

---

# Phase III. Implementation

Aelapati Spandana  
[sxa220091@utdallas.edu](mailto:sxa220091@utdallas.edu)

Rithwik Reddy Koripelly  
[rxk210087@utdallas.edu](mailto:rxk210087@utdallas.edu)

Jahnvi Bindela  
[Jxb220024@utdallas.edu](mailto:Jxb220024@utdallas.edu)

Veera Veni Teki  
[vxt220008@utdallas.edu](mailto:vxt220008@utdallas.edu)

Mohanish Pradeep  
[mxp210040@utdallas.edu](mailto:mxp210040@utdallas.edu)

## 0. Pre-Illumination

For clearly describing the implementation of our database, we separate this report into four sections. In Section 1 we normalize the original relational schema into third-normal form and changed part of our relational schema because of some requirement from Phase III. We then explained what are changed and we show a dependency diagram for each relation one by one. In Section 2 we begin our process of building a database in *Oracle* using SQL statements, which contains three parts. Part one is the creation of database, including tables, all other structures as well as data type and format, Part two is the creation of views corresponding to five distinct requirements from Question d, and Part three is the creation of Queries to satisfy 14 requirements from Question e. Finally, a short summary is given at the end of this report.

## 1. Modified Relational Schema

Firstly, according to the requirement of phase III and with purpose to simplify the relation model for this database, we changed the way to handle multi valued attribute and added a relation of follows. The modified relational schema is **in attached PDF**.

---

## 2. Implementation of Database

### 2.1 Creation of Database with SQL Statements

After normalizing every relational schema into third normal form and modifying some details, it is the time to implement our database using Oracle SQL Plus.

#### 2.1.1 Table Creation

Using SQL statement, we create 19 tables as follows:

- **Country:**

```
-----  
Create Table Country  
(  
    Country_Name Varchar(75) Not Null,  
    Country_Id      int    Primary Key  
);  
-----
```

- **State:**

```
-----  
Create Table State  
(  
    State_Nam      Varchar(59) Not Null,  
    e  
    Country_Id      int,  
    Foreign Key (Country_Id) References  
    Country(Country_Id), Primary Key (State_Name, Country_Id)  
);  
-----
```

- **City:**

```
-----  
Create Table City  
(  
    City_Name      Varchar(59) ,  
    State_Name      Varchar(59),  
    Country_Id      int,  
    Foreign Key (Country_Id, State_Name) References  
    State(Country_Id, State_Name),  
    Primary Key (City_Name, State_Name, Country_Id)  
);  
-----
```

---

```
);
```

---

- **Business\_Partner:**

---

```
Create Table Business_Partner
(
  Bs_Name Varchar(15) Not Null,
  Contact_Person Varchar(20) Not Null,
  Bs_Id int Primary Key,
  Phone NUMBER(19) Not Null,
  Bs_Type Varchar(25) Not Null,
  Check (Bs_Type IN ( 'Restaurants','Hotel' ) )
);
```

---

- **Trip\_Plans:**

---

```
Create Table Trip_Plans
(
  Trip_Name Varchar(20),
  Trip_id int Primary Key,
  Trip_Start date,
  Trip_End date,
  Check (Trip_Start < Trip_End )
);
```

---

- **Destination\_Type:**

---

```
Create Table Destination_Type
(
  Destination_Type_Id int Primary Key,
  Destination_Type_Name Varchar(20) Not Null
);
```

---

- **Member\_Type:**

---

```
Create Table Member_Type
(
  Member_Type_Id int Primary Key,
  Member_Type_Name Varchar(20) Not Null
);
```

---

);

---

- **Destination:**

---

```
Create Table Destination
(
  Dest_Id int Primary Key ,
  Dest_Name Varchar(85) Not Null,
  Description Varchar(250),
  Cost_Price Decimal(5,2),
  City_Name Varchar(59) Not Null,
  State_Name Varchar(59) Not Null,
  Country_Id int Not Null,
  Street_No int Not Null,
  Zip_code int,
  Bs_Id int,
  Destination_Type_Id int,
  Foreign Key ( Destination_Type_Id) References
Destination_Type(Destination_Type_Id),
  Foreign Key ( Bs_Id ) References Business_Partner(Bs_Id ),
  Foreign Key(Country_Id,State_Name,City_Name) References
City(Country_Id,State_Name,City_Name)
);
```

---

- **Member:**

---

```
Create Table Member
(
  Username Varchar(15) Primary Key,
  Password Varchar(128) Not Null,
  Email Varchar(345) Not Null,
  Street_No int Not Null,
  Zip_code int Not Null,
  City_Name Varchar(59) Not Null,
  State_Name Varchar(59) Not Null,
  Country_Id int Not Null,
  Member_Type_Id int,
  Foreign Key( Member_Type_Id) References
Member_Type(Member_Type_Id), Foreign
Key(Country_Id,State_Name,City_Name) References
City(Country_Id,State_Name,City_Name)
);
```

---

---

- **Comments:**

---

```
Create Table Comments
(
    Replies Long,
    Post_Time date,
    Username Varchar(15) Not Null,
    Dest_Id int,
    Content Varchar(3000),
    Primary Key(Post_Time ,Username ,Dest_Id ), Foreign
    Key(Username) References Member(Username), Foreign
    Key(Dest_Id)References Destination(Dest_Id)
);
```

---

- **Visited\_Dest:**

---

```
Create Table Visited_dest
(
    Username Varchar(15) Not Null,
    Visited_Dest_Id int Not Null,
    Start_Date date,
    End_Date date,
    Primary Key(Visited_Dest_Id ,Username),
    Foreign Key(Username) References Member(Username),
    Foreign Key(Visited_Dest_Id)References
    Destination(Dest_Id), Check (Start_Date < End_Date )
);
```

---

- **Dest\_Desc\_Modified:**

---

```
Create table Dest_Desc_Modified
(
    Pref_Username Varchar(15),
    Dest_Id int,
    member_type_id int,
    Date_Modified Timestamp,
    Primary Key(Pref_Username ,Dest_Id,Date_Modified ),
    Foreign Key (Pref_Username ) References Member(Username),
    Foreign Key (Dest_Id) References Destination(Dest_Id),
    Foreign Key( Member_Type_Id) References
Member_Type(Member_Type_Id),
    check( member_type_id = 1)
);
```

---

- **Photo:**

---

```
Create Table Photo
(
    Photo_Id int    Primary Key,
    Link       Varchar(2083) Not Null,
    Visit_Dest_Id      int    Not Null,
    Username  Varchar(15) Not Null,
    Foreign Key(Username,Visit_Dest_Id) References
    Visited_dest(Username,Visited_Dest_Id )
);
```

---

- **Business\_Partner\_Rating:**

---

```
Create Table Business_Partner_Rating
(
    Bs_Id int Not Null,
    Rate int Not Null,
    Username  Varchar(15) Not Null,
    Foreign Key(Username) References Member(Username),
    Foreign Key(Bs_Id)References Business_Partner(Bs_Id),
    Primary Key(Bs_id,Username)
);
```

---

- **Dest\_Post:**

---

```
Create Table Dest_Post
(
    Username  Varchar(15) Not Null,
    Dest_Id  int,
    Dest_Rating int Not Null,
    Post_Time date,
    Primary Key(Dest_Id ,Username ,Post_Time ),
    Foreign Key(Post_Time,Username, Dest_Id)References
    Comments(Post_Time,Username, Dest_Id),
    Check (Dest_Rating >= 1 And Dest_Rating <=10)
);
```

---

---

- **Likes\_Dislikes\_comment:**

```
-----
Create Table Likes_Dislikes_comment
(
  Username Varchar(15),
  Dest_Id int,
  Post_Time date,
  Member_Username Varchar(15),
  Like_Dislike int,
  Primary Key(Username, Dest_Id, Post_Time, Member_Username),
  Foreign Key (Username, Post_Time, Dest_Id) References
Comments(Username, Post_Time, Dest_Id),
  Foreign Key(Member_Username) references Member(Username)
);
-----
```

- **Trip\_Plan\_Includes:**

```
-----
Create Table Trip_Plan_Includes
(
  Trip_id int Not Null,
  Arrival_Time date,
  Departure_Time date,
  Username varchar(15) Not Null,
  Dest_Id int,
  Primary Key(Trip_id, Username, Dest_Id),
  Foreign Key(Trip_id) References
Trip_Plans(Trip_id), Foreign Key(Username)
References Member(Username), Foreign
Key(Dest_Id)References Destination(Dest_Id) );
-----
```

- **Follower\_Followed\_Member:**

```
-----
Create Table Follower_Followed_Member
(
  Followed_Username Varchar(15),
  Follower_Username Varchar(15),
  Primary Key(Followed_Username, Follower_Username),
  Foreign Key(Followed_Username) References Member(Username),
  Foreign Key(Follower_Username) References Member(Username)
);
-----
```

---

- **Wish\_dest:**

```
-----  
Create Table Wish_dest  
(  
    Username varchar(15),  
    Wish_dest int,  
    Primary Key(Username,Wish_dest),  
    Foreign Key(Username) References Member(Username),  
    Foreign Key(Wish_dest) References Destination(dest_Id)  
);  
-----
```

## 2.1.2 A Database State

We insert some values into the database in order to test our SQL create view and query statement. The insertion statements are shown as follows:

- **INSERTION OF TABLE Country**

```
-----  
INSERT INTO country (Country_Name, Country_Id) VALUES  
('United States', '1');  
INSERT INTO country (Country_Name, Country_Id) VALUES ('FRANCE', '2');  
-----
```

Country_Name	Country_Id
United States	1
FRANCE	2

- **INSERTION OF TABLE State**

```
-----  
INSERT INTO state (State_Name, Country_Id) VALUES ('New York', '1');  
INSERT INTO state (State_Name, Country_Id) VALUES ('Texas', '1');  
INSERT INTO state (State_Name, Country_Id) VALUES ('Corsica', '2');  
INSERT INTO state (State_Name, Country_Id) VALUES ('Ile-de-France', '2');  
-----
```



---

- **INSERTION OF TABLE City**

```
INSERT INTO city (City_Name, State_Name, Country_Id) VALUES
('Albany', 'New York', '1');
INSERT INTO city (City_Name, State_Name, Country_Id) VALUES ('Tyler',
'Texas', '1');
INSERT INTO city (City_Name, State_Name, Country_Id) VALUES
('Bastia', 'Corsica', '2');
INSERT INTO city (City_Name, State_Name, Country_Id) VALUES ('Paris',
'Ile-de-France', '2');
INSERT INTO city (City_Name, State_Name, Country_Id) VALUES
('Chatou', 'Ile-de-France', '2');
INSERT INTO city (City_Name, State_Name, Country_Id) VALUES
('Chelles', 'Ile-de-France', '2');
INSERT INTO city (City_Name, State_Name, Country_Id) VALUES
('Clichy', 'Ile-de-France', '2');
INSERT INTO city (City_Name, State_Name, Country_Id) VALUES
('Colombes', 'Ile-de-France', '2');
```

---

- **INSERTION OF TABLE Destination\_Type**

```
INSERT INTO destination_type (Destination_Type_Id, Destination_Type_Name)
VALUES ('1', 'Other Attractions');
INSERT INTO destination_type (Destination_Type_Id, Destination_Type_Name)
VALUES ('2', 'Restaurants');
INSERT INTO destination_type (Destination_Type_Id, Destination_Type_Name)
VALUES ('3', 'Shopping Mall');
```

---

- **INSERTION OF TABLE Business\_Partner**

```
INSERT INTO business_partner (Bs_Name, Contact_Person, Bs_Id, Phone,
Bs_Type) VALUES ('Rolers', 'John', '1', '1032629199', 'Restaurants');
INSERT INTO business_partner (Bs_Name, Contact_Person, Bs_Id, Phone,
Bs_Type) VALUES ('Rockers', 'Steve', '2', '19032629199', 'Restaurants');
INSERT INTO business_partner (Bs_Name, Contact_Person, Bs_Id, Phone,
Bs_Type) VALUES ('MMT', 'Jake', '3', '9032629198', 'Restaurants');
```

---

---

## ● INSERTION OF TABLE Destination

---

```
INSERT INTO destination (Dest_Id, Dest_Name, Description, Cost_Price,
City_Name, State_Name, Country_Id, Street_No, Zip_code, Bs_Id,
Destination_Type_Id) VALUES ('1', 'YONO', 'Global menu emphasizing
Indonesian cuisine .', '10', 'Albany', 'New York', '1', '25',
'12210', '1', '2');
INSERT INTO destination (Dest_Id, Dest_Name, Description, Cost_Price,
City_Name, State_Name, Country_Id, Street_No, Zip_code, Bs_Id,
Destination_Type_Id) VALUES ('2', 'Athos', 'Authentic Greek fare in
an upscale setting with a lively bar.', '8', 'Albany', 'New York',
'1', '4602', '12203', '2', '2');
INSERT INTO destination (Dest_Id, Dest_Name, Description, Cost_Price,
City_Name, State_Name, Country_Id, Street_No, Zip_code, Bs_Id,
Destination_Type_Id) VALUES ('3', 'A Tana', 'just wow', '25',
'Bastia', 'Corsica', '2', '2', '20200', '3', '2');
INSERT INTO destination (Dest_Id, Dest_Name, Description, Cost_Price,
City_Name, State_Name, Country_Id, Street_No, Zip_code, Bs_Id,
Destination_Type_Id) VALUES ('4', 'Caffe Italia', 'A veteran family-
run standby for classic Italian dishes.', '20', 'Albany', 'New York',
'1', '662', '12206', '2', '2');
INSERT INTO destination (Dest_Id, Dest_Name, Description, Cost_Price,
City_Name, State_Name, Country_Id, Street_No, Zip_code, Bs_Id,
Destination_Type_Id) VALUES ('5', '677 Prime', 'Upscale steakhouse
with mahogany accents art features 400+ wines bar deals.', '15',
'Albany', 'New York', '1', '677', '12207', '3', '2');
INSERT INTO destination (Dest_Id, Dest_Name, Description, Cost_Price,
City_Name, State_Name, Country_Id, Street_No, Zip_code, Bs_Id,
Destination_Type_Id) VALUES ('6', 'Grazie Mille', 'vegetarian food is
great.', '12', 'Bastia', 'Corsica', '2', '32', '20287', '2', '2');
INSERT INTO destination (Dest_Id, Dest_Name, Description, Cost_Price,
City_Name, State_Name, Country_Id, Street_No, Zip_code, Bs_Id,
Destination_Type_Id) VALUES ('7', 'Eiffel Tower', 'Romantic place to
visit.', '50', 'Paris', 'Ile-de-France', '2', '21', '20222', '3', '1');
INSERT INTO destination (Dest_Id, Dest_Name, Description, Cost_Price,
City_Name, State_Name, Country_Id, Street_No, Zip_code, Bs_Id,
Destination_Type_Id) VALUES ('8', 'Lmao', 'best pasta here.', '30',
'Chatou', 'Ile-de-France', '2', '42', '29222', '1', '2'); INSERT INTO
destination (Dest_Id, Dest_Name, Description, Cost_Price, City_Name,
State_Name, Country_Id, Street_No, Zip_code, Bs_Id,
Destination_Type_Id) VALUES ('9', 'Musee du Louvre', 'A sumptuous
palace that was once the home of France Kings', '10', 'Chelles', 'Ile-
de-France', '2', '92', '20250', '2', '1');
INSERT INTO destination (Dest_Id, Dest_Name, Description, Cost_Price,
City_Name, State_Name, Country_Id, Street_No, Zip_code, Bs_Id,
Destination_Type_Id) VALUES ('10', 'Rono', 'Awesome Chinese food.', '33',
'Clichy', 'Ile-de-France', '2', '122', '20290', '3', '2');
INSERT INTO destination (Dest_Id, Dest_Name, Description, Cost_Price,
City_Name, State_Name, Country_Id, Street_No, Zip_code, Bs_Id,
```

---

```
Destination_Type_Id) VALUES ('11', 'Eats', 'Mixture of all Cousines.',  
'22', 'Colombes', 'Ile-de-France', '2', '222', '20270', '2', '2');
```

---

## ● INSERTION OF TABLE Member\_Type

---

```
INSERT INTO member_type (Member_Type_Id, Member_Type_Name) VALUES  
('1', 'Preferred');  
INSERT INTO member_type (Member_Type_Id, Member_Type_Name)  
VALUES ('2', 'Regular');
```

---

## ● INSERTION OF TABLE Member

---

```
INSERT INTO member (Username, Password, Email, Street_No, Zip_code,  
City_Name, State_Name, Country_Id, Member_Type_Id) VALUES ('pprasun',  
'124578', 'pprasun@patriots.uttyler.edu', '3700', '75701', 'Tyler',  
'Texas', 1, 1);  
INSERT INTO member (Username, Password, Email, Street_No, Zip_code,  
City_Name, State_Name, Country_Id, Member_Type_Id) VALUES  
('rpawan', '12457888', 'rpawan@patriots.uttyler.edu', '3700',  
'75701', 'Tyler', 'Texas', 1, 1);  
INSERT INTO member (Username, Password, Email, Street_No, Zip_code,  
City_Name, State_Name, Country_Id, Member_Type_Id) VALUES  
('ecisneros', 'wow', 'ecisneros@patriots.uttyler.edu', '51', '20200',  
'Bastia', 'Corsica', 2, 1);  
INSERT INTO member (Username, Password, Email, Street_No, Zip_code,  
City_Name, State_Name, Country_Id, Member_Type_Id) VALUES ('ssagar',  
'wow', 'ssagar@gmail.com', '91', '20201', 'Bastia', 'Corsica', 2, 1);  
INSERT INTO member (Username, Password, Email, Street_No, Zip_code,  
City_Name, State_Name, Country_Id, Member_Type_Id) VALUES ('k Kapoor',  
'test', 'k Kapoor@gmail.com', '101', '20251', 'Bastia', 'Corsica', 2,  
1); INSERT INTO member (Username, Password, Email, Street_No, Zip_code,  
City_Name, State_Name, Country_Id, Member_Type_Id) VALUES ('knikhil',  
'123rwrcs', 'knikhil@gmail.com', '3352', '12207', 'Albany', 'New York',  
1, 2);  
INSERT INTO member (Username, Password, Email, Street_No, Zip_code,  
City_Name, State_Name, Country_Id, Member_Type_Id) VALUES ('rschumaker',  
'derdsws', 'rschumaker@gmail.com', '2152', '22074', 'Albany', 'New York',  
1, 2);
```

---

---

- **INSERTION OF TABLE Visited\_Dest**

```
-----
INSERT INTO visited_dest (Username, Visited_Dest_Id, Start_Date, End_Date)
VALUES ('pprasun', '1','2019-04-01 00:00:00', '2019-04-15 18:00:00');
INSERT INTO visited_dest (Username, Visited_Dest_Id, Start_Date, End_Date)
VALUES ('rpawan', '3','2019-04-01 00:00:00','2019-04-06 18:00:00');
INSERT INTO visited_dest (Username, Visited_Dest_Id, Start_Date, End_Date)
VALUES ('rpawan', '6','2019-04-07 00:00:00', '2019-04-08 18:00:00');
INSERT INTO visited_dest (Username, Visited_Dest_Id, Start_Date, End_Date)
VALUES ('rpawan', '7','2019-04-09 00:00:00','2019-04-10 18:00:00');
INSERT INTO visited_dest (Username, Visited_Dest_Id, Start_Date, End_Date)
VALUES ('rpawan', '8','2019-04-11 00:00:00','2019-04-13 18:00:00');
INSERT INTO visited_dest (Username, Visited_Dest_Id, Start_Date, End_Date)
VALUES ('rpawan', '9','2019-04-14 00:00:00','2019-04-16 18:00:00');
INSERT INTO visited_dest (Username, Visited_Dest_Id, Start_Date, End_Date)
VALUES ('rpawan', '10','2019-04-17 00:00:00','2019-04-19 18:00:00');
INSERT INTO visited_dest (Username, Visited_Dest_Id, Start_Date, End_Date)
VALUES ('rpawan', '11','2019-04-20 00:00:00','2019-04-22 18:00:00');
INSERT INTO visited_dest (Username, Visited_Dest_Id, Start_Date, End_Date)
VALUES ('rpawan', '1','2019-04-20 00:00:00','2019-04-22 18:00:00');
-----
```

- **INSERTION OF TABLE Trip\_Plans**

```
-----
INSERT INTO trip_plans (Trip_Name, Trip_id, Trip_Start, Trip_End) VALUES
('France tour', '1','2019-04-01 00:00:00','2019-04-15 18:00:00,');
INSERT INTO trip_plans (Trip_Name, Trip_id, Trip_Start, Trip_End) VALUES
('World tour', '2','2019-04-01 00:00:00','2019-04-22 18:00:00');
INSERT INTO trip_plans (Trip_Name, Trip_id, Trip_Start, Trip_End) VALUES
('US tour', '3','2019-04-02 00:00:00','2019-04-23 18:00:00');
INSERT INTO trip_plans (Trip_Name, Trip_id, Trip_Start, Trip_End) VALUES
('New year Tour', '4','2019-01-01 00:00:00','2019-04-07 18:00:00');
```

---

## ● INSERTION OF TABLE Trip\_Plan\_Includes

---

```
INSERT INTO trip_plan_includes (Trip_id, Arrival_Time, Departure_Time,
Username, Dest_Id) VALUES ('1', '2019-04-01 10:00:00', '2019-04-15
10:00:00', 'pprasun', 3);
INSERT INTO trip_plan_includes (Trip_id, Arrival_Time, Departure_Time,
Username, Dest_Id) VALUES ('2','2019-04-01 10:00:00', '2019-04-16
10:00:00', 'pprasun', 1);
INSERT INTO trip_plan_includes (Trip_id, Arrival_Time, Departure_Time,
Username, Dest_Id) VALUES ('2','2019-04-16 10:00:00','2019-04-22
10:00:00', 'pprasun', 3);
INSERT INTO trip_plan_includes (Trip_id, Arrival_Time, Departure_Time,
Username, Dest_Id) VALUES ('3','2019-03-16 10:00:00','2019-03-22
10:00:00', 'rpawan', 3);
```

---

## ● INSERTION OF TABLE Comments

---

```
INSERT INTO comments (Replies, Post_Time, Username, Dest_Id, Content)
VALUES ('', SYSDATE, 'pprasun', '1', 'This place is good.');
```

```
INSERT INTO comments (Replies, Post_Time, Username, Dest_Id, Content)
VALUES ('', SYSDATE, 'pprasun', '2', 'This place is okay.');
```

```
INSERT INTO comments (Replies, Post_Time, Username, Dest_Id, Content)
VALUES ('', SYSDATE, 'pprasun', '3', 'This place is wow.');
```

```
INSERT INTO comments (Replies, Post_Time, Username, Dest_Id, Content)
VALUES ('', SYSDATE, 'rpawan', '1', 'I love food and this place satisfies
my cravings.');
```

```
INSERT INTO comments (Replies, Post_Time, Username, Dest_Id, Content)
VALUES ('', SYSDATE, 'rpawan', '2', 'This place is not that good');
```

```
INSERT INTO comments (Replies, Post_Time, Username, Dest_Id, Content)
VALUES ('', SYSDATE, 'rpawan', '3', 'this is the place to be');
```

```
INSERT INTO comments (Replies, Post_Time, Username, Dest_Id, Content) VALUES
('', SYSDATE, 'rpawan', '6', 'This vegetarian is so yum.');
```

```
INSERT INTO comments (Replies, Post_Time, Username, Dest_Id, Content) VALUES
('', SYSDATE, 'rschumaker', '7', 'One of best tourist place.');
```

```
INSERT INTO comments (Replies, Post_Time, Username, Dest_Id, Content) VALUES
('', SYSDATE, 'ssagar', '8', 'Best Pasta Ever');
```

```
INSERT INTO comments (Replies, Post_Time, Username, Dest_Id, Content)
VALUES ('', SYSDATE, 'pprasun', '9', 'Well it is artistic.');
```

```
INSERT INTO comments (Replies, Post_Time, Username, Dest_Id, Content)
VALUES ('', SYSDATE, 'kkapoor', '10', 'Best Chinese.');
```

---

```
INSERT INTO comments (Replies, Post_Time, Username, Dest_Id, Content)
VALUES ('', SYSDATE, 'knikhil', '11', 'Well go if you want to really
eat.');
```

```
INSERT INTO comments (Replies, Post_Time, Username, Dest_Id, Content)
VALUES ('', TO_DATE('2019-01-02 10:00:00', 'yyyy-mm-dd hh24:mi:ss'),
'pprasun', '7', 'Happy new year in France.');
```

---

## ● INSERTION OF TABLE Dest\_Post

---

```
INSERT INTO dest_post (Username, Dest_Id, Dest_Rating, Post_Time)
VALUES ('pprasun', '1', '9', '2019-04-28 15:34:45');
```

```
INSERT INTO dest_post (Username, Dest_Id, Dest_Rating, Post_Time) VALUES
('pprasun', '2', '10', '2019-04-28 15:34:45');
```

```
INSERT INTO dest_post (Username, Dest_Id, Dest_Rating, Post_Time)
VALUES ('pprasun', '3', '10', '2019-04-28 15:34:45');
```

```
INSERT INTO dest_post (Username, Dest_Id, Dest_Rating, Post_Time)
VALUES ('rpawan', '1', '10', '2019-04-28 15:34:45');
```

```
INSERT INTO dest_post (Username, Dest_Id, Dest_Rating, Post_Time)
VALUES ('rpawan', '2', '8', '2019-04-28 15:34:45');
```

```
INSERT INTO dest_post (Username, Dest_Id, Dest_Rating, Post_Time)
VALUES ('rpawan', '3', '10', '2019-04-28 15:34:45');
```

```
INSERT INTO dest_post (Username, Dest_Id, Dest_Rating, Post_Time) VALUES
('rpawan', '6', '9', '2019-04-28 15:34:45');
```

```
INSERT INTO dest_post (Username, Dest_Id, Dest_Rating, Post_Time)
VALUES ('rschumaker', '7', '8', '2019-04-28 15:34:45');
```

```
INSERT INTO dest_post (Username, Dest_Id, Dest_Rating, Post_Time)
VALUES ('ssagar', '8', '9', '2019-04-28 15:34:45');
```

```
INSERT INTO dest_post (Username, Dest_Id, Dest_Rating, Post_Time)
VALUES ('pprasun', '9', '5', '2019-04-28 15:34:45');
```

```
INSERT INTO dest_post (Username, Dest_Id, Dest_Rating, Post_Time) VALUES
('k Kapoor', '10', '6', '2019-04-28 15:34:45');
```

---

```
INSERT INTO dest_post (Username, Dest_Id, Dest_Rating, Post_Time)
VALUES ('knikhil', '11', '8', '2019-04-28 15:34:45');
```

---

## ● INSERTION OF TABLE Follower\_Followed\_Member

---

```
INSERT INTO follower_followed_member (Followed_Username,
Follower_Username) VALUES ('ecisneros', 'k Kapoor');
INSERT INTO follower_followed_member (Followed_Username,
Follower_Username) VALUES ('ecisneros', 'knikhil');
INSERT INTO follower_followed_member (Followed_Username,
Follower_Username) VALUES ('ecisneros', 'pprasun');
INSERT INTO follower_followed_member (Followed_Username,
Follower_Username) VALUES ('ecisneros', 'rpawan');
INSERT INTO follower_followed_member (Followed_Username,
Follower_Username) VALUES ('ecisneros', 'ssagar');
INSERT INTO follower_followed_member (Followed_Username,
Follower_Username) VALUES ('k Kapoor', 'ecisneros');
INSERT INTO follower_followed_member (Followed_Username,
Follower_Username) VALUES ('knikhil', 'rschumaker');
INSERT INTO follower_followed_member (Followed_Username,
Follower_Username) VALUES ('knikhil', 'pprasun'); INSERT
INTO follower_followed_member (Followed_Username,
Follower_Username) VALUES ('knikhil', 'rpawan');
```

---

## ● INSERTION OF TABLE Photo

---

```
INSERT INTO photo (Photo_Id, Link, Visit_Dest_Id, Username) VALUES ('1',
'https://www.google.com/url?img', '1', 'pprasun');
INSERT INTO photo (Photo_Id, Link, Visit_Dest_Id, Username) VALUES
('2', 'https://www.google.com/url?img', '1', 'pprasun');
INSERT INTO photo (Photo_Id, Link, Visit_Dest_Id, Username) VALUES
('3', 'https://www.google.com/url?img', '1', 'pprasun');
INSERT INTO photo (Photo_Id, Link, Visit_Dest_Id, Username) VALUES
('4', 'https://www.google.com/url?img', '6', 'rpawan');
```

---

## ● INSERTION OF TABLE Wish\_Dest

---

---

```
INSERT INTO wish_dest (Username, Wish_dest) VALUES ('ecisneros', '1');
INSERT INTO wish_dest (Username, Wish_dest) VALUES ('ecisneros', '3');
INSERT INTO wish_dest (Username, Wish_dest) VALUES ('knikhil', '3');
INSERT INTO wish_dest (Username, Wish_dest) VALUES ('rschumaker', '6');
```

---

### ● INSERTION OF TABLE Likes\_Dislikes\_Comment

---

```
INSERT INTO likes_dislikes_comment (Username, Dest_Id, Post_Time,
Member_Username, Like_Dislike) VALUES ('pprasun', '7', '2019-01-02
10:00:00', 'rpawan', '1');
INSERT INTO likes_dislikes_comment (Username, Dest_Id, Post_Time,
Member_Username, Like_Dislike) VALUES ('pprasun', '7', '2019-01-
10:00:00', 'rschumaker', '1');
INSERT INTO likes_dislikes_comment (Username, Dest_Id, Post_Time,
Member_Username, Like_Dislike) VALUES ('rschumaker', '7', '2019-
04-28 15:34:45', 'pprasun', '1');
INSERT INTO likes_dislikes_comment (Username, Dest_Id, Post_Time,
Member_Username, Like_Dislike) VALUES ('pprasun', '7', '2019-01-02
10:00:00', 'knikhil', '0');
```

---

### ● INSERTION OF TABLE Dest\_Desc\_Modified

---

```
INSERT INTO dest_desc_modified (Pref_Username, Dest_Id,
Date_Modified) VALUES ('knikhil', '5', SYSDATE);
INSERT INTO dest_desc_modified (Pref_Username, Dest_Id,
Date_Modified) VALUES ('rschumaker', '6', SYSDATE);
```

---

### ● INSERTION OF TABLE Business\_Partner\_Rating

---

```
INSERT INTO business_partner_rating (Bs_Id, Rate, Username) VALUES
('1', '9', 'ecisneros');
INSERT INTO business_partner_rating (Bs_Id, Rate, Username) VALUES
('2', '6', 'pprasun');
```

---

Till now we have finished the process of creating tables and database states.



---

## 2.2 Creation of Views (including answers for Question d.)

### View 01: Retrieve all the restaurants in New York city, US.

```
Create View view1 AS Select DEST_NAME from destination
wherdestination_type_Id=2 AND State_Name = 'New York' AND Country_Id
= (select Country_Id from country where
country.Country_Name='United States');
```

### View 02: Retrieve countries and the members who have visited them.

```
Create View subview2 AS select * from visited_dest V Join destination
D On V.Visited_Dest_Id=D.Dest_Id;
```

```
Create View view2 AS select Dest_Name,Username,Country_Name
from subview21 s Join country C On s.country_Id=C.Country_Id;
```

### View 03: Retrieve itineraries to France.

```
Create View view3 AS select * from Trip_Plans
where Trip_Id in(select Trip_Id from Trip_Plan_Includes
where dest_Id in(select dest_Id from Trip_Plan_Includes where Dest_Id
in (select dest_id from destination where country_id =(select
Country_Id from country where Country_Name ='FRANCE'))));
```

### View 04: Retrieve the country(s) visited by whom also visits/visited US in the same trip (within 15 days).

```
Create view subview41 as select * from visited_dest where end_date >=
(CURRENT_DATE - 15);
```

```
Create view view4 as Select Country_Name from Country where Country_Id
In(Select Country_Id from destination where Dest_Id in(Select
Visited_Dest_Id from subview41 where username in(Select
distinct(username) from subview41 where Visited_Dest_Id in (Select
Visited_Dest_Id from visited_dest where Visited_Dest_Id in (select
Dest_id from destination where Country_Id =(select Country_Id from country
where Country_name='United States')))) AND Visited_Dest_Id != 1)) ;
```

---

## 2.3 Creation of SQL Queries (Answer for Question f)

Now we give out the SQL Queries for each of 14 questions listed in Question e.  
as follows:

**Query 1.** Retrieve the names, addresses, and estimated-prices of the 3 most popular restaurants in New York city, US.  
(Rithwik Reddy Koripelly)

```
Create View V1_Q1
As
Select
D.Dest_id,AVG(Dest_rating) AS
AVG_RATING from
Destination D full Outer Join Dest_post DP
On
D.dest_id= Dp.dest_id
Group by D.Dest_id
Order by AVG(Dest_rating);
```

```
Create View V1_Q2
As
select
Dest_Name,Street_No,Zip_code,City_Name,
State_Name,Country_Id,Cost_Price,AVG_RATING
from
V1_Q1 FULL OUTER JOIN Destination D
on
D.dest_id=V1_Q1.dest_id;

select * from V1_Q2 where rownum<=3;
```

**Query 2.** Retrieve the username, status (*regular* or *preferred*), and ranking of the member who has uploaded the most pictures. (Rithwik Reddy Koripelly)

```
Create view query21 as SELECT COUNT(USERNAME) as count,
USERNAME FROM photo GROUP BY USERNAME;

Create View query22 As Select username, Member_Type_Id from
member where username in (Select username from query21 where
count in (select max(count) from query21));
```

---

```
Select Username,mt.Member_Type_Id ,Member_Type_name from query22  
q22 Join member_type Mt on q22.Member_Type_Id =mt.Member_Type_Id ;
```

**Query 3.** For each country in the system, retrieve the username, address and the number of followers of the members who live in this country and has the most followers. (Mohanish Pradeep)

```
create view subview31 as select m.country_id, f.followed_username,  
f.follower_username from follower_followed_member f join member m  
on f.followed_username = m.username;  
  
create view subview32 as select m.country_id as follower_country_id,  
f.country_id as followed_country_id, f.followed_username,  
f.follower_username from subview31 f join member m on f.follower_username  
= m.username;  
  
create view subview33 as SELECT followed_username,  
COUNT(followed_country_id) AS total_follower FROM subview32  
GROUP BY followed_username;  
  
create view subview34 as select m.country_id, m.Street_No, m.Zip_code,  
m.City_Name, m.State_Name, f.followed_username, f.total_follower from  
subview33 f join member m on f.followed_username = m.username;
```

**Query 4.** Retrieve the names, addresses, and estimated-prices of the 3 most popular restaurants in New York city, US. (Mohanish Pradeep)

```
SELECT Visited_dest.username,  
Destination.dest_name, Destination.country_id  
FROM Visited_dest, Destination  
where Visited_dest.visited_dest_id=Destination.dest_id and  
country_id = 2;
```

---

**Query 5.** For all country(s) visited by whom also visits/visited US in the same trip (within 15 days), retrieve the distinct names of the countries.

**(Veera Veni Teki)**

```
select * from View4;
```

**Query 6.** Retrieve the contact information of the business owner who owns the most expensive restaurant and the owner who owns the most assets in the system.

**(Veera Veni Teki)**

```
Create View Business_Partner_Q6
```

```
AS select Bs_id,Count(dest_id) As Number_Of_locations
```

```
from Destination group by Bs_id order by count(dest_id)
```

```
DESC; Create View Business_Partner_Q6_1 As select Bs_id from
```

```
Business_Partner_Q6 where rownum=1; Create View
```

```
Business_Partner_Q6_2
```

```
AS select Bs_id,Max(Cost_price) As
```

```
Max_Cost_Price from Destination
```

```
group by Bs_id order by Max(Cost_price) DESC;
```

```
Create View Business_Partner_Q6_3 AS select Bs_id
```

```
from Business_Partner_Q6_2 where rownum=1;
```

```
Select DISTINCT(Contact_Person),D.Bs_id,Phone from Destination D Join
```

```
Business_Partner B ON (D.BS_id=(Select Bs_Id from Business_Partner_Q6_3) OR
```

```
D.Bs_Id =(Select Bs_Id from Business_Partner_Q6_1 )) AND B.Bs_Id = D.Bs_Id
```

```
AND Destination_Type_Id = 2 ;
```

**Query 7.** Retrieve the names of the 5 most desirable France cities to visit.

**(Jahnavi Bindela)**

```
Create view query7 as Select dest_id from dest_post where dest_id
```

```
in (Select dest_id from destination where country_id = 2) AND
```

```
ROWNUM <= 5 order by DEST_RATING DESC ;
```

---

```
Select Distinct(city_name) from destination where dest_id in  
(select * from query7 );
```

**Query 8.** Retrieve the username and status of the member who either posted any comments or created any itinerary between 12/01/2018 and 1/31/2019.  
**(Jahnavi Bindela)**

```
Create View Q8Comments  
AS  
select Username  
from Comments  
where  
(Post_Time)>DATE('2018-12-01 00:00:00') And  
(Post_Time)<DATE('2019-01-31 00:00:00')
```

**Query 9.** For each member who has visited all the states/provinces in France, retrieve the maximum, minimum and average daily cost per person, per day across all these related itineraries (*\*considering restaurant and attraction cost only*).

**(Spandana Aelapati)**

```
Create View Q91V1 As select Dest_id from destination where Country_id =(Select
Country_Id
from country where Country_Name='FRANCE' ) AND Destination_Type_id
IN(2,1);
```

```
Create View Q92V1 AS select Username,Count(DISTINCT(visited_Dest_id )) AS
No_Of_Dest
from Visited_Dest where visited_Dest_id IN (select Dest_id from Q91V1 ) Group
by Username
Order by No_Of_Dest DESC;
```

```
Create View Q93V1 As select Username from Q92V1 where No_Of_Dest=(select
Count(Dest_Id)
from Q91VT );
```

```
Create View Q94V1
AS
select VD.Username,D.Dest_Id,D.Cost_Price,Start_Date,End_Date
From
Visited_dest VD JOIN DESTINATION D
On VD.Visited_Dest_Id =D.Dest_ID
AND
username IN ( Select Distinct(Username) from Q92V1 );
```

```
Create View Q95V2 AS select Username,D.Dest_Id,D.City_Name
,Q94V1.Cost_Price from
Q94V1 join Destination D on D.Dest_id=Q94V1 .Dest_id;
```

```
Create View Q96V1 AS select AVG(COST_PRICE) AS AVG_COST
,Max(COST_PRICE) AS
MAX_COST ,MIN(COST_PRICE) AS MIN_COST from Q95V2 ;
```

```
Create View Q97V2 as select Distinct(Username), AVG_COST , MAX_COST ,
MIN_COST
from Q95V2 Join Q96V1 on Avg_Cost>0 ;
```

**Query 10.** For each country, retrieve the total number of original comments, the total number of related itineraries, and the total number of members from this country, and the total number of members who have visited.

**(Spandana Aelapati)**

Create view v11 AS select D.Country\_Id,Count(Co.dest\_id) AS Comment\_Count  
from Destination D Full Outer Join Comments Co on Co.dest\_id=D.dest\_id  
Group by Country\_Id;

Create view v22 AS select D.Country\_Id, Count(Trip\_Id) As Trip\_Count  
from Destination D Full Outer Join Trip\_Plan\_Includes TPI On  
TPI.dest\_id=D.dest\_id Group by country\_id;

Create view v33 AS select Country\_Id,Count(Username) As  
Members\_From\_Country from Member Group by Country\_id;

Create view v44 AS select Country\_id ,Count(VD.Username) As  
Members\_Visited\_Country from Visited\_dest VD Full Outer Join Destination  
D ON VD.Visited\_dest\_Id = D.dest\_Id Group by Country\_id;

Create View v55 As select  
v33.Country\_id,Members\_From\_Country,Members\_Visited\_Country from v33 FULL  
OUTER JOIN v44 on v33.Country\_id=v44.Country\_id;

Create View v66 As select v11.Country\_id, Comment\_Count,Trip\_Count from  
v11 FULL OUTER JOIN v22 on v11.Country\_id=v22.Country\_id;

Create View v771 As select  
V66.Country\_id,Comment\_Count,Trip\_Count,Members\_From\_Country  
from v55 FULL OUTER JOIN v66 on v55.Country\_id=v66.Country\_id;

Create view v882 As select  
Country\_Name,C.Country\_id,Comment\_Count,Trip\_Count,Members\_From\_Country  
From Country C FULL OUTER JOIN v771 on  
v771.Country\_id=C.Country\_id;  
select \* from v882;

---

### 3. Conclusion

In this report we have modified the EER diagram and relational schemas for XXX Database according to the requirement of Phase III. We also have given dependency diagrams for each relational schema in the database. Then we created tables for each relational schema and write the SQL statements for the views and queries listed in Question d. and Question e..