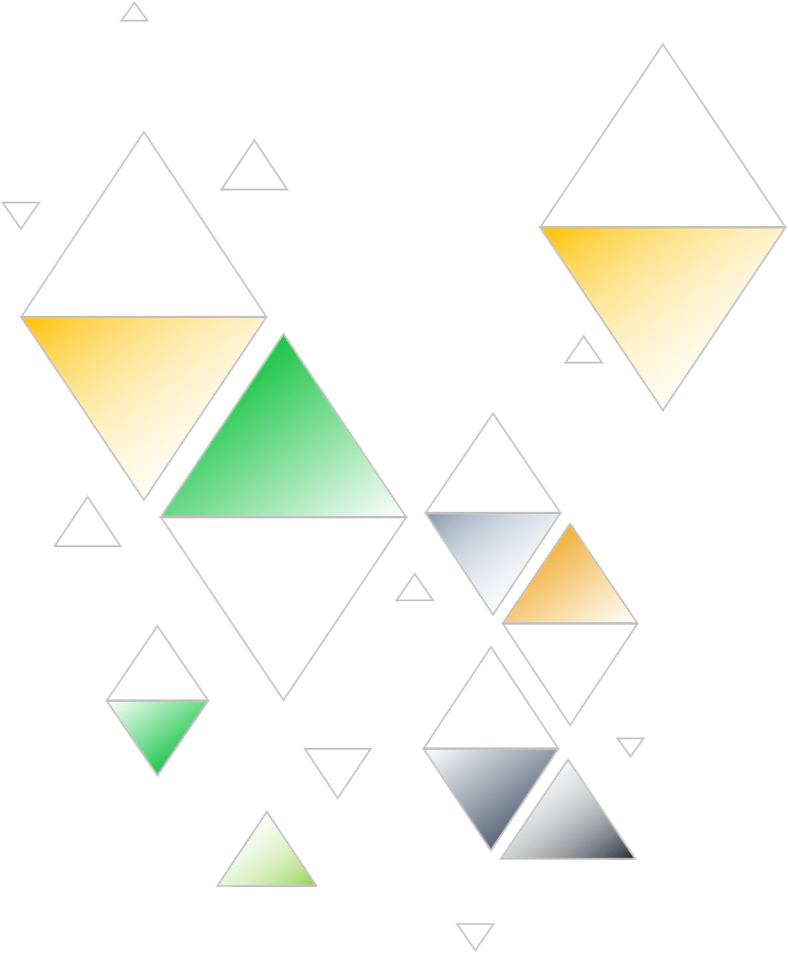


**CS254   
 DATABASE MANAGEMENT SYSTEMS**

A\*

Y****OUR TRAVEL AGENT

prepared by   
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B. TECH cse-a

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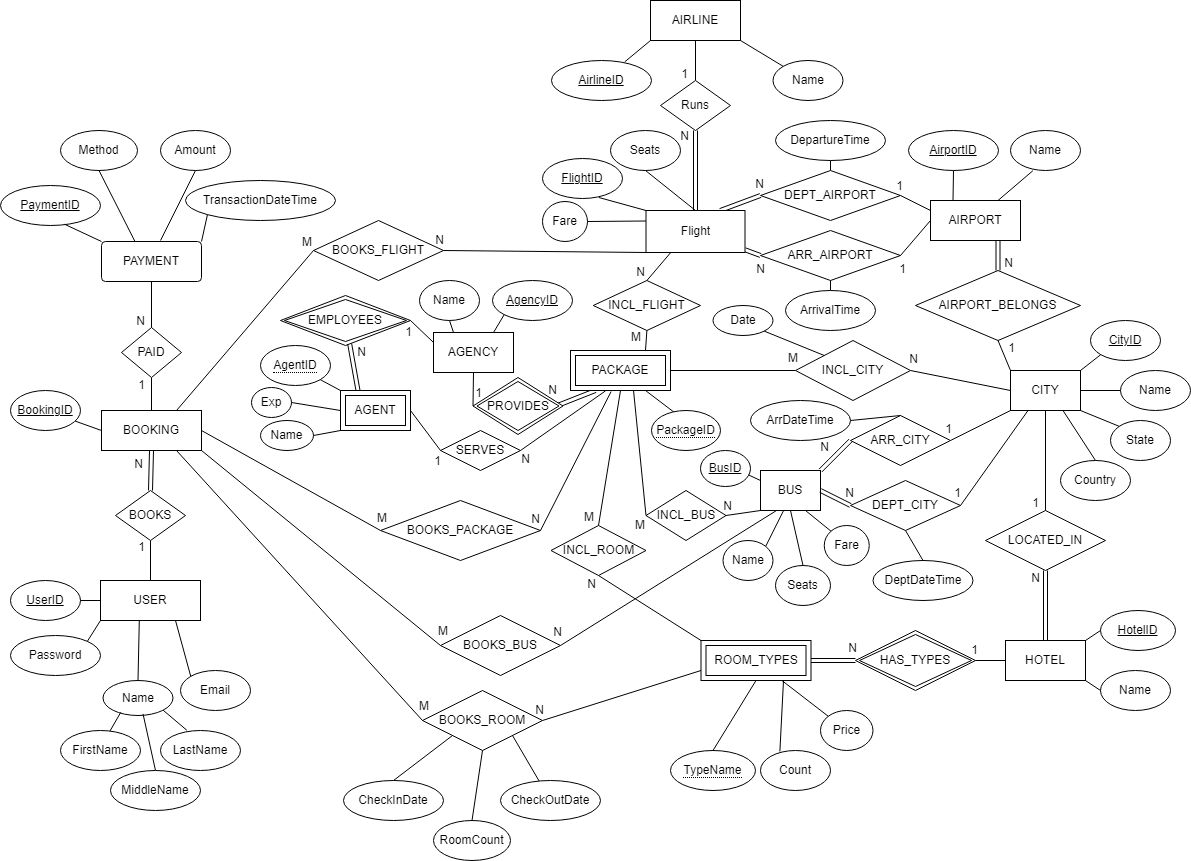
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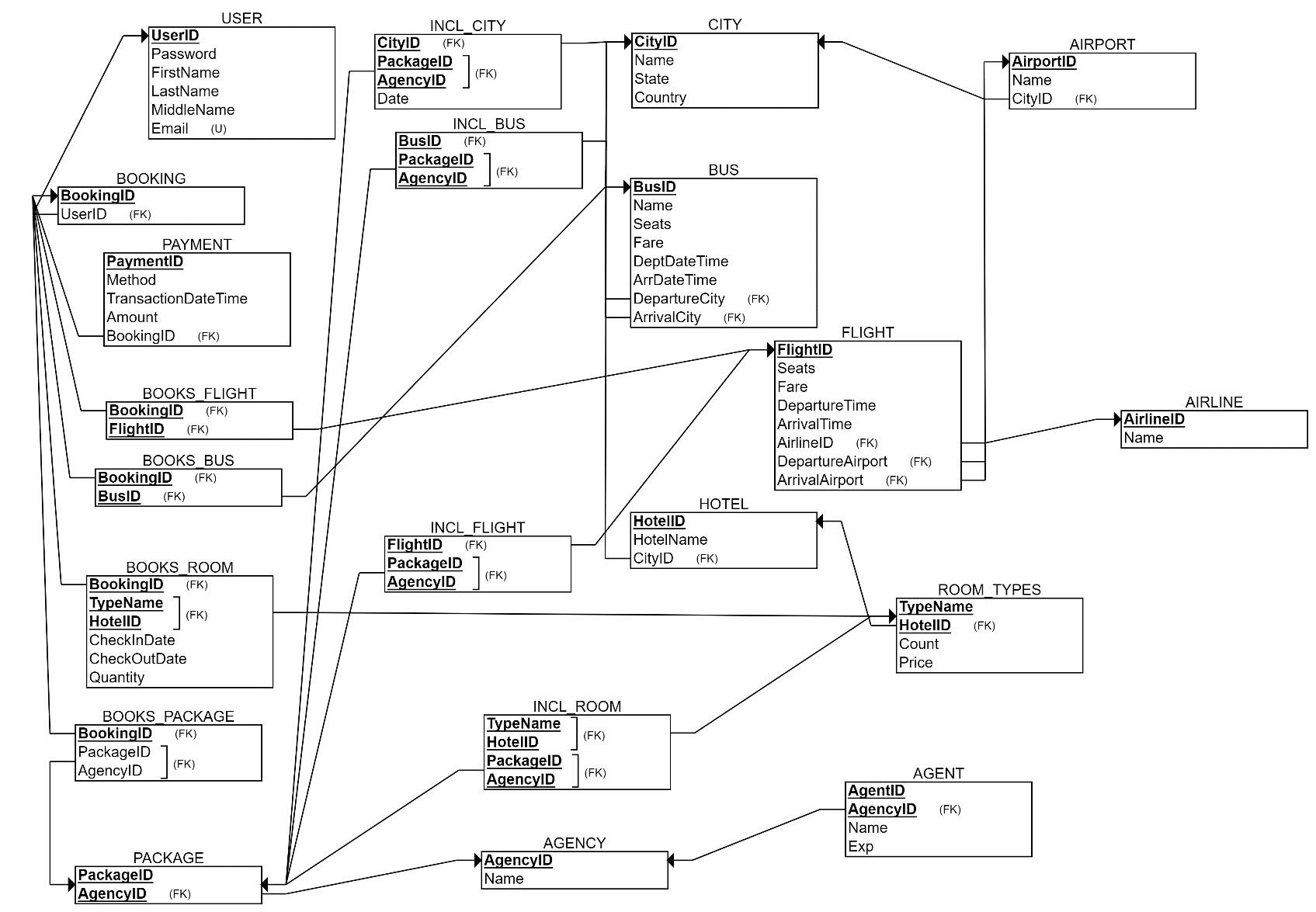
# PROJECT OVERVIEW

* The A\* travel management system is a comprehensive database designed to handle various aspects of travel planning and booking.
* It includes tables for users, flights, hotels, buses, agencies, agents, packages, airlines, cities, airports and related.
* This system facilitates seamless booking of flights, hotels, and buses either individually or as part of tour packages.
* With its extensive features, it provides users with efficient tools for planning and organizing their trips, making it indispensable for travelers and travel agents alike.

# ENTITY RELATIONSHIP DIAGRAM (ERD)



# RELATIONAL MODEL



# ERD EXPLANATION

## ENTITIES

|  |
| --- |
| Users: Contains details of users including name, date of birth, user ID, password, user type, and email.  City: Stores information about cities with attributes like city ID, name, state, and country.  Airport: Represents airports with attributes such as airport ID, name, and associated city ID.  Hotel: Contains details about hotels including hotel ID, name, and associated city ID.  Room\_Types: Stores information about room types available in hotels, with attributes like type name, count, price, and associated hotel ID.  Agency: Represents travel agencies with attributes like agency ID and name.  Agent: Contains details about agents working for travel agencies, including agent ID, name, experience, and associated agency ID.  Package: Stores information about travel packages offered by agencies, with attributes like package ID, title, and associated agency ID.  Airline: Represents airlines with attributes such as airline ID and name.  Bus: Contains details about bus services with attributes like bus ID, name, seats, fare, departure time, arrival time, departure city, and arrival city. |

## RELATIONSHIPS

|  |
| --- |
| One-to-Many Relationships:  Users and User\_Phone\_No: Each user can have multiple phone numbers associated with them.  Hotel and Room\_Types: Each hotel can have multiple room types available.  Agency and Agent: Each agency can have multiple agents working for them.  Package and Room\_Types: Each travel package may include multiple room types.  Package and Bus: Each travel package may include multiple bus services.  Package and Flight: Each travel package may include multiple flights.  Many-to-One Relationships:  Airport and City: Each airport belongs to a single city.  Hotel and City: Each hotel is located in a single city.  Bus and City: Each bus service operates between two cities.  Package and Agency: Each travel package is offered by a single agency.  Many-to-Many Relationships:  Users and Package: Each user can book multiple travel packages, and each travel package can be booked by multiple users.  Users and Booking: Each user can make multiple bookings, and each booking is made by a single user.  Package and Booking: Each travel package can be booked multiple times, and each booking can include a single travel package.  Hotel and Booking: Each hotel can be booked multiple times, and each booking can include a single hotel.  Bus and Booking: Each bus service can be booked multiple times, and each booking can include a single bus service.  Flight and Booking: Each flight can be booked multiple times, and each booking can include a single flight. |

# FUNCTIONAL DEPENDENCIES

# NORMALIZATION

# TABLES CREATION

CREATE TABLE USER

(

  UserID INT NOT NULL,

  Password VARCHAR(100) NOT NULL,

  FirstName VARCHAR(100) NOT NULL,

  LastName VARCHAR(100),

  MiddleName VARCHAR(100),

  Email VARCHAR(100) NOT NULL,

  PRIMARY KEY (UserID),

  UNIQUE (Email)

);

CREATE TABLE CITY

(

  CityID INT NOT NULL,

  Name VARCHAR(100) NOT NULL,

  State VARCHAR(100) NOT NULL,

  Country VARCHAR(100) NOT NULL,

  PRIMARY KEY (CityID)

);

CREATE TABLE AIRPORT

(

  AirportID INT NOT NULL,

  Name VARCHAR(100) NOT NULL,

  CityID INT NOT NULL,

  PRIMARY KEY (AirportID),

  FOREIGN KEY (CityID) REFERENCES CITY(CityID)

);

CREATE TABLE HOTEL

(

  HotelID INT NOT NULL,

  HotelName VARCHAR(100) NOT NULL,

  CityID INT NOT NULL,

  PRIMARY KEY (HotelID),

  FOREIGN KEY (CityID) REFERENCES CITY(CityID)

);

CREATE TABLE ROOM\_TYPES

(

  TypeName VARCHAR(100) NOT NULL,

  Count INT NOT NULL,

  Price FLOAT NOT NULL,

  HotelID INT NOT NULL,

  PRIMARY KEY (TypeName, HotelID),

  FOREIGN KEY (HotelID) REFERENCES HOTEL(HotelID)

);

CREATE TABLE AGENCY (

  AgencyID INT NOT NULL,

  Name VARCHAR(100) NOT NULL,

  PRIMARY KEY (AgencyID)

);

CREATE TABLE AGENT

(

  AgentID INT NOT NULL,

  Name VARCHAR(100) NOT NULL,

  Exp INT NOT NULL,

  AgencyID INT NOT NULL,

  PRIMARY KEY (AgentID, AgencyID),

  FOREIGN KEY (AgencyID) REFERENCES AGENCY(AgencyID)

);

CREATE TABLE PACKAGE

(

  PackageID INT NOT NULL,

  Title VARCHAR(100) NOT NULL,

  AgencyID INT NOT NULL,

  PRIMARY KEY (PackageID, AgencyID),

  FOREIGN KEY (AgencyID) REFERENCES AGENCY(AgencyID)

);

CREATE TABLE AIRLINE

(

  AirlineID INT NOT NULL,

  Name VARCHAR(100) NOT NULL,

  PRIMARY KEY (AirlineID)

);

CREATE TABLE BUS

(

  BusID INT NOT NULL,

  Name VARCHAR(100) NOT NULL,

  Seats INT NOT NULL,

  Fare FLOAT NOT NULL,

  DeptDateTime DATE NOT NULL,

  ArrDateTime DATE NOT NULL,

  DepartureCity INT NOT NULL,

  ArrivalCity INT NOT NULL,

  PRIMARY KEY (BusID),

  FOREIGN KEY (DepartureCity) REFERENCES CITY(CityID),

  FOREIGN KEY (ArrivalCity) REFERENCES CITY(CityID)

);

CREATE TABLE INCL\_CITY

(

  ArrDate DATE NOT NULL,

  CityID INT NOT NULL,

  PackageID INT NOT NULL,

  AgencyID INT NOT NULL,

  PRIMARY KEY (CityID, PackageID, AgencyID),

  FOREIGN KEY (CityID) REFERENCES CITY(CityID),

  FOREIGN KEY (PackageID, AgencyID) REFERENCES PACKAGE(PackageID, AgencyID)

);

CREATE TABLE INCL\_BUS

(

  BusID INT NOT NULL,

  PackageID INT NOT NULL,

  AgencyID INT NOT NULL,

  PRIMARY KEY (BusID, PackageID, AgencyID),

  FOREIGN KEY (BusID) REFERENCES BUS(BusID),

  FOREIGN KEY (PackageID, AgencyID) REFERENCES PACKAGE(PackageID, AgencyID)

);

CREATE TABLE INCL\_ROOM

(

  TypeName VARCHAR(100) NOT NULL,

  HotelID INT NOT NULL,

  PackageID INT NOT NULL,

  AgencyID INT NOT NULL,

  PRIMARY KEY (TypeName, HotelID, PackageID, AgencyID),

  FOREIGN KEY (TypeName, HotelID) REFERENCES ROOM\_TYPES(TypeName, HotelID),

  FOREIGN KEY (PackageID, AgencyID) REFERENCES PACKAGE(PackageID, AgencyID)

);

CREATE TABLE BOOKING

(

  BookingID INT NOT NULL,

  UserID INT NOT NULL,

  PRIMARY KEY (BookingID),

  FOREIGN KEY (UserID) REFERENCES USER(UserID)

);

CREATE TABLE PAYMENT

(

  PaymentID INT NOT NULL,

  Method VARCHAR(100) NOT NULL,

  TransactionDateTime DATE NOT NULL,

  Amount FLOAT NOT NULL,

  BookingID INT NOT NULL,

  PRIMARY KEY (PaymentID),

  FOREIGN KEY (BookingID) REFERENCES BOOKING(BookingID)

);

CREATE TABLE BOOKS\_BUS

(

  BookingID INT NOT NULL,

  BusID INT NOT NULL,

  PRIMARY KEY (BookingID, BusID),

  FOREIGN KEY (BookingID) REFERENCES BOOKING(BookingID),

  FOREIGN KEY (BusID) REFERENCES BUS(BusID)

);

CREATE TABLE BOOKS\_ROOM

(

  CheckInDate DATE NOT NULL,

  CheckOutDate DATE NOT NULL,

  Quantity INT NOT NULL,

  BookingID INT NOT NULL,

  TypeName VARCHAR(100) NOT NULL,

  HotelID INT NOT NULL,

  PRIMARY KEY (BookingID, TypeName, HotelID),

  FOREIGN KEY (BookingID) REFERENCES BOOKING(BookingID),

  FOREIGN KEY (TypeName, HotelID) REFERENCES ROOM\_TYPES(TypeName, HotelID)

);

CREATE TABLE BOOKS\_PACKAGE

(

  BookingID INT NOT NULL,

  PackageID INT NOT NULL,

  AgencyID INT NOT NULL,

  PRIMARY KEY (BookingID),

  FOREIGN KEY (BookingID) REFERENCES BOOKING(BookingID),

  FOREIGN KEY (PackageID, AgencyID) REFERENCES PACKAGE(PackageID, AgencyID)

);

CREATE TABLE FLIGHT

(

  FlightID INT NOT NULL,

  Seats INT NOT NULL,

  Fare FLOAT NOT NULL,

  DepartureTime DATE NOT NULL,

  ArrivalTime DATE NOT NULL,

  AirlineID INT NOT NULL,

  DepartureAirport INT NOT NULL,

  ArrivalAirport INT NOT NULL,

  PRIMARY KEY (FlightID),

  FOREIGN KEY (AirlineID) REFERENCES AIRLINE(AirlineID),

  FOREIGN KEY (DepartureAirport) REFERENCES AIRPORT(AirportID),

  FOREIGN KEY (ArrivalAirport) REFERENCES AIRPORT(AirportID)

);

CREATE TABLE INCL\_FLIGHT

(

  FlightID INT NOT NULL,

  PackageID INT NOT NULL,

  AgencyID INT NOT NULL,

  PRIMARY KEY (FlightID, PackageID, AgencyID),

  FOREIGN KEY (FlightID) REFERENCES FLIGHT(FlightID),

  FOREIGN KEY (PackageID, AgencyID) REFERENCES PACKAGE(PackageID, AgencyID)

);

CREATE TABLE BOOKS\_FLIGHT

(

  BookingID INT NOT NULL,

  FlightID INT NOT NULL,

  PRIMARY KEY (BookingID, FlightID),

  FOREIGN KEY (BookingID) REFERENCES BOOKING(BookingID),

  FOREIGN KEY (FlightID) REFERENCES FLIGHT(FlightID)

);

# DATA INSERTION

INSERT INTO USER (UserId, Password, FirstName, LastName, MiddleName, Email)

VALUES

(1, SHA2('password1', 256), 'Chetan', 'Kar', NULL, 'chetankar65@gmail.com'),

(2, SHA2('password2', 256), 'Aarav', 'Patel', 'Kumar', 'aarav.patel@example.com'),

(3, SHA2('password3', 256), 'Ananya', 'Sharma', 'Singh', 'ananya.sharma@example.com'),

(4, SHA2('password4', 256), 'Aryan', 'Das', 'Gupta', 'aryan.das@example.com'),

(5, SHA2('password5', 256), 'Neha', NULL, NULL, 'neha.joshi@example.com'),

(6, SHA2('password6', 256), 'Rahul', 'Gupta', 'Sharma', 'rahul.gupta@example.com'),

(7, SHA2('password7', 256), 'Priya', NULL, 'Kumari', 'priya.verma@example.com'),

(8, SHA2('password8', 256), 'Ravi', 'Malhotra', 'Singh', 'ravi.malhotra@example.com'),

(9, SHA2('password9', 256), 'Sneha', 'Choudhary', 'Yadav', 'sneha.choudhary@example.com'),

(10, SHA2('password10', 256), 'Shubham', 'Pahilwani', NULL, 'shubhampahilwani1@gmail.com');

INSERT INTO CITY (CityID, Name, State, Country)

VALUES

(1, 'Bengaluru', 'Karnataka', 'India'),

(2, 'Mumbai', 'Maharashtra', 'India'),

(3, 'Hyderabad', 'Telangana', 'India'),

(4, 'Dubai', 'Emirate of Dubai', 'United Arab Emirates'),

(5, 'New York City', 'New York', 'United States of America'),

(6, 'London', 'London', 'United Kingdom'),

(7, 'San Francisco', 'California', 'United States of America'),

(8, 'Jaipur', 'Rajasthan', 'India'),

(9, 'Kolkata', 'West Bengal', 'India'),

(10, 'Chennai', 'Tamil Nadu', 'India');

INSERT INTO Airport

(AirportID, Name, CityID) VALUES

(1, 'Kempegowda International Airport', 1),

(2, 'Chatrapati Shivaji International Airport', 2),

(3, 'Rajiv Gandhi International Airport', 3),

(4, 'Dubai International Airport', 4),

(5, 'Heathrow International Airport', 5),

(6, 'JFK International Airport', 6),

(7, 'Sanfrancisco International Airport', 7),

(8, 'Jaipur International Airport', 8),

(9, 'DV Patil International Airport', 2),

(10, 'Dumdum Airport', 9);

INSERT INTO HOTEL (HotelID, HotelName, CityID)

VALUES

(1, 'Taj Mahal Palace', 2),

(2, 'ITC Gardenia', 1),

(3, 'Taj Falaknuma Palace', 3),

(4, 'JW Marriott Marquis Hotel Dubai', 4),

(5, 'The Plaza Hotel', 5),

(6, 'The Ritz London', 6),

(7, 'The St. Regis San Francisco', 7),

(8, 'Fairmont Jaipur', 8),

(9, 'The Oberoi Bengaluru', 1),

(10, 'Taj Lands End, Mumbai', 2),

(11, 'ITC Kakatiya, Hyderabad', 3),

(12, 'Burj Al Arab Jumeirah', 4),

(13, 'The Peninsula New York', 5),

(14, 'The Langham London', 6),

(15, 'Hotel Nikko San Francisco', 7),

(16, 'Rambagh Palace, Jaipur', 8),

(17, 'JW Marriot Chennai', 10);

INSERT INTO ROOM\_TYPES (TypeName, Count, Price, HotelID)

VALUES ('Luxury Suite', 10, 500.00, 1),

('Deluxe Room', 20, 250.00, 1),

('Executive Suite', 5, 800.00, 1),

('Garden View Room', 15, 300.00, 2),

('Executive Club Room', 10, 400.00, 2),

('Presidential Suite', 3, 1200.00, 2),

('Grand Royal Suite', 5, 1500.00, 3),

('Heritage Room', 20, 600.00, 3),

('Nizam Suite', 3, 2000.00, 3),

('Deluxe Room', 30, 400.00, 4),

('Executive Suite', 15, 800.00, 4),

('Royal Suite', 5, 1500.00, 4),

('Plaza Suite', 10, 1000.00, 5),

('Grand Suite', 20, 700.00, 5),

('Deluxe Room', 50, 400.00, 5),

('Junior Suite', 8, 900.00, 6),

('Executive Room', 15, 600.00, 6),

('Penthouse Suite', 3, 2500.00, 6),

('Superior Room', 25, 500.00, 7),

('Executive Suite', 10, 1000.00, 7),

('St. Regis Suite', 5, 1500.00, 7),

('Royal Suite', 5, 1200.00, 8),

('Deluxe Room', 30, 400.00, 8),

('Luxury Tent', 10, 800.00, 8),

('Deluxe Room', 45, 900.00, 17);

INSERT INTO AGENCY (AgencyID, Name)

VALUES

(1, 'Thomas Cook'),

(2, 'MakeMyTrip'),

(3, 'Cox & Kings'),

(4, 'Expedia'),

(5, 'Travelocity'),

(6, 'Goibibo'),

(7, 'Yatra.com'),

(8, 'Cleartrip');

INSERT INTO AGENT (AgentID, Name, Exp, AgencyID)

VALUES

(1, 'Aarav Mehta', 5, 1),     -- Thomas Cook

(2, 'Anjali Singhania', 7, 2), -- MakeMyTrip

(3, 'Rohan Khanna', 6, 3),    -- Cox & Kings

(4, 'Shreya Patel', 8, 4),     -- Expedia

(5, 'Amit Kumar', 4, 5),       -- Travelocity

(6, 'Kavita Sharma', 9, 6),    -- Goibibo

(7, 'Rajeev Desai', 3, 7),     -- Yatra.com

(8, 'Sneha Gupta', 6, 8);      -- Cleartrip

INSERT INTO PACKAGE (PackageID, Title, AgencyID)

VALUES

(1, 'Golden Triangle Tour', 1),  -- Thomas Cook

(2, 'Andaman Adventure', 2),      -- MakeMyTrip

(3, 'Goa Beach Getaway', 3),      -- Cox & Kings

(4, 'Dubai Desert Safari', 4),    -- Expedia

(5, 'New York City Explorer', 5), -- Travelocity

(6, 'London Theater Experience', 6), -- Goibibo

(7, 'San Francisco Bay Cruise', 7), -- Yatra.com

(8, 'Rajasthan Heritage Tour', 8), -- Cleartrip

(9, 'Goa Family Pack', 1),    -- Thomas Cook

(10, 'South India special package', 2);    -- MakeMyTrip

INSERT INTO AIRLINE (AirlineID, Name)

VALUES

(1, 'Emirates'),

(2, 'Singapore Airlines'),

(3, 'Qatar Airways'),

(4, 'Cathay Pacific'),

(5, 'British Airways'),

(6, 'Lufthansa'),

(7, 'Air France'),

(8, 'Delta Air Lines'),

(9, 'IndiGo'),

(10, 'Vistara'),

(11, 'Spicejet'),

(12, 'Air India');

INSERT INTO BUS (BusID, Name, Seats, Fare, DeptDateTime, ArrDateTime, DepartureCity, ArrivalCity)

VALUES

(7273, 'Morning Star Travels', 40, 2050, '2024-04-10 07:00:00', '2024-04-10 15:00:00', 3, 1), -- Hyd to BLR

(7689, 'Morning Star Travels', 40, 2090, '2024-04-11 08:00:00', '2024-04-11 16:00:00', 1, 3), -- BLR to Hyd

(8383, 'Vinayak Travels', 47, 1990, '2024-04-12 09:00:00', '2024-04-12 17:00:00', 1, 2), -- Blr to Mum

(6111, 'TSRTC', 53, 3500, '2024-04-13 10:00:00', '2024-04-13 18:00:00', 3, 2), -- Hyd to Mumbai

(4555, 'MSRTC', 53, 3900, '2024-04-14 11:00:00', '2024-04-14 19:00:00', 2, 3), -- Mumbai to Hyd

(3001, 'TSRTC', 60, 1900, '2024-04-14 11:00:00', '2024-04-14 19:00:00', 1, 3), -- blr to hyd

(3393, 'KSRTC', 65, 1500, '2024-04-16 12:00:00', '2024-04-14 16:00:00', 1, 10); -- blr to chennai

INSERT INTO INCL\_CITY

VALUES

('2024-04-10', 2, 1, 1),

('2024-04-12', 8, 1, 1),

('2024-04-14', 9, 1, 1),

('2024-04-16', 10, 1, 1),

('2024-04-11', 5, 5, 5),

('2024-04-13', 10, 10, 2),

('2024-04-15', 1, 10, 2),

('2024-04-17', 3, 10, 2),

('2024-04-19', 2, 10, 2),

('2024-05-20', 6, 6, 6);

-- South India package from Hyderabad to Bangalore

INSERT INTO INCL\_BUS

VALUES

(7689, 10, 2),

(3393, 10, 2);

-- Bengaluru (under packageID 10, agencyID 2)

INSERT INTO INCL\_ROOM (TypeName, HotelID, PackageID, AgencyID)

VALUES ('Presidential Suite', 2, 10, 2);

-- Mumbai (under packageIDs 1 and 10, agencyIDs 1 and 2)

INSERT INTO INCL\_ROOM (TypeName, HotelID, PackageID, AgencyID)

VALUES ('Luxury Suite', 1, 1, 1),

       ('Luxury Suite', 1, 10, 2);

-- Jaipur (under packageID 8, agencyID 8)

INSERT INTO INCL\_ROOM (TypeName, HotelID, PackageID, AgencyID)

VALUES ('Luxury Tent', 8, 8, 8);

-- London (under packageID 6, agencyID 6)

INSERT INTO INCL\_ROOM (TypeName, HotelID, PackageID, AgencyID)

VALUES ('Junior Suite', 6, 6, 6);

-- San Francisco (Under packageID 7, AgencyID 7)

INSERT INTO INCL\_ROOM (TypeName, HotelID, PackageID, AgencyID)

VALUES ('Executive Suite', 7, 7, 7);

-- Chennai (Under packageID 10, agencyID 2)

INSERT INTO INCL\_ROOM (TypeName, HotelID, PackageID, AgencyID)

VALUES ('Deluxe Room', 17, 10, 2);

INSERT INTO BOOKING (BookingID, UserID)

VALUES

(1, 1),

(2, 2),

(3, 3),

(4, 4),

(5, 5);

INSERT INTO PAYMENT (PaymentID, Method, TransactionDateTime, Amount, BookingID)

VALUES

(1, 'UPI', '2024-4-5 15:00', 7000, 1),

(2, 'Debit', '2024-4-5 15:00', 9000, 2),

(3, 'Credit', '2024-4-5 15:00', 4000, 3),

(4, 'Netbanking', '2024-4-5 15:00', 6000, 4),

(5, 'UPI', '2024-4-5 15:00', 7000, 5);

INSERT INTO BOOKS\_BUS (BookingID, BusID)

VALUES

(1, 3001),

(2, 3393);

INSERT INTO BOOKS\_ROOM (CheckInDate, CheckOutDate, Quantity, BookingId, TypeName, HotelId)

VALUES

('2024-4-13', '2024-4-15', 1, 1, 'Nizam Suite', 3),

('2024-4-13', '2024-4-15', 2, 2, 'Executive Club Room', 2);

INSERT INTO BOOKS\_PACKAGE (BookingID, PackageID, AgencyID)

VALUES

(3, 1, 1),

(4, 2, 2);

-- Blr to Mumbai (Emirates)

INSERT INTO FLIGHT (FlightID, Seats, Fare, DepartureTime, ArrivalTime, AirlineID, DepartureAirport, ArrivalAirport)

VALUES

(1, 150, 5000.00, '2024-04-10', '2024-04-10', 1, 1, 2);

-- Blr to London (British Airways)

INSERT INTO FLIGHT (FlightID, Seats, Fare, DepartureTime, ArrivalTime, AirlineID, DepartureAirport, ArrivalAirport)

VALUES

(2, 200, 12000.00, '2024-04-11', '2024-04-11', 5, 1, 5);

-- Blr to San Francisco (Lufthansa)

INSERT INTO FLIGHT (FlightID, Seats, Fare, DepartureTime, ArrivalTime, AirlineID, DepartureAirport, ArrivalAirport)

VALUES

(3, 180, 15000.00, '2024-04-12', '2024-04-12', 6, 1, 7);

-- Blr to Hyderabad (IndiGo)

INSERT INTO FLIGHT (FlightID, Seats, Fare, DepartureTime, ArrivalTime, AirlineID, DepartureAirport, ArrivalAirport)

VALUES

(4, 160, 4000.00, '2024-04-13', '2024-04-13', 9, 1, 3);

-- Blr to Chennai (Spicejet)

INSERT INTO FLIGHT (FlightID, Seats, Fare, DepartureTime, ArrivalTime, AirlineID, DepartureAirport, ArrivalAirport)

VALUES

(5, 150, 3500.00, '2024-04-14', '2024-04-14', 11, 1, 10);

-- Hyd to San Francisco (Air India)

INSERT INTO FLIGHT (FlightID, Seats, Fare, DepartureTime, ArrivalTime, AirlineID, DepartureAirport, ArrivalAirport)

VALUES

(6, 180, 18000.00, '2024-04-15', '2024-04-15', 12, 3, 7);

-- Jaipur to Bengaluru (Vistara)

INSERT INTO FLIGHT (FlightID, Seats, Fare, DepartureTime, ArrivalTime, AirlineID, DepartureAirport, ArrivalAirport)

VALUES

(7, 140, 6000.00, '2024-04-16', '2024-04-16', 10, 8, 1);

-- Jaipur to Dubai (Emirates)

INSERT INTO FLIGHT (FlightID, Seats, Fare, DepartureTime, ArrivalTime, AirlineID, DepartureAirport, ArrivalAirport)

VALUES

(8, 200, 18000.00, '2024-04-17', '2024-04-17', 1, 8, 4);

-- Mumbai to Bangalore (IndiGo)

INSERT INTO FLIGHT (FlightID, Seats, Fare, DepartureTime, ArrivalTime, AirlineID, DepartureAirport, ArrivalAirport)

VALUES

(9, 180, 4500.00, '2024-04-18', '2024-04-18', 9, 2, 1);

-- Mumbai to Kolkata (Air India)

INSERT INTO FLIGHT (FlightID, Seats, Fare, DepartureTime, ArrivalTime, AirlineID, DepartureAirport, ArrivalAirport)

VALUES

(11, 180, 6000.00, '2024-04-15', '2024-04-15', 12, 2, 3);

-- Chennai to Kolkata (SpiceJet)

INSERT INTO FLIGHT (FlightID, Seats, Fare, DepartureTime, ArrivalTime, AirlineID, DepartureAirport, ArrivalAirport)

VALUES

(10, 160, 5500.00, '2024-04-19', '2024-04-19', 11, 10, 3);

INSERT INTO INCL\_FLIGHT (FlightId, PackageId, AgencyId)

VALUES

(2, 6, 6),

(3, 7, 7),

(9, 10, 2),

(8, 4, 4),

(10, 1, 1),

(11, 1, 1);

INSERT INTO BOOKS\_FLIGHT

VALUES

(4, 1),

(5, 1);

# SAMPLE QUERIES

-- What packages are available

SELECT \* FROM Package;

-- What cities are covered in individial packages

SELECT Agency.Name as Agency\_Name, Package.Title as Package\_title, City.Name as Cities\_covered FROM Package

INNER JOIN Agency on Package.AgencyID = Agency.AgencyID

INNER JOIN INCL\_CITY on Package.PackageID = INCL\_CITY.PackageID

INNER JOIN CITY on INCL\_CITY.CityID = City.CityID

ORDER BY (Package.Title);

-- What hotels are covered in individual packages

SELECT Agency.Name as Agency\_Name, Package.Title as Package\_title, Hotel.HotelName AS Hotel\_name, City.Name as City\_name FROM Package

INNER JOIN Agency on Package.AgencyID = Agency.AgencyID

INNER JOIN INCL\_ROOM on Package.PackageID = INCL\_ROOM.PackageID

INNER JOIN HOTEL on INCL\_ROOM.HotelID = HOTEL.CityID

INNER JOIN CITY on Hotel.CityID = City.CityID

ORDER BY (Package.Title);

-- What flights are covered in packages

SELECT Agency.Name as Agency\_Name, Package.Title as Package\_title, Airline.Name as Airline FROM Package

INNER JOIN Agency on Package.AgencyID = Agency.AgencyID

INNER JOIN INCL\_FLIGHT on Package.PackageID = INCL\_FLIGHT.PackageID

INNER JOIN FLIGHT on INCL\_FLIGHT.FlightID = Flight.FlightID

INNER JOIN AIRLINE on FLIGHT.AirlineID = Airline.AirlineID

ORDER BY (Package.Title);

-- Display flight details of flights booked by Aryan Gupta

SELECT Flight.FlightID, Airline.Name, A1.Name, A2.Name FROM Flight

INNER JOIN BOOKS\_FLIGHT on Flight.FlightID = BOOKS\_FLIGHT.FlightID

INNER JOIN Airline on Flight.AirlineID = Airline.AirlineID

INNER JOIN BOOKING on BOOKS\_FLIGHT.BookingID = BOOKING.BookingID

INNER JOIN Airport A1 on A1.AirportID = Flight.DepartureAirport

INNER JOIN Airport A2 on A2.AirportID = Flight.ArrivalAirport

WHERE BOOKING.UserID = (SELECT UserID FROM USER WHERE email = 'aryan.das@example.com');

-- Display hotels along with roomtypes present in Bengaluru, Mumbai and Chennai

SELECT Hotel.HotelName AS Hotel\_name, City.Name AS City, ROOM\_TYPES.TypeName as Room\_type, ROOM\_TYPES.Count AS Rooms\_available,

ROOM\_TYPES.Price as Price\_per\_night FROM ROOM\_TYPES

JOIN Hotel on Hotel.HotelId = ROOM\_TYPES.HotelID

JOIN City on City.CityID = Hotel.CityID

WHERE City.CityID in (Select CityID from CITY where City.Name = 'Bengaluru' or City.Name = 'Mumbai'

or City.Name = 'Chennai');

---- Display average price of hotel rooms present in hotels in Bengaluru

Select City.Name, ROUND(AVG(ROOM\_TYPES.Price), 2) AS Avg\_cost\_per\_night FROM ROOM\_TYPES

INNER JOIN HOTEL ON Hotel.HotelID = ROOM\_TYPES.HotelID

INNER JOIN CITY ON City.CityID = Hotel.CityID

WHERE City.CityID = (Select CityId from City where City.Name = 'Bengaluru')

GROUP BY City.CityID;

---- Display Hotel rooms in bengaluru that have below average price

Select Hotel.HotelName, ROOM\_TYPES.TypeName, ROOM\_TYPES.Price FROM ROOM\_TYPES

INNER JOIN HOTEL ON Hotel.HotelID = ROOM\_TYPES.HotelID

INNER JOIN CITY ON City.CityID = Hotel.CityID

WHERE City.CityID = (Select CityId from City where City.Name = 'Bengaluru')

AND ROOM\_TYPES.Price < (SELECT ROUND(AVG(ROOM\_TYPES.Price), 2) AS Avg\_cost\_per\_night FROM ROOM\_TYPES

INNER JOIN HOTEL ON Hotel.HotelID = ROOM\_TYPES.HotelID

INNER JOIN CITY ON City.CityID = Hotel.CityID

WHERE City.CityID = (Select CityId from City where City.Name = 'Bengaluru')

GROUP BY City.CityID);