

# **Wild-life Safari Trip Management System**



**Information Systems and Data Modeling – IT1090**

**Assignment Report**

**Group MET\_01\_02**

**Sri-Lanka Institute of Information Technology**

## GROUP DETAILS

**Group No: MET\_01\_02**

**Case Study: Wild life safari management system**

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## **1. Hypothetical Scenario**

"Jungle Safari" is an online wildlife safari system that offers a wide range of services to adventure seekers. Our customers can choose from a variety of safari packages that we have presented with great deals and discounts, or they can book hotels or restaurants according to their preferences. Customers can register and create user accounts for themselves on our online wildlife safari system. Our website provides thorough information about the National Parks, including maps and photographs, to assist our registered customers, both regional and abroad, in planning their wild safari tours. It also has information about the nearest railway station, bus station, hotels, and restaurants, all of which offer a variety of pricing and services. Our website allows our customers to estimate the cost of a tour before making a reservation. We provide our customers advantages such as the ability to cancel hotel or restaurant reservations, as well as wild safari packages, within a specified time period. Our clients are welcome to use our social networking platform and share their experiences with others. Customers can contact us through our Feedback page if they have any questions about how to make our system more user friendly.

Administrators are in charge of maintaining the system's operations, such as approving reservations, managing user accounts, and validating users.

## **2. Requirements Analysis Document**

### **1. Introduction**

#### **1.1 Purpose of the System**

When exploring wildlife safari systems, we looked at how the internet connects customers and businesses, and how a website may make a service more accessible to clients. So, as a group, we devised a solution for the wildlife safari industry by building a website where people can see and purchase safari packages online. Customers can also use our website to ask questions about our services or products, get customer support, and make improvements by simply registering with us. We offer a variety of services for booking wild safari tours in Sri Lanka's many national parks online.

## **2. Proposed system**

### **2.1 Overview**

Since the system must handle a variety of data, including that of registered customers, a database is required, as it is easier to manage a computer-based stored data system than to manage written or typed documents. This reduces time consumption and effort of both customer and the administrators. There is no chance of losing information since all data is stored in the database in a safe environment. Unauthorized users are unable to access the database. It can only be controlled by users of the system. A database is beneficial to the smooth running of operations and the system's performance. As a result, this online wild safari system will be given the concept of designing its own database. When creating a database, it is beneficial to collect requirements and view them in light of the system's goal. The requirement analysis approach can be used to accomplish this. We can then determine the functional and non-functional specifications. This project can be completed using the approach of requirement analysis.

### **2.2 Functional requirements**

“Jungle Safari” is a website where users can book safari tours according to their preferences. Both registered and non-registered customers can visit the website. Only registered customers have the privilege to book their safari packages and to experience the maximum services of the website. Guests can do only search and view details given. This website provides detailed information of five most iconic National Parks with maps and images that help the registered customers both local and foreign, in making their tour plan for wild safari. The users have the facility to access safari details directly through a search bar by date, by package details or by location. When a user wants to register to the system, user details such as name, email, contact number, user name and password should be given correctly and to login to the system, user credentials must be entered to the system such as user name and password. It is after the administrator validates the users; they can accomplish their purpose along with the support of the manager. Registered users can view and book their safaris through this website along with the facility to reserve hotels or restaurants. These reservations are approved and user accounts are

managed by the administrator. Once the reservations are approved, the system sends a notification as well as an email to the user informing about the successful reservation. Also, updating safari contents, services details and social media platforms are done by the administrator. Since it provides the details of different packages and maps of closest hotels/restaurants, railway station, and bus station, the customers find it very easy to organize their tours. They also can view, update and delete their profile.

The registered customer is provided with a facility to calculate the cost of the tour before they reserve it and also if they prefer, to cancel the hotel / restaurant reservation or wild life safari packages, within the given period of time. They further can enjoy their safari tour with offers and discounts that they receive by the manager for their valid reservations. Currency translator is used in the system by the manager to calculate the cost and the discount.

This website provides the opportunity for the registered users to share their safari experiences in public with the permission and the verification of the administrator, to give their feedback and to rate for their packages, hotels and restaurants. Both guests and registered users have the contact services provided via an instant message box or email or calls to inquire and plan their wild safari tours. Furthermore, customers can access the 'About Us' page which contains the vision and goals of the website in order to maintain a better understanding between them and the service providers. They also can share their suggestions to make the system more user friendly.

System will keep the records of every activity that takes place in the system and based on that database manager can generate as well as analyze different reports.

Customers can visit our website using their cell phones or personal computers from anywhere at any time for convenience. As a result, one of the system's primary responsibilities is to secure user credentials in the service. Each person should have a relationship, according to the protocol. It makes it easy for users to keep the system in good working order.

## **2.3 Non-Functional Requirements**

### **2.3.1 Data Requirements**

We identified data requirements for the wild-life safari trip management system as below.

- Registered user
- Administrator
- Package
- Hotel
- Restaurant
- Manager
- Calculated cost

### **2.3.2 Performance Requirements**

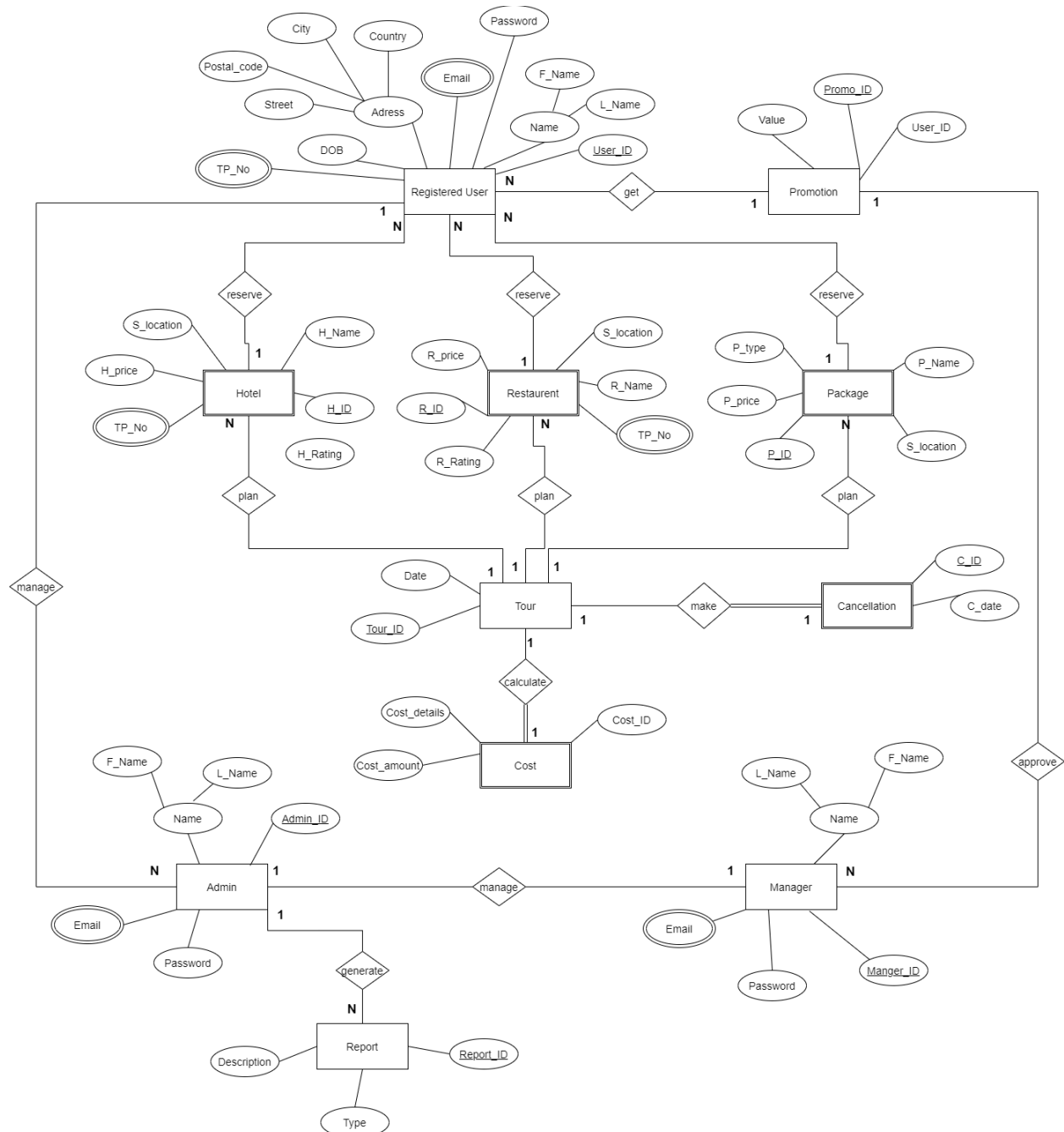
This focuses mainly about how the system will perform after being developed.

- Registered user can view safari details.
- Registered user can edit and delete the account details.
- Give expeditious responds to user requirements.
- Load the pages in few second.
- Design user friendly user interface.
- Admin able to create/update/edit and delete data
- Users have ability to access the website at any time using any device or any browser.

### **2.3.3 Security Requirements**

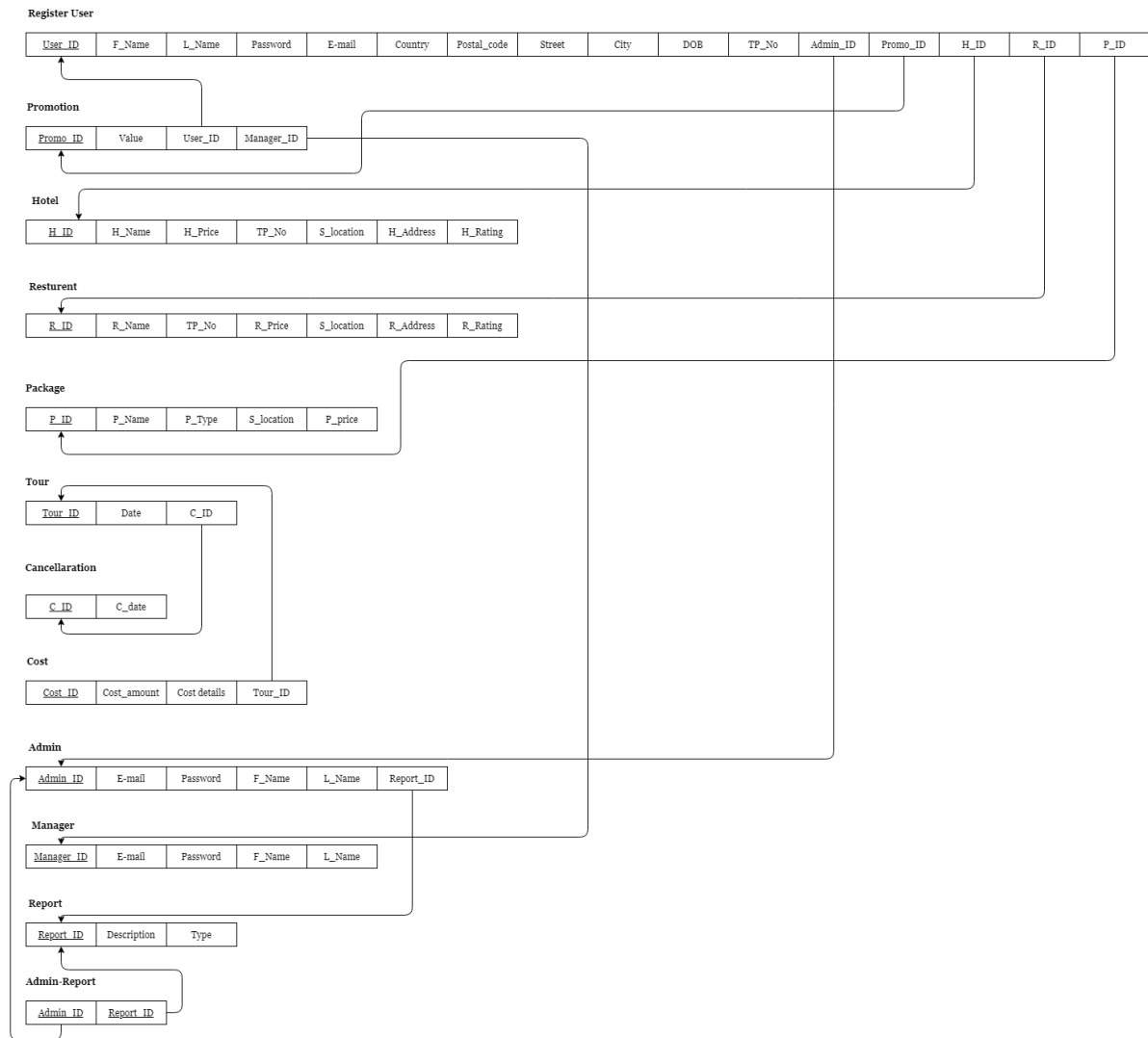
- Secure privacy of users.
- Backup database straight off.
- Validate user to avoid unauthorized access.
- The system generates a warning message when an incorrect user credentials are entered.
- Store sensitive data such as contact details and password with secure.

### 3. Entity Relationship(ER) Model





## 4. Rational schemas



## 5. SQL code

```
CREATE TABLE Registered user(  
  
    User_ID int not null,  
  
    F_Name char(50) not null,  
  
    L_Name char(50) not null,  
  
    password varchar (100) not null,  
  
    email varchar(100) not null,  
  
    Street varchar(100) not null,  
  
    city char(100) not null,  
  
    postal code int not null,  
  
    country char(100) not null,  
  
    DOB varchar(100) not null,  
  
    TP_no varchar(100) not null,  
  
    Admin_ID int not null,  
  
    Promo_ID varchar(100),  
  
    H_ID int,  
  
    R_ID int,  
  
    P_ID int,  
  
  
    constraint PK_Registered user PRIMARY KEY (User_ID),
```

constraint FK\_Registered user FOREIGN KEY (Admin\_ID) references Admin (Admin\_ID),

constraint FK\_Registered user FOREIGN KEY (Promo\_ID) references Promotion (Promo\_ID),

constraint FK\_Registered user FOREIGN KEY (H\_ID) references Hotel (H\_ID),

constraint FK\_Registered user FOREIGN KEY (R\_ID) references Restaurant (R\_ID),

constraint FK\_Registered user FOREIGN KEY (P\_ID) references Package (P\_ID)

);

INSERT INTO Registered user

values('00000001','Saman','Silva','Saman@123','saman123@gmail.com','219,Kadawatha road','Dehiwala','10350','Sri Lanka','04.06.1995','071234560','01','P01','0012',' ','000008'),

('00000002','Rachel','Seinfeld','Rachel@123','rachel123@gmail.com','5A,stafor street','Los Angeles','90002','USA','02.05.1998','0714895326','01','P04','0005',' ','000002'),

('00000003','Idula','Perera','Indula@123','indula123@ail.com','23,Havelock city','colombo 04','00400','Sri lanka','23.12.1985','0773462387','01','P02',' ','000015'),

('00000004','Fatima','Nazeer','Fathima@123','fathima123@gmail.com','67/5,Yousuf Avenue','Beruwala','12070','Sri Lanka','1979.03.30','0725458769','01',' ','023','000013'),

('00000005','Shakthi','Krishanan','Shakthi@123','shakthi123@gmail.com','345,Allen Avenue','Wellawatta','10350','Sri Lanka','10.10.1989','0775437234','01','P03','0019',' ','000012')

CREATE TABLE Promotion (

Promo\_ID varchar(100) not null,

Value varchar (100),

User\_ID int not null,

Manager\_ID int not null

constraint PK\_Promotion PRIMARY KEY (Promotion\_ID)

constraint FK\_Promotion FOREIGN KEY (User\_ID) references User (User\_ID)

Constraint FK\_Promotion FOREIGN KEY (Manager\_ID) references Manager  
(Manager\_ID)

);

INSERT INTO Promotion

values('P01','LKR 2,500','00000001','1'),

('P02','LKR 5,000','00000003','1'),

('P03','LKR 7,500','00000005','1'),

('P04','LKR 10,000','00000002','1')

CREATE TABLE Hotel (

H\_ID int not null,

H\_name char(100) not null,

S\_location varchar (100) not null,

H-Address varchar(500),

H\_price varchar(100),

H\_telno varchar(100),

H\_rating varchar(100),

constraint PK\_Hotel PRIMARY KEY (H\_ID)

);

INSERT INTO Hotel

values('0001','Cinnamon Wild Yala','Yala','Palatupana,Kirinda 82614','LKR 35,819.00','0472 239 449','4-star hotel'),

('0002','Jetwing Yala','Yala','Palatupana,Kirinda 82614','LKR 27,757.00','0474 710 710','4-star hotel'),

('0003','Laya Safari','Yala','Kirinda-Palatupana-Yala Rd,Palatupana 820000','LKR 19,637.00','0472 239 851','4-star hotel'),

('0004','Lepord Nest-Glamping in Yala','Palatupana,Yala,Thissamarama 82000','070 281 0287','2-star hotel'),

('0005','Uge Chena Huts','Yala','Tala-Palatupana,Wildlife safari zone, Yala,Thissmarama 82000','LKR 263,972.00','0472 267 100','5-star hotel'),

('0006','Wilpattu Tree House Hotel','Wilpattu','Wilpattu Sanctuary Rd Hunuwilagama, Horiwila, Wilpattu road, 50200, Nochchiyagama','LKR 14,879.00','077 376 7113','1-star hotel'),

('0007','The Backwaters Lodge - Wilpattu','Wilpattu','Wilpattu National Park Hotel Road, Eluwankulama 61308','LKR 19,838.00','076 331 3119','3-star hotel'),

('0008','Mahoorra - Wilpattu by Eco Team','Wilpattu','Wilpattu National Park, Nochchiyagama, Wilpattu, 41000 Pahala Maragahawewa, Sri Lanka','LKR 84,710.00','070 222 8222','"),

('0009','Glamping Wilpattu by Thamaravila','Wilpattu','Wilpattu Sanctuary Road/Wilpattu, 50220 Wilpattu, Sri Lanka','LKR 50,759','076 150 3403','3-star hotel'),

('0010','Wilpattu Green Cabin','Wilpattu','Eluwankulama, Achchamulai, Sri Lanka','",076 669 6801','"),

('0011','EKHO Safari Tissa','Bundala','Tissamaharama - Kataragama Rd, Tissamaharama 82600','",0475 677 623','4-star hotel'),

('0012','DoubleTree by Hilton Weerawila Rajawarna Resort','Bundala','Weerawila Watta, Wirawila 82632','LKR 20,772.00','5-star hotel'),

('0013','Oak Ray Wild Yala','Bundala','No. 115 Tissamaharama - Kataragama Rd, Mahasenpura 82600','",076 388 2338','3-star hotel'),

('0014','Saraii Village','Bundala','Randunu Kele Watte, Weerawila, Hambantota District, Sri Lanka, A2, Wirawila','LKR 9,762','076 821 6363','3-star hotel'),

('0015','Lake Villa Resort','Bundala','Lake Road Randunu Watta, Weerawila 82632','LKR 7,563','071 631 5522','3-star hotel'),

('0016','Lavendish Wild Safari','Wasgamuwa','Wasgamuwa','LKR 8,658','0663 669 268','"),

('0017','Lakegala Resort','Wasgamuwa','Ma Oya Haththota Amuna, 21000','LKR 7,849','071 544 2117','"),

('0018','Aligama Cottage', 'Wasgamuwa','Wasgamuwa','Pussalayaya,Gamunuoya Handungamuwa, Wasgamuwa 12500','",071 101 4131','"),

('0019','Kalundewa Retreat','Wasgamuwa','Kalundewa Road, Dambulu Oya Dambulla. Sri Lanka.','LKR 54,038','077 520 5475','4-star hotel'),

('0020','Primate Centre Lodge', 'Wasgamuwa', '17,Srimath Anagarika Dharmapala mawatha, Polonnaruwa 51000','",077 311 3530','2-star hotel'),

('0021','Athgira River Camping - Udawalawe','Udawalawe','Mudunmangada road, Udawalawe, 70190 Udawalawe, Sri Lanka','LKR 5,895','","),

('0022','Elephant Trail','Udawalawe',' 35 Thanamalwilla Road, Udawalawa','LKR 10,808','0472 232 275','3-star hotel'),

('0023','Grand Udawalawe Safari Resort', 'Udawalawa','No. 912, B427, Udawalawa 70190','LKR 19,156','0472 232 000','4-star hotel'),

('0024','The Countryside Udawalawe','Udawalawa','Near the fair road, Udawalawe 70190','LKR 7,661','076 839 6086','4-star hotel'),

('0025','Nildiya Mankada Safari Lodge','Udawalawa','Walawegama Rd, Udawalawa','LKR 7,563','0473 629 000','3-star hotel')

CREATE TABLE Restaurant (

R\_ID int not null,

R\_name char(100) not null,

S\_location varchar (100) not null,

R\_location varchar (500) not null,

TP\_No varchar(100),

R\_rating varchar(100),

constraint PK\_Restaurants PRIMARY KEY (H\_ID)

);

INSERT INTO Restaurants

values('001','Cinnamon Wild Yala','Yala','Palatupana,Kirinda 82614','0472 239 449','4-star hotel'),

('002','Jetwing Yala','Yala','Palatupana,Kirinda 82614','0474 710 710','4-star hotel'),

('003','Laya Safari','Yala','Kirinda-Palatupana-Yala Rd,Palatupana 820000','0472 239 851','4-star hotel'),

('004','Lepord Nest-Glamping in Yala','Palatupana,Yala,Thissamarama 82000','070 281 0287','2-star hotel'),

('005','Uge Chena Huts','Yala','Tala-Palatupana,Wildlife safari zone, Yala,Thissmarama 82000','0472 267 100','5-star hotel'),

('0006','Wilpattu Tree House Hotel','Wilpattu','Wilpattu Sanctuary Rd Hunuwilagama, Horiwila, Wilpattu road, 50200, Nochchiyagama','077 376 7113','1-star hotel'),

('007','The Backwaters Lodge - Wilpattu','Wilpattu','Wilpattu National Park Hotel Road, Eluwankulama 61308','076 331 3119','3-star hotel'),

('008','Mahoor - Wilpattu by Eco Team','Wilpattu','Wilpattu National Park, Nochchiyagama, Wilpattu., 41000 Pahala Maragahawewa, Sri Lanka','070 222 8222','"),



('009','Glamping Wilpattu by Thamaravila','Wilpattu','Wilpattu Sanctuary Road/Wilpattu, 50220 Wilpattu, Sri Lanka','076 150 3403','3-star hotel'),

('010','Wilpattu Green Cabin','Wilpattu','Eluwankulama, Achchamulai, Sri Lanka','076 669 6801','"),

('011','EKHO Safari Tissa','Bundala','Tissamaharama - Kataragama Rd, Tissamaharama 82600','0475 677 623','4-star hotel'),

('012','DoubleTree by Hilton Weerawila Rajawarna Resort','Bundala','Weerawila Watta, Wirawila 82632','5-star hotel'),

('013','Oak Ray Wild Yala','Bundala','No. 115 Tissamaharama - Kataragama Rd, Mahasenpura 82600','076 388 2338','3-star hotel'),

('014','Saraii Village','Bundala','Randunu Kele Watta, Weerawila, Hambantota District, Sri Lanka, A2, Wirawila','076 821 6363','3-star hotel'),

('015','Lake Villa Resort','Bundala','Lake Road Randunu Watta, Weerawila 82632','071 631 5522','3-star hotel'),

('016','Lavendish Wild Safari','Wasgamuwa','Wasgamuwa','0663 669 268','"),

('017','Lakegala Resort','Wasgamuwa','Ma Oya Haththota Amuna, 21000','071 544 2117','"),

('018','Aligama Cottage', 'Wasgamuwa','Wasgamuwa','Pussalayaya,Gamunuoya Handungamuwa, Wasgamuwa 12500','071 101 4131','"),

('019','Kalundewa Retreat','Wasgamuwa','Kalundewa Road, Dambulu Oya Dambulla. Sri Lanka.','077 520 5475','4-star hotel'),

('020','Primate Centre Lodge', 'Wasgamuwa', '17,Srimath Anagarika Dharmapala mawatha, Polonnaruwa 51000','077 311 3530','2-star hotel'),

('021','Athgira River Camping - Udawalawe','Udawalawe','Mudunmangada road, Udawalawe, 70190 Udawalawe, Sri Lanka','"),

('022','Elephant Trail','Udawalawe',' 35 Thanamalwilla Road, Udawalawa','0472 232 275','3-star hotel'),

('023','Grand Udawalawe Safari Resort', 'Udawalawa','No. 912, B427, Udawalawa 70190','0472 232 000','4-star hotel'),

('024','The Countryside Udawalawe','Udawalawa','Near the fair road, Udawalawe 70190','076 839 6086','4-star hotel'),

('025','Nildiya Mankada Safari Lodge','Udawalawa','Walawegama Rd, Udawalawa','0473 629 000','3-star hotel')

```
CREATE TABLE package(  
  
P_ID int not null,  
  
P_Name varchar(100) not null,  
  
P_type int not null,  
  
S_location char(100) not null,  
  
P_price varchar(100),  
  
constraint PK_Package PRIMARY KEY (P_ID)  
  
);
```

```
INSERT INTO Package  
  
values('000001','Family Mini','4','yala','LKR 6,000'),
```

('000002','Family','6','yala','LKR 8,000'),  
('000003','Family Plus','8','yala','LKR 9,000'),  
('000004','Family Mini','4','Willpattu','LKR 5,500'),  
('000005','Family','6','Willpattu','LKR 7,500'),  
('000006','Family Plus','8','Willpattu','LKR 8,500'),  
('000007','Family Mini','4','Bundala','LKR 5000'),  
('000008','Family','6','Bundala','LKR 7,000'),  
('000009','Family Plus','8','Bundala','LKR 8,000'),  
('000010','Family Mini','4','Wasmamuwa','LKR 6,000'),  
('000011','Family','6','Wasmamuwa','LKR 8,000'),  
('000012','Family plus','8','Wasmamuwa','LKR 9,000'),  
('000013','Family Mini','4','Udawalawa','LKR 5,750'),  
('000014','Family','6','Udawalawa','LKR 7,750'),  
('000015','Family plus','8','Udawalawa','LKR 8,750')

```
CREATE TABLE tour(  
    Tour_ID varchar(100) not null,  
    date int not null,  
    C_ID varchar(100)
```

```
constraint PK_tour PRIMARY KEY (Tour_ID),  
  
constraint FK_tour FOREIGN KEY (C_ID) references User (C_ID)  
  
);
```

```
INSERT INTO tour  
  
values('T01','12.06.2021')  
  
('T02','09.09.2021'),  
  
('T03','22.12.2021'),  
  
('T04','02.07.2021'),  
  
('T05','25.11.2021')
```

```
CREATE TABLE Cancelation(  
  
C_ID varchar(100) not null,  
  
C_Date varchar(100)  
  
);
```

```
INSERT INTO  
  
values('C01','')
```

```
CREATE TABLE Cost(
```

```
Cost_ID varchar(100) not null,
```

```
cost_details varchar(200),
```

```
cost_amount varchar(100),
```

```
Tour_ID varchar(100) not null,
```

```
constraint PK_Cost PRIMARY KEY (Cost_ID)
```

```
constraint FK_cost FOREIGN KEY (Tour_ID) references Tour (Tour_ID)
```

```
);
```

```
INSERT INTO Cost
```

```
values('Cost01','Hotel-DoubleTree by Hilton Weerawila Rajawarna Resort,Pkg-000008','LKR 30,772','T01'),
```

```
('Cost02','Hotel-Uge Chena Huts,Pkg-000002','LKR 265,972','T02'),
```

```
('Cost03','Pkg-000015','LKR 8,750','T03'),
```

```
('Cost04','Restaurant-Grand Udawalawe Safari Resort','','T04'),
```

```
('Cost05','Hotel-Kalundewa Retreat,Pkg-000012','LKR 30,000','T05')
```

```
CREATE TABLE admin(  
  
Admin_ID int not null,  
  
Email varchar (100) not null,  
  
passwaord varchar (50) not null,  
  
F_Name char(100) not null,  
  
L_Name char (100) not null,  
  
Report_ID varchar (100)  
  
constraint PK_admin PRIMARY KEY (Admin_ID)  
  
constraint FK_Registered admin FOREIGN KEY (Report_ID) references Package  
(Report_ID)  
  
);
```

```
INSERT INTO Admin
```

```
values
```

```
('01','Admin1@gaill.com','Admin1@123','firstname1','lastname1',''),
```

```
CREATE TABLE manager(  
  
Manager_ID int not null,
```

Email varchar (100) not null,

password varchar(50) not null,

F\_Name char (100),

L\_name char (100)

constraint PK\_Manager PRIMARY KEY (M\_ID)

);

INSERT INTO Manager

values

('1','manager@gmail.com','manager@123','first','last')

CREATE TABLE Report (

Report\_ID varchar (100) not null,

Type char(50) not null,

description varchar(500)

constraint PK\_Report PRIMARY KEY (Report\_ID)

);

```
INSERT INTO Report  
  
values('R01','Hotels Reort','Sample report for hotels'),  
  
('R02','Restaurant Report','Sample report for restaurant'),  
  
('R03','Package Report','Sample reports for package')
```

```
CREATE TABLE Admin-Report(  
  
Admin_ID int not null,  
  
Report_ID varchar (100) not null,  
  
constraint PK_Admin-Report PRIMARY KEY (Admin_ID,Report_ID),  
  
constraint FK_Report FOREIGN KEY (Report_ID) references Report (Report_ID),  
  
constraint FK_Admin FOREIGN KEY (Admin_ID) references Admin (Admin_ID)  
  
);
```

```
INSERT INTO Admin-Report  
  
values('01','R01')
```