

Tours and Travels Management Database:

Database Specification: Purpose, Business problems addressed and business rules.

Database Purpose:

The purpose of this database is to help the travel agents to manage service providers, bookings, pricing, tracking etc.

These components include bookings, restaurants, flights, packages, etc. The database will be used by different employees within the travel company and to improve the performance and easy retrieval of data.

Business Problems Addressed:

- Allow the tracking of users' booking, billing, tracking, check-in, check-out of customers by travel agency employees by providing services for the same.
- Track booking history of customers to recommend travel packages based on similar booking patterns and offer appropriate discounts to increase sales.
- Monitor customer sessions and purchase behavior to identify fraudulent activity.
- To store payment records for reconciliation and track expenditure.
- Provide insights about travel package performance by evaluating parameters like customer reviews, hotel reviews, transport feedbacks to improve and update package details.

Business Rules:

- Each customer may have one or more bookings.
- Each customer may make one or more payments.
- Each customer may have zero or more customized package recommendations.
- Each customer may have zero or more feedbacks.
- Each employee must have only one role.
- Each package may have one or more places.
- Each package may have one or more guides assigned.
- Each package may have one or more hotel stay recommendation.
- Each booking may have multiple payment modes.
- Each booking must have only one package.
- Each booking must have only one unique flight_id.
- Each hotel may have one or more restaurant recommendations.
- Each flight must have a place_id.

Design Decisions:

Entity	Why this Entity is included?	How is this entity related to others?
employeeLogin	This entity will help an employee of travel agency to log in successfully.	This entity is related to the employee entity. The emp_id is foreign key in the employeeLogin table. Email address is a primary key in the login table.
userLogin	userLogin entity will help the customer to login successfully.	Entity is related to the Customer Entity. The cust_id is a foreign key in the userLogin table. User email attribute is a foreign key in the userLogin table.
Booking	This entity will store all the bookings made by the customers and contain all the booking details.	It is connected to package, customer, flight entities. The p_id, cust_id, flight_id are foreign keys in the booking table and a unique combination of all these foreign keys will help us track the booking details.
Package	This entity will store all the travel package details such as package name, recommended hotels, destination place, guide assigned and flight_id.	This entity is related to place, hotel, flight, guide and booking table. Package_id is a primary key in the package table which is a foreign key in place, guide, place, flight, customer, booking tables.
Hotel	This entity will store all the hotel details.	Hotel entity will contain all the hotel details like hotel_id (Primary Key), hotel_name, and recommended restaurants. In addition, hotel_id will act as a foreign key in restaurant and taxi tables.

Restaurant	This will store all the restaurant details.	This primary key of this entity(Restaurant_id) which will help us in getting all the restaurant details.
Place	This will store all the location details.	The primary key of this entity(Place_id) will be called as a foreign key the Flight table.
Payment	This will store all the Payment details along with the customer_id.	The Payment table is related to the customer table as the primary key of customer_id is called as a foreign key . It uniquely identifies payment made my all the customers.
Employee	This will store all the Employee details uniquely identified by the Employee_id key	The primary key of this entity(Employee_id) will be called as a foreign key in the employeeLogin table.
Role	This will store all the Role details uniquely identified by the Role_Employee_id key.	In this table role_employee_id is the primary key which acts like a foreign key in the employee table.
Customer	This will store all the Customer details.	This entity is related to package, booking, feedback, user login table, payment table. Customer_id is called as a foreign key in all these tables.
Feedback	Feedback entity will store feedbacks of different customers and include it as feedback description.	Feedback entity is related to customer table and it consists of cust_id which acts an a foreign key and cust_id along with Feedback_id will help us get to know feedback provided by customer.
Taxi	This entity will record all the taxi details and will give taxi recommendations by a hotel.	Taxi_id acts as a primary key in this table and it is associated with the Hotel entity and hotel_id acts like a foreign key in the taxi entity.

Guide	Guide entity is used to collect and contain guide details. Guide will be assigned to a particular package.	Guide_id will be used as a Primary key in guide table. Package_id acts a foreign key in this table.
Flight	This entity contains flight details and will be contained in booking table.	Flight_id is used as a foreign key in booking table and it is related to package and places table.

ERD screenshot:

