date, return_date, trip_type, travel_class, preferred_destintion,
preferred_departure, fare_type, adult, child, infant, seat_no, cancellation, user_id, transaction_id, flight_id)
values ('25-923-2932', '8/8/2021', null, 'one_way', 'Economy', 'Varanasi', 'Delhi',         'regular', 3, 0, 0,
'25C','No',                  7,         227405038282,                   '2999');
insert into booking (booking_id, departure_date, return_date, trip_type, travel_class, preferred_destintion,
preferred_departure, fare_type, adult, child, infant, seat_no, cancellation, user_id, transaction_id, flight_id)
values ('02-996-8438', '4/15/2021', null, 'one_way', 'First_', 'Delhi', 'Nagpur',           'regular',1, 0, 0, '1A',
'No',                    8,         205062351789,                   '7376');
insert into booking (booking_id, departure_date, return_date, trip_type, travel_class, preferred_destintion,
preferred_departure, fare_type, adult, child, infant, seat_no, cancellation, user_id, transaction_id, flight_id)
values ('61-777-1579', '4/24/2021', null, 'one_way', 'Economy', 'Visakhapatnam', 'Patna',  'regular',1, 0, 0,
'25B', 'No',                 9,         154778722879,                   '6382');
insert into booking (booking_id, departure_date, return_date, trip_type, travel_class, preferred_destintion,
preferred_departure, fare_type, adult, child, infant, seat_no, cancellation, user_id, transaction_id, flight_id)
values ('13-572-3142', '4/23/2021', null, 'one_way', 'Economy', 'Hyderabad', 'Mumbai',     'regular', 2, 0, 1,
'25A','No',                  10,        160224491268,                   '3802');
insert into booking (booking_id, departure_date, return_date, trip_type, travel_class, preferred_destintion,
preferred_departure, fare_type, adult, child, infant, seat_no, cancellation, user_id, transaction_id, flight_id)
values ('45-442-0568', '4/22/2021', null, 'one_way', 'Economy', 'Ahmedabad', 'Varanasi',  'regular', 1, 0, 0,
'24C','No',                  11,        160224942921,                   '4316');
insert into booking (booking_id, departure_date, return_date, trip_type, travel_class, preferred_destintion,
preferred_departure, fare_type, adult, child, infant, seat_no, cancellation, user_id, transaction_id, flight_id)
values ('32-212-7844', '4/12/2021', null, 'one_way', 'Economy', 'Bhubaneswar', 'Kolkata', 'premium',1, 0, 0,
'24A', 'No',                 12,        157776967101,                   '2092');
insert into booking (booking_id, departure_date, return_date, trip_type, travel_class, preferred_destintion,
preferred_departure, fare_type, adult, child, infant, seat_no, cancellation, user_id, transaction_id, flight_id)
values ('93-109-8522', '3/15/2021', null, 'one_way', 'Business', 'Tiruchirapalli', 'Delhi',  'regular', 1, 0, 0,
'4A','No',                   13,        160224107795,                   '6238');
insert into booking (booking_id, departure_date, return_date, trip_type, travel_class, preferred_destintion,
preferred_departure, fare_type, adult, child, infant, seat_no, cancellation, user_id, transaction_id, flight_id)
```

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values ('43-268-3039', '2/18/2021', null, 'one_way', 'Economy', 'Delhi', 'Mumbai',          'regular',1, 0, 0,
'40B', 'No',                     14,      132983831314,                    '5132');
insert into booking (booking_id, departure_date, return_date, trip_type, travel_class, preferred_destintion,
preferred_departure, fare_type, adult, child, infant, seat_no, cancellation, user_id, transaction_id, flight_id)
values ('88-094-1103', '9/19/2021', null, 'one_way', 'Business', 'Chennai', 'Patna',          'regular', 2, 2, 0,
'3B','No',                     15,      401837415137,                    '8729');
insert into booking (booking_id, departure_date, return_date, trip_type, travel_class, preferred_destintion,
preferred_departure, fare_type, adult, child, infant, seat_no, cancellation, user_id, transaction_id, flight_id)
values ('63-887-7236', '4/6/2021', '12/24/2020', 'round_trip', 'First_', 'Coimbatore', 'Delhi', 'regular',0, 1, 0, '1B',
'No',              16,      096989001494,                    '2185');
insert into booking (booking_id, departure_date, return_date, trip_type, travel_class, preferred_destintion,
preferred_departure, fare_type, adult, child, infant, seat_no, cancellation, user_id, transaction_id, flight_id)
values ('09-385-4368', '1/15/2021', null, 'one_way', 'Economy', 'Delhi', 'Lucknow',          'regular', 2, 1, 2,
'32A','No',                     17,      075996823206,                    '8431');
insert into booking (booking_id, departure_date, return_date, trip_type, travel_class, preferred_destintion,
preferred_departure, fare_type, adult, child, infant, seat_no, cancellation, user_id, transaction_id, flight_id)
values ('76-056-1723', '7/7/2021', null, 'one_way', 'Economy', 'Mumbai', 'Surat',          'regular', 1, 0, 0,
'39B','No',                     18,      257261743782,                    '4315');
insert into booking (booking_id, departure_date, return_date, trip_type, travel_class, preferred_destintion,
preferred_departure, fare_type, adult, child, infant, seat_no, cancellation, user_id, transaction_id, flight_id)
values ('95-428-2873', '10/1/2021', '10/7/2021', 'round_trip', 'Business', 'Patna', 'Varnasi', 'regular', 1, 0, 0,
'3A','Yes',              19,      367854575539,                    '5136');


insert into ticket  values ('A-3584', '9/15/2021', '13:44:00',    '21-402-4309');
insert into ticket values ('A-3723', '8/15/2021', '16:40:00',    '74-158-4202');
insert into ticket  values ('CT-35719', '8/14/2021', '09:00:00',       '32-578-3738');
insert into ticket  values ('G-3563', '9/15/2021', '13:15:00',    '00-115-8319');
insert into ticket  values ('K-3014', '6/19/2021', '20:45:00',    '00-062-8924');
insert into ticket  values ('J-3574', '8/25/2021', '24:00:00',    '56-695-7049');
insert into ticket  values ('M-5038', '8/8/2021', '06:30:00',    '25-923-2932');
insert into ticket  values ('UJ-6767', '4/15/2021', '18:40:00',  '02-996-8438');
insert into ticket  values ('FE-5893', '4/24/2021', '15:35:00',  '61-777-1579');
insert into ticket  values ('O-5100', '4/23/2021', '19:00:00',    '13-572-3142');
insert into ticket values ('O-3561', '4/22/2021', '18:00:00',    '45-442-0568');
insert into ticket  values ('P-3570', '4/12/2021', '17:15:00',    '32-212-7844');
insert into ticket  values ('J-6763', '3/15/2021', '17:30:00',    '93-109-8522');
insert into ticket  values ('M-3550', '2/18/2021', '17:45:00',    '43-268-3039');
insert into ticket  values ('N-3500', '9/19/2021', '08:00:00',    '88-094-1103');
insert into ticket  values ('MN-3530', '8/30/2021', '06:45:00', '63-887-7236');
insert into ticket  values ('KL-6334', '4/6/2021', '07:00:00',    '09-385-4368');
insert into ticket  values ('KL-3558', '9/19/2021', '19:45:00',    '88-094-1103');
insert into ticket  values ('L-5282', '7/7/2021', '13:00:00',    '76-056-1723');
insert into ticket  values ('L-3558', '10/1/2021', '14:00:00',    '95-428-2873');


INSERT INTO covid19_data
        VALUES (987654321078, 2, 'N', '21-402-4309', 'Normal', 'A988');
INSERT INTO covid19_data
        VALUES (123654789256, 2, 'N', '74-158-4202', 'Normal', 'A984');
INSERT INTO covid19_data
        VALUES (789456123032, 2, 'N', '32-578-3738', 'Normal', 'A987');
INSERT INTO covid19_data
        VALUES (456789321089, 2, 'N', '00-115-8319', 'Normal', 'A983');
```

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INSERT INTO covid19_data
    VALUES (321987654012, 2, 'N', '00-062-8924', 'Normal', 'A983');
INSERT INTO covid19_data
    VALUES (963025874198, 2, 'N', '56-695-7049', 'Normal', 'A998');
INSERT INTO covid19_data
    VALUES (987654321012, 2, 'N', '25-923-2932', 'Normal', 'A996');
INSERT INTO covid19_data
    VALUES (987654321013, 2, 'N', '02-996-8438', 'Normal', 'A983');
INSERT INTO covid19_data
    VALUES (987654321014, 2, 'N', '61-777-1579', 'Normal', 'A982');
INSERT INTO covid19_data
    VALUES (987654321015, 2, 'N', '13-572-3142', 'Normal', 'A981');
INSERT INTO covid19_data
    VALUES (987654321016, 2, 'N', '45-442-0568', 'Normal', 'A970');
INSERT INTO covid19_data
    VALUES (987654321017, 2, 'N', '32-212-7844', 'Normal', 'A990');
INSERT INTO covid19_data
    VALUES (987654321018, 2, 'N', '93-109-8522', 'Normal', 'A994');
INSERT INTO covid19_data
    VALUES (987654321019, 2, 'N', '43-268-3039', 'Normal', 'A983');
INSERT INTO covid19_data
    VALUES (987654321020, 2, 'N', '88-094-1103', 'Normal', 'A992');
INSERT INTO covid19_data
    VALUES (987321064512, 1, 'N', '63-887-7236', 'High', 'A993');
INSERT INTO covid19_data
    VALUES (987321064519, 1, 'N', '09-385-4368', 'High', 'A983');
INSERT INTO covid19_data
    VALUES (987321064589, 0, 'Y', '76-056-1723', 'High', 'A987');
INSERT INTO covid19_data
    VALUES (987321064588, 0, 'Y', '95-428-2873', 'High', 'A976');


insert into login_details (login_id, user_name, user_password, user_id) values (1916649252, 'imaunders0', 'j4Ed6HIa7', 1);
insert into login_details (login_id, user_name, user_password, user_id) values (1672640900, 'ggorling1', 'v0ZMh0', 2);
insert into login_details (login_id, user_name, user_password, user_id) values (3043405088, 'toiseau2', 'idt8BC', 3);
insert into login_details (login_id, user_name, user_password, user_id) values (4191357491, 'vszreter3', 'QwD00kGA7V4', 4);
insert into login_details (login_id, user_name, user_password, user_id) values (5448066874, 'mgripton4', 'qt9teafH8Q', 5);
insert into login_details (login_id, user_name, user_password, user_id) values (4226304956, 'lcullen5', 'edduePjq83t', 6);
insert into login_details (login_id, user_name, user_password, user_id) values (7307882756, 'arennebeck6', 'd0tfPTfsN', 7);
insert into login_details (login_id, user_name, user_password, user_id) values (9766589862, 'jgoodliffe7', '60OuvN', 8);
insert into login_details (login_id, user_name, user_password, user_id) values (9019684600, 'rsaull8', 'Z0k81I3sad14', 9);
insert into login_details (login_id, user_name, user_password, user_id) values (1517146006, 'mtorricina9', '3YfTzi5ETz', 10);
insert into login_details (login_id, user_name, user_password, user_id) values (1628656448, 'jducaena', '59XvBR0iGf5', 11);
insert into login_details (login_id, user_name, user_password, user_id) values (6689233346, 'plystonb', 'JZNIrM', 12);
insert into login_details (login_id, user_name, user_password, user_id) values (5114793522, 'ppakemanc', '31ZE0BCV5', 13);
```

insert into login_details (login_id, user_name, user_password, user_id) values (1727140295, 'mwrothamd', 'mFCNvrpEm', 14);
insert into login_details (login_id, user_name, user_password, user_id) values (8609184318, 'btomainoe', 'tOKY4FsG', 15);
insert into login_details (login_id, user_name, user_password, user_id) values (6859282813, 'tcrightonf', 'L5jAO2p1cI2b', 16);
insert into login_details (login_id, user_name, user_password, user_id) values (7012438500, 'mhatliffeg', '0drvLlf5', 17);
insert into login_details (login_id, user_name, user_password, user_id) values (5603393244, 'sdilkeh', 'lOU2P9MLW9b', 18);
insert into login_details (login_id, user_name, user_password, user_id) values (4052460827, 'lhyamsi', 'gSXnbdjl8luO', 19);
insert into login_details (login_id, user_name, user_password, user_id) values (2757586193, 'omcgrottyj', 'QEkD4zrTF0I', 20);
insert into login_details (login_id, user_name, user_password, user_id) values (9574075060, 'jenil_doshi', 'jenil@1234', 21);
insert into login_details (login_id, user_name, user_password, user_id) values (7082747013, 'akansha_lite_pro_max', 'akansha@1234', 22);
insert into login_details (login_id, user_name, user_password, user_id) values (9974708600, 'dipshi_mumbai_shopper', 'dipshi@1234', 23);
insert into login_details (login_id, user_name, user_password, user_id) values (9451195094, 'rachit_0011', 'rachit@1234', 24);
insert into login_details (login_id, user_name, user_password, user_id) values (7739996806, 'invisible', 'abhishek@1234', 25);

insert into FLIGHT_DETAILS values ('0157', '8729', 'economy', '3B', '7425');
insert into FLIGHT_DETAILS values ('3863', '5136', 'economy', '3A', '7845');
insert into FLIGHT_DETAILS values ('7681', '3425', 'business', 'B5', '8622');
insert into FLIGHT_DETAILS values ('4648', '4315', 'business', '39B', '9120');
insert into FLIGHT_DETAILS values ('8431', '8431', 'economy', '32A', '7845');
insert into FLIGHT_DETAILS values ('4352', '2185', 'first class', '1B', '8622');
insert into FLIGHT_DETAILS values ('8004', '5132', 'first class', '40B', '8622');
insert into FLIGHT_DETAILS values ('6057', '6238', 'economy', '4A', '7425');
insert into FLIGHT_DETAILS values ('5605', '2092', 'business', '24A', '9120');
insert into FLIGHT_DETAILS values ('8774', '4315', 'economy', '24C', '9120');
insert into FLIGHT_DETAILS values ('4310', '3802', 'first class', '25A', '8622');
insert into FLIGHT_DETAILS values ('3225', '6382', 'economy', '25B', '8622');
insert into FLIGHT_DETAILS values ('9110', '7376', 'economy', '1A', '7845');
insert into FLIGHT_DETAILS values ('2910', '2999', 'economy', '25C', '7425');
insert into FLIGHT_DETAILS values ('8880', '7740', 'first class', '26A', '8622');
insert into FLIGHT_DETAILS values ('6198', '8235', 'economy', '4B', '7425');
insert into FLIGHT_DETAILS values ('6854', '3463', 'business', '26B', '7845');
insert into FLIGHT_DETAILS values ('5292', '6052', 'economy', '26C', '7845');
insert into FLIGHT_DETAILS values ('7552', '7708', 'first class' ,'34B', '8622');
insert into FLIGHT_DETAILS values ('8785', '2272', 'economy','27A', '9120');

INSERT INTO lands_at values (77483, 'A976', 8729, '09/19/2021 07:10:00');
INSERT INTO lands_at values (77494, 'A981', 8729, '09/19/2021 11:27:00');
INSERT INTO lands_at values (77523, 'A992', 8729, '09/19/2021 21:49:00');
INSERT INTO lands_at values (87747, 'A996', 5136, '10/01/2021 11:00:00');
INSERT INTO lands_at values (87787, 'A976', 5136, '10/01/2021 16:36:00');
INSERT INTO lands_at values (91730, 'A995', 3425, '11/29/2021 12:00:00');
INSERT INTO lands_at values (91742, 'A987', 3425, '11/29/2021 05:55:00');
INSERT INTO lands_at values (49541, 'A998', 4315, '07/07/2021 02:00:00');
INSERT INTO lands_at values (49554, 'A987', 4315, '07/07/2021 05:16:00');

```
INSERT INTO lands_at values (01350, 'A995', 8431, '01/15/2021 06:00:00');
INSERT INTO lands_at values (01352, 'A983', 8431, '01/15/2021 09:23:00');
INSERT INTO lands_at values (01623, 'A983', 2185, '01/24/2021 08:30:00');
INSERT INTO lands_at values (01752, 'A984', 2185, '01/24/2021 06:52:00');
INSERT INTO lands_at values (01804, 'A993', 2185, '01/25/2021 01:32:00');
INSERT INTO lands_at values (12690, 'A987', 5132, '02/18/2021 10:15:00');
INSERT INTO lands_at values (12765, 'A983', 5132, '02/18/2021 14:26:00');
INSERT INTO lands_at values (27850, 'A983', 6238, '03/15/2021 11:30:00');
INSERT INTO lands_at values (28091, 'A994', 6238, '03/16/2021 03:52:00');
INSERT INTO lands_at values (38572, 'A973', 2092, '04/12/2021 04:00:00');
INSERT INTO lands_at values (38591, 'A990', 2092, '04/12/2021 07:51:00');
INSERT INTO lands_at values (42223, 'A996', 4316, '04/22/2021 07:30:00');
INSERT INTO lands_at values (42324, 'A983', 4316, '04/22/2021 11:54:00');
INSERT INTO lands_at values (42377, 'A970', 4316, '04/22/2021 16:37:00');
INSERT INTO lands_at values (42587, 'A987', 3802, '04/23/2021 09:20:00');
INSERT INTO lands_at values (42612, 'A981', 3802, '04/23/2021 11:32:00');
INSERT INTO lands_at values (42931, 'A976', 6382, '04/24/2021 09:45:00');
INSERT INTO lands_at values (43149, 'A974', 6382, '04/24/2021 18:30:00');
INSERT INTO lands_at values (43260, 'A982', 6382, '04/25/2021 08:52:00');
INSERT INTO lands_at values (39931, 'A988', 7376, '04/15/2021 10:40:00');
INSERT INTO lands_at values (39994, 'A991', 7376, '04/15/2021 16:27:00');
INSERT INTO lands_at values (40000, 'A983', 7376, '04/15/2021 19:50:00');
INSERT INTO lands_at values (55829, 'A983', 2999, '08/08/2021 02:05:00');
INSERT INTO lands_at values (55841, 'A996', 2999, '08/08/2021 05:40:00');
INSERT INTO lands_at values (49092, 'A974', 7740, '06/19/2021 09:00:00');
INSERT INTO lands_at values (49114, 'A983', 7740, '06/19/2021 11:27:00');
INSERT INTO lands_at values (59638, 'A987', 8235, '08/25/2021 03:20:00');
INSERT INTO lands_at values (59641, 'A998', 8235, '08/25/2021 06:38:00');
INSERT INTO lands_at values (77480, 'A992', 3463, '09/19/2021 07:00:00');
INSERT INTO lands_at values (77954, 'A974', 3463, '09/19/2021 14:55:00');
INSERT INTO lands_at values (78072, 'A983', 3463, '09/19/2021 17:32:00');
INSERT INTO lands_at values (67337, 'A971', 6052, '09/04/2021 09:35:00');
INSERT INTO lands_at values (67428, 'A987', 6052, '09/04/2021 12:23:00');
INSERT INTO lands_at values (68274, 'A983', 7708, '09/15/2021 04:20:00');
INSERT INTO lands_at values (68327, 'A988', 7708, '09/15/2021 06:51:00');
INSERT INTO lands_at values (57284, 'A995', 2272, '08/15/2021 10:15:00');
INSERT INTO lands_at values (57329, 'A980', 2272, '08/15/2021 14:57:00');
INSERT INTO lands_at values (57390, 'A984', 2272, '08/15/2021 19:08:00');
```

8.) QUERIES AND RESULTS

1.) Which date has maximum number of bookings?

```
select departure_date,count(booking_id) b from booking
group by departure_date
order by b desc;
```

	departure_date date	b bigint
1	2021-09-15	2
2	2021-04-22	1
3	2021-08-15	1
4	2021-04-12	1
5	2021-07-07	1

2.) Display flight_ID,Departure_date,flight_type of all flights whose ticket price is less than 3000?

```
set search_path to flight_booking;
select flight_id,departure_date,flight_type from flight f
natural join booking b
natural join flight_details fd
where fd.prices>8000;
```

Notifications   **Data Output**   Explain   Messages

	flight_id bigint	departure_date date	flight_type character varying (50)
1	4315	2021-07-07	commercial flying
2	2185	2021-04-06	commercial flying
3	5132	2021-02-18	commercial flying
4	2092	2021-04-12	intructional flying
5	3802	2021-04-23	aerial work
6	6382	2021-04-24	commercial flying
7	7740	2021-06-19	commercial flying
8	7708	2021-09-15	commercial flying
9	2272	2021-08-15	non-commercial business aviation

3.) Display flight_ID from location,to location and price of flights whose departure is in the month of April?

set search_path to flight_booking;
select flight_id,departure,destination,prices from flight f
natural join flight_details
where f.departure_time between '04/01/2021' and '05/01/2021';

Notifications	Data Output	Explain	Messages	
	flight_id bigint 🔒	departure character varying (50) 🔒	destination character varying (50) 🔒	prices smallint 🔒
1	2092	Kolkata	Bhubaneshwar	9120
2	3802	Mumbai	Hyderabad	8622
3	6382	Patna	Vishakhapatnam	8622
4	7376	Nagpur	Delhi	7845

4.) Revenue generated of each airline?

select a_name,sum(prices) as total_revenue
from airlines
natural join flight
natural join flight_details
group by a_name
order by total_revenue desc;

Notifications	Data Output	Explain	Mes
	a_name character varying (30) 🔒	total_revenue bigint 🔒	
1	spicejet	44604	
2	gofirst	42132	
3	indigo	32514	
4	vistara	23892	
5	air india	23115	
6	air asia	17742	

5.) Write a query to find the number of passengers travelled in each flight in each scheduled date?

select flight_id,count(booking_id) as passengers
from flight
natural join booking
where departure_date between '04/01/2021' and '05/01/2021'
group by flight_id;

	flight_id [PK] bigint	passengers bigint
1	2092	1
2	2185	1
3	3802	1
4	4316	1
5	6382	1
6	7376	1

6.) Average baggage weight by city?

select extract(MONTH from departure_time) as months,sum(prices) over (partition by a_name
order by extract(MONTH from departure_time)),a_name
from airlines
natural join flight
natural join flight_details
group by a_name,extract(MONTH from departure_time),prices;

	months double precision	sum bigint	a_name character varying (30)
1	4	9120	air asia
2	9	17742	air asia
3	3	7425	air india
4	9	15270	air india
5	10	23115	air india
6	4	8622	gofirst
7	7	17742	gofirst
8	8	25167	gofirst
9	9	33012	gofirst

7.) Write a query to find no_of_seats>600?

select a_code,a_name,seats from airlines
natural join airplane
where seats>'600'
group by a_name,a_code,seats
order by seats desc;

	a_code bigint	a_name character varying (30)	seats character varying (30)
1	9584	indigo	800
2	9598	spicejet	800
3	5560	spicejet	790
4	9322	indigo	780
5	3334	gofirst	750
6	5457	air asia	740
7	3232	vistara	720
8	58	spicejet	700
9	2762	air asia	700

8.) Most popular routes by origin airport?

select count(flight_id),departure,destination,route_id from flight
group by departure,destination,route_id;

	count bigint	departure character varying (50)	destination character varying (50)	route_id bigint
1	1	Lucknow	Mumbai	103
2	1	Patna	Vishakhapatnam	112
3	1	Mumbai	Hyderabad	111
4	1	Kolkata	Bhubaneshwar	109
5	1	Varanasi	Ahmedabad	110
6	1	Pune	Mumbai	118
7	1	Nagpur	Delhi	113
8	1	Chennai	Delhi	117
9	1	Delhi	Coimbatore	106

9.) Number of flights per airport?

select air_code,count(f_id) from lands_at
group by air_code;

	air_code character varying (20)	count bigint
1	A983	10
2	A980	1
3	A976	3
4	A984	2
5	A990	1
6	A981	2
7	A994	1
8	A971	1
9	A992	2

10.)   What is the most preferred airline?

select a.A_name,count(booking_id) from airlines a join flight f on a.flight_id = f.flight_id
join booking b on b.flight_id = f.flight_id
Group by a.A_code;

	a_name character varying (30)	count bigint
1	indigo	1
2	gofirst	1
3	vistara	1
4	air asia	1
5	air india	1
6	indigo	1
7	gofirst	1
8	spicejet	1
9	air asia	1

11.)   Total fare collected from '2016-10-01' to '2016-10-20'?

select distinct (select count(rt_pcr)from covid19_data where rt_pcr='false')*100 / (select count(b_id) from covid19_data)
as Perecentage_of_negative_RT_PCR from covid19_data;

	perecentage_of_negative_rt_pcr bigint
1	89

12.)   Revenue of airline by each month?

select u_id,sum(total_amount) transaction_amount from payment
natural join booking b
join user_table u on b.user_id=u.u_id
group by u_id
order by transaction_amount desc;

	u_id [PK] bigint	transaction_amount bigint
1	16	126323
2	13	82905
3	19	73986
4	8	57979
5	15	49666
6	6	17611
7	3	6726
8	4	6272
9	9	5144

13.)   Which user has done the largest transaction?

select distinct destination,departure,prices from flight
natural join flight_details
order by prices desc
limit 3;

Notifications   **Data Output**   Explain   Messages

	destination character varying (50) 🔒	departure character varying (50) 🔒	prices smallint 🔒
1	Manglore	Lucknow	9120
2	Bhubaneshwar	Kolkata	9120
3	Mumbai	Surat	9120

14.)   Which flight is shortest between a source and destination?

SELECT destination_time - departure_time as time_diffrence from flight

	time_diffrence interval 🔒
1	12:50:00
2	04:35:00
3	02:20:00
4	00:55:00
5	01:10:00
6	14:50:00
7	01:50:00
8	14:25:00
9	01:10:00

15.)   Which flights have arrived around their scheduled time?

select payment_mode,count(transaction_id) from payment
group by payment_mode
order by count desc
limit 2;

	payment_mode character varying (30) 🔒	count bigint 🔒
1	Netbanking	5
2	Debit Card	5

16.)   Maximum number of reasons for insurance?

select reason,count(i_id) from travel_insurance
group by reason
order by count desc
limit 2;

	reason character varying (30) 🔒	count bigint 🔒
1	Missed Flight	4
2	Baggage Damage	3

9.) CONCLUSION

The Airline reservation system has been a way of minimizing the clerical work, which is almost a routine and consumes the most precious time.

This AIRLINE RESERVATION SYSTEM has been an attempt to help the user to minimize his workload along with minimizing the paper works and saving of time.

Almost all the difficulties of manual reservation have been removed by this system. To wind up let me welcome all the suggestions and other improvements, which the system needs so that it covers all the needs if the user in the user way.

During our database management course we have learned about the basics of database design. This project gave us the opportunity to try our new skills in practice. While doing this project we also gained deeper understanding on database design and how it can be implemented in real life situations. We believe we can use our database designing skills also in other university projects.

10.) BIBLIOGRAPHY

Goindigo.com . Retrieved from   https://www.goindigo.in/

postgresqltutorial . Retrieved from https://postgresqltutorial.com/

javatpoint.com . Retrieved from https://www.javatpoint.com/