DBMS Project - 1

Topic: - Tourism

Submission Date: - 3 April 2018

Submission To: - T. Ramakrishnudu

Submitted By : -

Divas Jindal (177117)

MEET SHAH (177135)

1 Assumptions

1.1 TourUser

This entity contains UserID, Name and Password where the primary key is UserID. This acts as a login portal for the usage of this database.

1.2 Accommodation

Accommodation contains AccID, Name, Type, Location, MinCost, MaxCost,
Offer, WebsiteAndCost and PlaceID as foreign key from TouristPlace entity.

1.3 TouristPlace

TouristPlace holds the place where the user wishes to tour. Details such as Name, Description, Type and PlaceID which is the primary key.

1.4 Weather

A perfect tour can always be ruined by bad weather. Weather entity holds the MinTemp, MaxTemp and a WebLink for further insights. WeatherID is the primary key.

1.5 Events

Events entity displays any event present near the user's tourist spot. Details such as EventID, EventType, StartDate, EndDate, Name and PlaceID.

1.6 Shopping

Shopping entity holds details about shopping spot around the area. ShoppingID, PlaceID, Category, Name and Location are stored.

1.7 Transportation

Transportation entity assist the user to move from one place to another. It consists of TransID , PlaceID, Name, Area, ContactInfo,Category.

1.8 PhotoAlbum

This entity holds the picture album of each tour. It contains AlbumID, PlaceID, Name.

1.9 Emergency

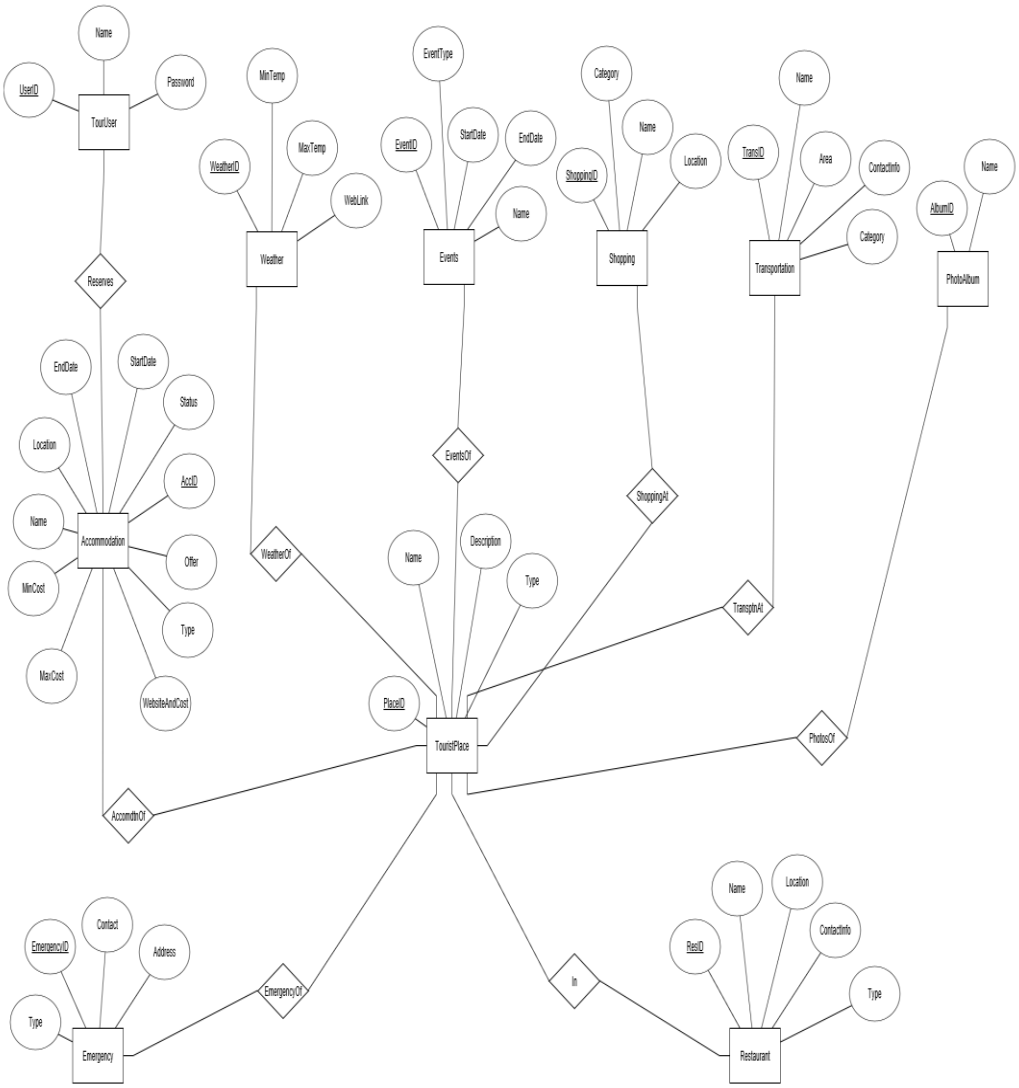
In case of any emergency such as health deterioration, loss of property etc., Emergency entity provides details such as Type, Contact, Address etc.

1.10 Restaurant

A lot of people find it difficult to find an eatery which caters to their needs. Restaurant entity comes handy here. ResID, Name, Location, contactinfo, type etc. are attributes of this entity.

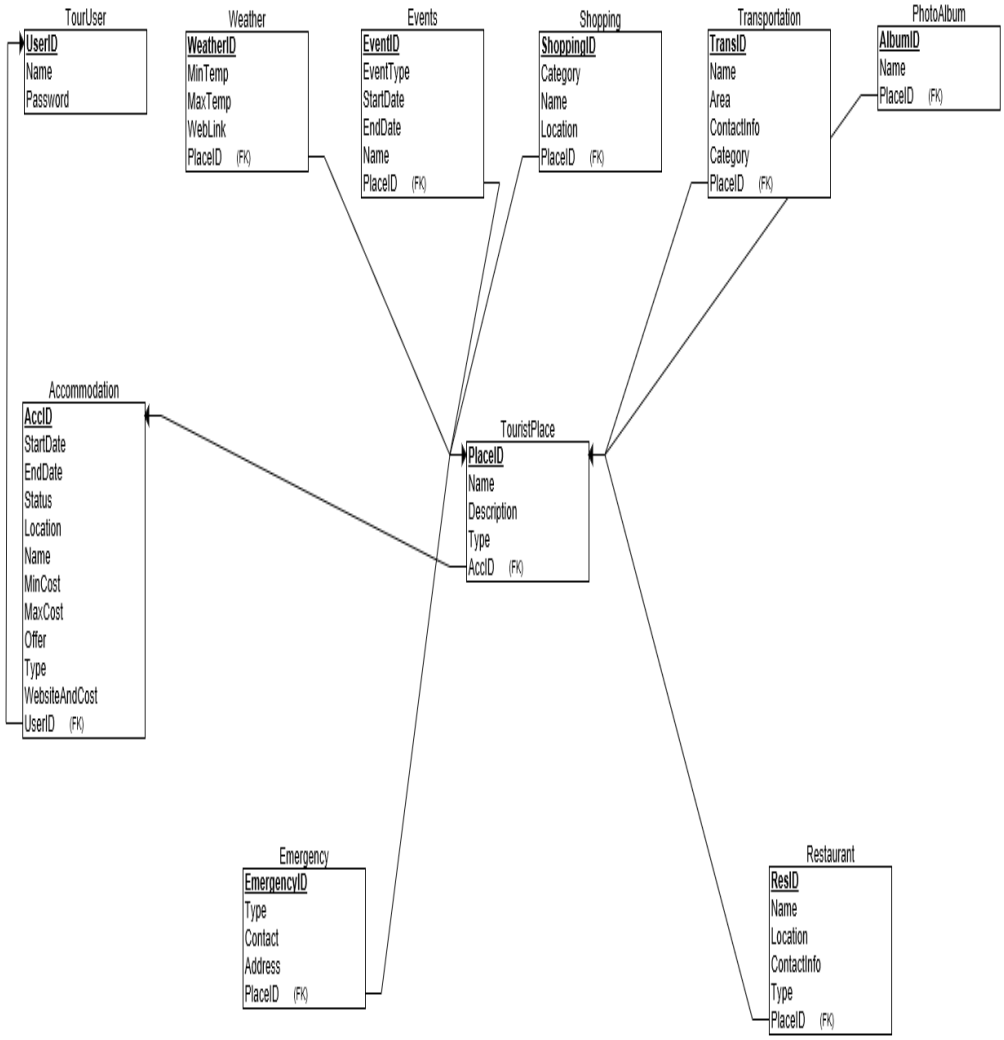
2 Entity Relationship Diagram

The below figure shows the Entity Relation diagram of Tourism Management
System.



3 Relational Database Schema

A relational database schema helps you to understand and organize the structure of a database. It is helpful when we design a new database or existing database is modified to incorporate new functionality.



4 Dependencies and Normalization

4.1 TourUser

There exists two functional dependencies {UserID → Name} , {UserID, Password} Both are fully functional dependent on the UserID. The table is in 3 NF.

4.2 Accommodation

The functional dependencies are {AccID → Name} , {AccID → Type} , {AccID
→ Location} , {AccID → MinCost} , {AccID → MaxCost} , {AccID → Offer} , {AccID → WebsiteAndContact} There exists full functional dependency. Hence table is in 3NF.

4.3 TouristPlace

The functional dependencies are {PlaceID → Name} , {PlaceID → Description} , {PlaceID → AccID} , {PlaceID → WeatherID, EventID, ShoppingID, TransID, AlbumID, ResID, EmergencyID} Since all the attributes depend on primary key and has no transitive dependency, the table is in 3NF.

4.4 Weather

The functional dependencies are {WeatherID → MinTemp}, {WeatherID → MaxTemp}, {WeatherID → WebLink}. The attributes depend only on primary key. Therefore, the table is in 3NF.

4.5 Events

The functional dependencies are {EventID → EventType} , {EventID → StartDate} , {EventID → EndDate} , {EventID → Name} There exists fully functional dependency. Therefore, the table is in 3NF.

4.6 Shopping

The functional dependencies are {ShoppingID → Category} , {ShoppingID → Name} , {ShoppingID → Location} Table is in 3NF.

4.7 Transportation

The functional dependencies are {TransID → Name} , {TansID → Category} , {TransID → Area} , {TranID → ContactInfo} , {TransID → Area} There exist partial dependency and transitive dependency. Therefore, the table is in 3NF.

4.8 PhotoAlbum

The functional dependencies are {AlbumID → Name} The table is in 3NF.

4.9 Emergency

The functional dependencies are {EmergencyID → Type} , {EmergencyID → Contact, Address} The attributes are fully functional dependent on EmergencyID. The table is in 3NF.

4.10 Restaurant

The functional dependencies are {ResID → Name} , {ResID → Location} , {ResID → ContactInfo} , {ResID → type} The attributes are fully functional dependent on ResID. The table is in 3NF.