

# Information Systems and Data Modeling

## IT1090



## Group Assignment

Title: Tourism & Travel Management System

Batch Number: Y1. S2. CSNE.01


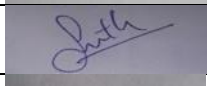
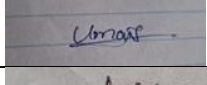

Group Number: MLB\_CSNE.01\_12

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## **Introduction**

Tourism and travel drive the global economy because these epitomes feed into the socio-economic development in the spheres of employment opportunities, cultural exchanges, and local industries. Increased demand for travel, therefore, calls for appropriate systems that reduce the different complications that come with the growth of the tourism sector. It will also bring into one platform all the functions being carried out by travel agencies and tour operators with regards to bookings and itinerary management, including customer service.

It will also cover the concept of a Tourism & Travel Management System: what it is, the main functionality it has, and how it can lead to better user satisfaction and operational performance. An overview of which technological elements are used to underpin such systems, challenges regarding the implementation of the same, and benefits accruing thereof to the various stakeholders concerned with the tourism sector will also be provided. This is achieved by presenting an apt management setup that will be able to reach out to the dynamic needs of the travelers and thereby facilitate the performance superior in them.

## **Hypothetical Scenario**

Consider a travel agency, say, "Wanderlust Adventures, dealing in customized tours for its customers. The agency faces great difficulty in managing the different bookings, payments recorded, coordination with service providers, and ensuring that no hassle comes to the customer when there is an increase in clientele. In regard to such problems, they plan to implement something called a Tourism & Travel Management System.

It provides an integrated facility to the customers where they can view tour packages, book flights and hotels, go on excursions, and arrange personalized itineraries on one single platform. The application automates booking processes within the TTMS. It sends real-time updates regarding availability and also provides instant payment options. The system shall integrate third-party service providers in regard to airlines and hotels so that any bookings are suitably updated accordingly. This system will also contain a mobile application for the customer in which their itinerary, whether updates, and reminders will be displayed. For the company Wanderlust Adventures, the system reduces manual labor and hence greater efficiency with reduced errors, while at the same time it increases customer satisfaction and provides insight into customer preferences through data analytics.

# **Requirement Analysis**

## **Main Requirements**

- **Functional Requirements**

Main Functions of the website and Events that take place between the users and the system is described by the Functional requirements. Five users are using this Tourism and Travel Management system. Namely: Customers, Guiders, Tour Operators, Transportation Providers and Travelers. They access this system in different ways where it is related to them.

## **Customer**

### **User Requirements**

- The system should allow new customers to create an account using their personal details
- Customers should be able to view and update their personal information.
- Customers should be able to change their password securely.
- Customers should be able to view their past and upcoming bookings.
- Customers should be able to edit or delete their reviews within a specified time frame.
- Customers should be able to search for packages based on various criteria.
- The system should provide filtering options to help customers find relevant travel packages quickly.

### **System Requirements**

- The system will enable the user to register an account using a unique username or email and a password.
- The system shall validate user inputs upon registration regarding the format of the email address and password strength.
- The system shall log in to a customer via credentials.
- The system should grant customers access to their personal data with the ability to view and edit it.

## **Payment System**

### **User Requirements**

- Provide the user with an option to select any payment method: credit/debit cards, PayPal, and other digital wallets.
- The system checks the chosen payment method against the supported ones.
- Users will be able to make their payments securely, with this sensitive information encrypted during transmission.
- The system should adhere to industry standards for secure processing of payments.

### **System Requirements**

- Sensitive payment information shall be encrypted upon transmission by the system. The system shall fully comply with the standards set out by PCI DSS for secure payment processing.
- The system shall show confirmation messages of successful payments with transaction IDs and details.
- The system shall change the status of a payment and the history after refunds are successfully processed.
- The user will be able to view the exact amount payable before confirmation.

## **Booking system**

### **User Requirements**

- The system should provide filtering options to narrow down the search results based on user preference.
- Users should be able to create and manage their accounts, including personal information, payment methods, and booking history.
- The system should allow users to view/download confirmation of their booking from their account.
- Users should be allowed to modify their bookings
- The system should allow the users to cancel the bookings and in turn provide the users with information on refund eligibility.
- There should be customer support available to the users for their queries regarding any booking, modification, or cancellations.

## **System Requirements**

- The system should then provide the facility for users to filter the search results regarding amenities, duration, and customer ratings.
- The system shall allow administrators to change information on packages at any time the administrators deem necessary.
- Every successful booking, the system shall generate a unique booking reference number.
- The system shall provide a cancellation option and specify any associated fees or refund policies.
- The system shall be integrated with various payment gateways for processing payments in a secure manner.

## **Transport Packages**

### **User Requirements**

- Users shall be granted the ability to search for transportation packages based on various criteria such as destination, type of transport- bus, train, flight, and date.
- The system shall enable the setting of filters to reduce results using price, duration, and user ratings as guidelines.
- Users shall be granted the ability to get into each transport package for more detailed information.
- The user shall begin to book the transport package by selecting an option and filling in some details.
- Users should be able to securely pay for the transport package via different modes of payment.
- Users shall be able to manage their accounts by viewing past transport package bookings made, saving preferred payment methods.

### **System Requirements**

- The system shall provide a feature to the administrator for creating, editing, and deleting transport packages.
  - The system should maintain detailed information related to each transport package.
- The system should allow the user to filter search results on such basis as price, duration, and amenities.

- The system shall integrate payment gateways to provide processing of transport package payments safely.
- The system should provide analytics for improving transport services, based on user behavior.

## **Guide**

### **User Requirements**

- Users should be able to view detailed profiles of guides.
- Users shall be able to search for guides based on various criteria.
- The system shall include options to filter results in order to make selection easier for users.
- The user should be able to book guides according to dates and time.
- The system should represent an individual guide schedule regarding their availability toward booking.
- When a guide who was previously available is booked, and he is not available, that should trigger a notification to users.

### **System Requirements**

- The system shall grant the guides the right to create, update, and delete their profiles.
- The system shall allow administrators to review guide profiles for approval to ensure that the information displayed is of quality and accurate.
- The system should allow filtering of results based on the user-set criteria.
- The system shall summarize booking details for confirmation by the user before confirmation of the booking.
- The system will also be able to notify guides about new bookings, cancellations, or modifications.
- The system shall ensure all communications are secure and private.



## **Data requirements**

### **➤ Customer**

- Customer\_Id
- F\_Name
- L\_Name
- Phone\_No
- Email
- StreetName
- City
- HomeNo
- Age

### **➤ Review**

- Review\_Id
- Customer\_Id
- Admin\_Id
- Rating
- Comment
- Date

### **➤ Payment**

- Payment\_Id
- Customer\_Id
- PaymentDate
- Method
- Amount

### **➤ Booking**

- Booking\_Id
- Customer\_Id
- BookingDate
- TotalAmount
- BookingType
- Package\_Id

### **➤ Destination**

- Destination\_Id
- Name
- City
- Description
- Country

➤ **Transport**

- TransportId
- Provider
- Type
- Price
- Booking\_Id

➤ **Transport Packages**

- Package\_Id
- Destination\_Id
- PackageName
- Itinerary
- Price
- Duration
- Guide\_ID

➤ **Guide**

- Guide\_Id
- F\_Name
- L\_Name
- Language
- Experience
- Admin\_ID
- Text

➤ **Guide\_Language**

- Guide\_Id
- language

➤ **Administration**

- Admin\_Id
- Phone\_No
- Email
- DOB
- Password
- F\_Name
- L\_Name
- City
- Street

➤ **Customer\_Pay\_Payment**

- Customer\_ID
- Payment\_ID
- Payment\_Date

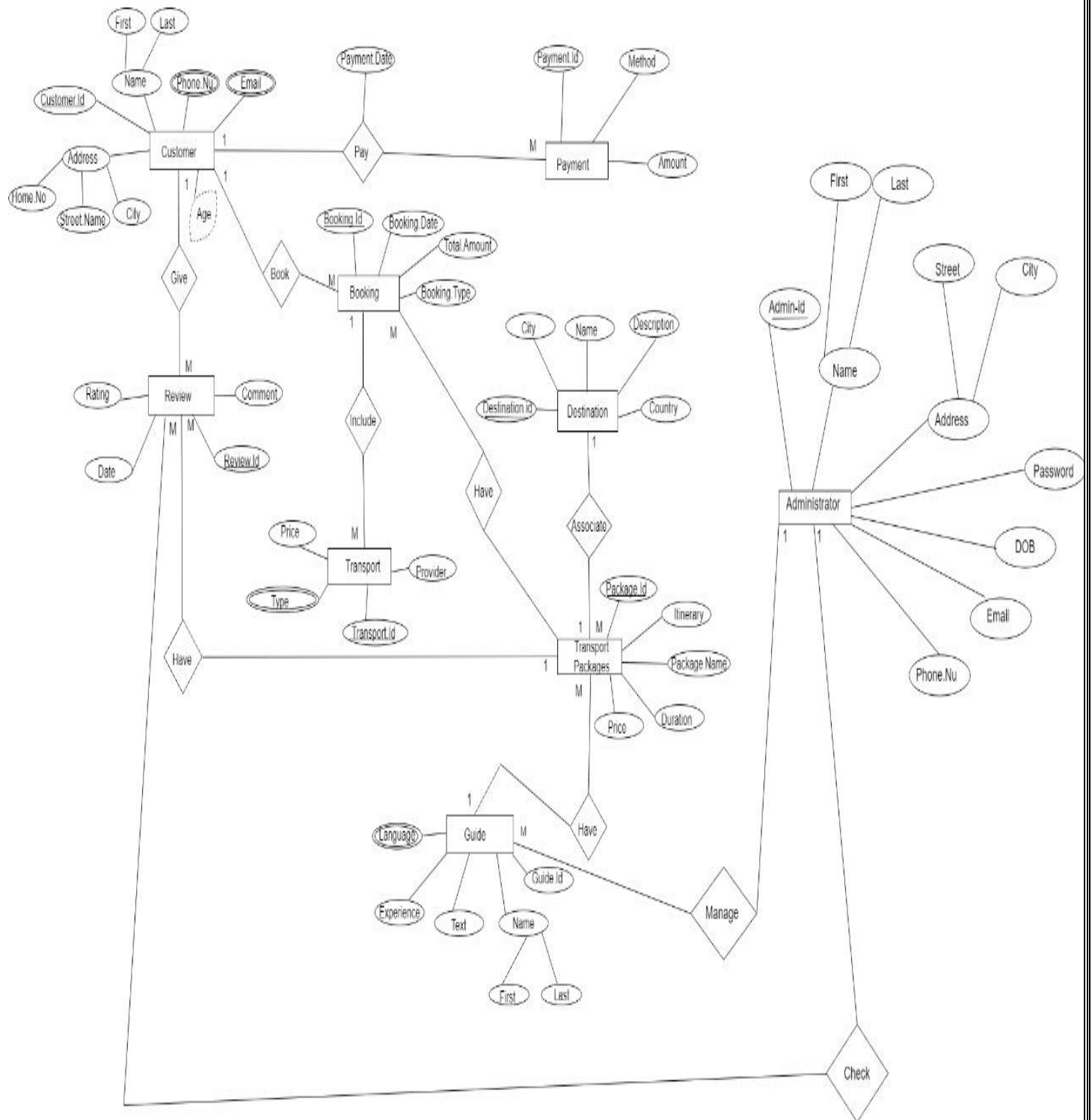
➤ **Customer\_Email**

- Customer\_ID
- Email

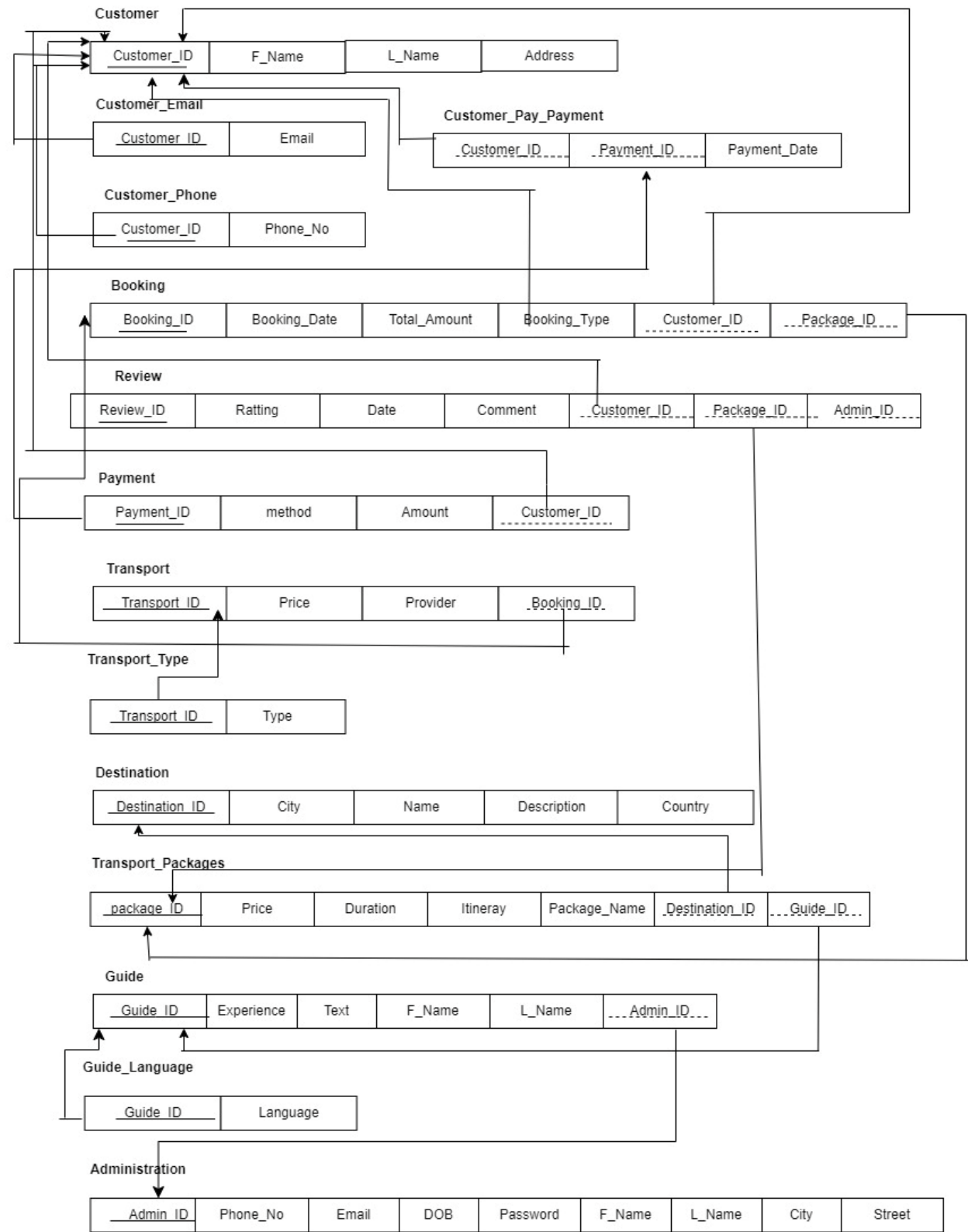
➤ **Customer\_Email**

- Customer\_ID
- Phone\_NO

## ER Diagram



# Relational Schema



# SQL Queries

## Data Base Create

/\*Create Table\*/

```
CREATE TABLE Customer(  
    Customer_ID Varchar(15) PRIMARY KEY,  
    First_Name VARCHAR(50) NOT NULL,  
    Last_Name VARCHAR(50) NOT NULL,  
    Home_No VARCHAR(50) NOT NULL,  
    Street_Name VARCHAR(50) NOT NULL,  
    City VARCHAR(50) NOT NULL,  
    Age INT NOT NULL,
```

);

/\*Customer Table Details \*/

```
INSERT INTO Customer VALUES ('C0001', 'Nimsara','Nethum','hn\102','samagipura','Nugegoda',25);  
INSERT INTO Customer VALUES ('C0002', 'Heman','Harath','hn\102','mawathagama','Maharagama',34);  
INSERT INTO Customer VALUES ('C0003', 'Shahim','Hem','hn\102','nelumapudara','Kandy',28);  
INSERT INTO Customer VALUES ('C0004', 'Peni','Silva','hn\102','ranawirumawatha','Negambo',57);  
INSERT INTO Customer VALUES ('C0005', 'Gihan','Pera','hn\102','samagimawatah','Homagama',42);
```

/\*Cutomer Phone Table\*/

```
CREATE TABLE Customer_Phone(  
    Customer_ID varchar(15) not null,  
    Phone_no decimal(10,0) not null
```

);

/\*Customer Phone Table Details \*/

```
INSERT INTO Customer_Phone VALUES ('C0001','0713701298');
INSERT INTO Customer_Phone VALUES ('C0002','0713701298');
INSERT INTO Customer_Phone VALUES ('C0003','0713701298');
INSERT INTO Customer_Phone VALUES ('C0004','0713701298');
INSERT INTO Customer_Phone VALUES ('C0005','0713701298');
```

/\*Customer Email Table\*/

```
CREATE TABLE Customer_Email(
    Customer_ID varchar(15) not null,
    Email VARCHAR (50) CHECK (Email LIKE '%_@_%._%') not null,

    CONSTRAINT Cutomer_Phone CHECK (Email LIKE '%@%'),
);
```

/\*Cutomer Email Table Details \*/

```
INSERT INTO Customer_Email VALUES ('C0001','nim@gamil.com');
INSERT INTO Customer_Email VALUES ('C0002','herath@gmail.com');
INSERT INTO Customer_Email VALUES ('C0003','shahim@gamil.com');
INSERT INTO Customer_Email VALUES ('C0004','peni@gamil.com');
INSERT INTO Customer_Email VALUES ('C0005','gihan@gamil.com');
```

```
CREATE TABLE Administrator (
    Admin_ID VARCHAR(15) PRIMARY KEY,
    First_Name VARCHAR(40) NOT NULL,
    Last_Name VARCHAR(40) NOT NULL,
    Street VARCHAR(30) NOT NULL,
    City VARCHAR(35) NOT NULL,
    Password VARCHAR(15) NOT NULL,
    DOB DATE NOT NULL,
```

```

Email VARCHAR(35) NOT NULL CHECK (Email LIKE '%_@_%._%'),
Phone_No DECIMAL(10) NOT NULL,

);

/* Add table details */

/*Administrator table details*/

INSERT INTO Administrator VALUES ('A0001','Kamal', 'Samantha', 'No.56/2, Galle road','Kandy', '****', '1984-09-08',
'kamal@gmail.com',0747456123);

INSERT INTO Administrator VALUES ('A0002','Madura', 'Dimantha', 'No.9/7, Nugegoda road','Nugegoda', '****',
'1990-03-08', 'madura@gmail.com',0767845684 );

INSERT INTO Administrator VALUES ('A0003','Sakuni', 'Sansala', 'No.36/8,Gothami road','Colombo', '****', '1986-11-
08', 'sakuni@gmail.com',0787456128 );

INSERT INTO Administrator VALUES ('A0004','Sithum', 'Apsara', 'No.25/47, Mahinda road','Negambo', '****', '1985-
10-08', 'dimantha@gmail.com', 0779854623 );

INSERT INTO Administrator VALUES ('A0005','Malki', 'Jayathilaka', 'No.5/12, Rajakaruna road','Malabe', '****',
'1989-04-08', 'malki@gmail.com',0115875247 );


CREATE TABLE
Destination (
Destination_ID VARCHAR(15) PRIMARY KEY,
City VARCHAR(50) NOT NULL,
Name VARCHAR(100) NOT NULL,
Description VARCHAR(100),
Country VARCHAR(50) NOT NULL

);

/*Destination Table Details */

INSERT INTO Destination VALUES ('D0001','Kandy','kani','Temple of Tooth','Srilanka');

```



```

INSERT INTO Destination VALUES ('D0002','Homagama','shani','Galle Face','Srilanka');

INSERT INTO Destination VALUES ('D0003','Hambanthota','niamli','Safari Park','Srilanka');

INSERT INTO Destination VALUES ('D0004','Maharagama','janu','Shopping Mall','Srilanka');

INSERT INTO Destination VALUES ('D0005','Kandy','heman','Fort','Srilanka');

```

```

CREATE TABLE Guide (

    Guide_ID VARCHAR(15) PRIMARY KEY,

    First_Name VARCHAR(50) NOT NULL,

    Last_Name VARCHAR(50) NOT NULL,

    Experience INT NOT NULL,

    Admin_ID VARCHAR(15),

    FOREIGN KEY (Admin_ID) REFERENCES Administrator(Admin_ID),

);

```

/\*Guide Table Details \*/

```

INSERT INTO Guide VALUES ('G0001','Eran','Pette','12','A0001');

INSERT INTO Guide VALUES ('G0002','Hens','Deman','02','A0002');

INSERT INTO Guide VALUES ('G0003','Ahem','Fan','09','A0003');

INSERT INTO Guide VALUES ('G0004','Jani','Iran','05','A0004');

INSERT INTO Guide VALUES ('G0005','Nima','Niker','10','A0005');

```

```

CREATE TABLE Guide_Language (

    Guide_ID VARCHAR(15) NOT NULL,

    Language VARCHAR(50) NOT NULL,

    FOREIGN KEY (Guide_ID) REFERENCES Guide(Guide_ID)

);

```

/\*Guide Language Table Details \*/

```

INSERT INTO Guide_Language VALUES ('G0001','English');
INSERT INTO Guide_Language VALUES ('G0002','English');
INSERT INTO Guide_Language VALUES ('G0003','English');
INSERT INTO Guide_Language VALUES ('G0004','English');
INSERT INTO Guide_Language VALUES ('G0005','English');

```

```

CREATE TABLE TransportPackage (
    Package_ID VARCHAR(15) PRIMARY KEY,
    Package_Name VARCHAR(100) NOT NULL,
    Price DECIMAL(10, 2) NOT NULL,
    Duration INT NOT NULL,
    Itinerary VARCHAR(225) NOT NULL,
    Destination_ID VARCHAR(15) NOT NULL,
    Guide_ID VARCHAR(15) NOT NULL,

    FOREIGN KEY (Destination_ID) REFERENCES Destination(Destination_ID),
    FOREIGN KEY (Guide_ID) REFERENCES Guide(Guide_ID)

);

```

/\*Transport Package Table Details \*/

```

INSERT INTO TransportPackage VALUES ('P0001','Herath','19000','03','ASE','D0001','G0001');
INSERT INTO TransportPackage VALUES ('P0002','Menka','19000','06','ASE','D0002','G0002');
INSERT INTO TransportPackage VALUES ('P0003','Sahan','18000','03','ASE','D0003','G0003');
INSERT INTO TransportPackage VALUES ('P0004','Shan','10000','03','ASE','D0004','G0004');
INSERT INTO TransportPackage VALUES ('P0005','Pethum','15000','05','ASE','D0005','G0005');

```

```

CREATE TABLE Booking (

```

```

Booking_ID VARCHAR(15) PRIMARY KEY,

Booking_Date DATE NOT NULL,

Total_Amount DECIMAL(10, 2) NOT NULL,

Booking_Type VARCHAR(50) NOT NULL,

Customer_ID Varchar(15) NOT NULL,

Package_ID VArCHAR(15) NOT NULL,

FOREIGN KEY (Customer_ID) REFERENCES Customer(Customer_ID),

FOREIGN KEY (Package_ID) REFERENCES TransportPackage(Package_ID)

);

```

/\*Booking Table Details \*/

```

INSERT INTO Booking VALUES ('B0001','2019-01-23','12000','Online','C0001','P0001');

INSERT INTO Booking VALUES ('B0002','2020-04-23','10500','Offline','C0002','P0002');

INSERT INTO Booking VALUES ('B0003','2019-02-03','11000','Online','C0003','P0003');

INSERT INTO Booking VALUES ('B0004','2018-02-23','10500','Offline','C0004','P0004');

INSERT INTO Booking VALUES ('B0005','2018-10-27','13500','Online','C0005','P0005');

```

```

CREATE TABLE Payment (

Payment_ID VARCHAR(15) PRIMARY KEY,

Payment_Date DATE NOT NULL,

Method VARCHAR(50) NOT NULL,

Amount DECIMAL(10, 2) NOT NULL,

Customer_ID Varchar(15) NOT NULL,

FOREIGN KEY (Customer_ID) REFERENCES Customer(Customer_ID)

);

```

/\*Payment Table Details \*/

```

INSERT INTO Payment VALUES ('P0001','2019-10-02','CreditCrad','12000','C0001');

INSERT INTO Payment VALUES ('P0002','2018-03-02','CashDeposit','12000','C0004');

```

```
INSERT INTO Payment VALUES ('P0003','2018-10-22','CreditCrad','12000','C0003');
```

```
INSERT INTO Payment VALUES ('P0004','2019-10-02','Paypal','12000','C0004');
```

```
INSERT INTO Payment VALUES ('P0005','2019-12-20','CreditCrad','12000','C0005');
```

```
CREATE TABLE Review (
```

```
    Review_ID VARCHAR(15) PRIMARY KEY,
```

```
    Rating VARCHAR(15) NOT NULL,
```

```
    Date DATE NOT NULL,
```

```
    Comment VARCHAR(225) NOT NULL,
```

```
    Customer_ID Varchar(15) NOT NULL,
```

```
    Package_ID VARCHAR(15) NOT NULL,
```

```
    Admin_ID VARCHAR(15),
```

```
    FOREIGN KEY (Customer_ID) REFERENCES Customer(Customer_ID),
```

```
    FOREIGN KEY (Package_ID) REFERENCES TransportPackage(Package_ID),
```

```
    FOREIGN KEY (Admin_ID) REFERENCES Administrator(Admin_ID)
```

```
);
```

```
/*Review Table Details */
```

```
INSERT INTO Review VALUES ('R0001','08%','2022-10-23','Good','C0001','P0001','A0001');
```

```
INSERT INTO Review VALUES ('R0002','07%','2020-10-20','Good','C0002','P0002','A0002');
```

```
INSERT INTO Review VALUES ('R0003','10%','2019-09-23','Good','C0003','P0003','A0003');
```

```
INSERT INTO Review VALUES ('R0004','12%','2022-10-23','Good','C0004','P0004','A0004');
```

```
INSERT INTO Review VALUES ('R0005','09%','2021-11-23','Good','C0005','P0005','A0005');
```

```
CREATE TABLE Transport (
```

```
    Transport_ID VARCHAR(15) PRIMARY KEY,
```

```

Provider VARCHAR(50) NOT NULL,

Price DECIMAL(10, 2) NOT NULL,

Booking_ID VARCHAR(15) NOT NULL,

FOREIGN KEY (Booking_ID) REFERENCES Booking(Booking_ID)

);

/*Transport Table Details */

INSERT INTO Transport VALUES ('T0001','ASD','11000','B0001');

INSERT INTO Transport VALUES ('T0002','DEF','10000','B0002');

INSERT INTO Transport VALUES ('T0003','AED','12000','B0003');

INSERT INTO Transport VALUES ('T0004','SDR','15000','B0004');

INSERT INTO Transport VALUES ('T0005','CVB','12000','B0005');


CREATE TABLE Transport_Type (

Transport_ID VARCHAR(15) NOT NULL,

Type VARCHAR(15) NOT NULL,

FOREIGN KEY (Transport_ID) REFERENCES Transport(Transport_ID)

);

/*Transport Type Table Details */

INSERT INTO Transport_Type VALUES ('T0001','Bus');

INSERT INTO Transport_Type VALUES ('T0002','Train');

INSERT INTO Transport_Type VALUES ('T0003','Bus');

INSERT INTO Transport_Type VALUES ('T0004','Bus');

INSERT INTO Transport_Type VALUES ('T0005','Car');

```

```

Create Table Customer_Pay_Payment(

Payment_Date DATE NOT NULL,

Customer_ID Varchar(15),

```

```

Payment_ID VARCHAR(15),

FOREIGN KEY (Customer_ID) REFERENCES Customer(Customer_ID),

FOREIGN KEY ( Payment_ID) REFERENCES Payment(Payment_ID),

);

/*Customer_Pay_Payment*/

INSERT INTO Customer_Pay_Payment VALUES('2019-10-02','C0001','P0001');

INSERT INTO Customer_Pay_Payment VALUES('2018-03-02','C0002','P0002');

INSERT INTO Customer_Pay_Payment VALUES('2018-10-22','C0003','P0003');

INSERT INTO Customer_Pay_Payment VALUES('2019-10-02','C0004','P0004');

INSERT INTO Customer_Pay_Payment VALUES('2019-12-20','C0005','P0005');

```

## Sample Data Output

	Admin_ID	First_Name	Last_Name	Street	City	Password	DOB	Email	Phone_No
1	A0001	Kamal	Samantha	No.56/2, Galle road	Kandy	****	1984-09-08	kamai@gmail.com	747456123
2	A0002	Madura	Dimantha	No.9/7, Nugegoda road	Nugegoda	****	1990-03-08	madura@gmail.com	767845684
3	A0003	Sakuni	Sansala	No.36/8, Gothami road	Colombo	****	1986-11-08	sakuni@gmail.com	787456128
4	A0004	Sithum	Apsara	No.25/47, Mahinda road	Negambo	****	1985-10-08	dimantha@gmail.com	779854623
5	A0005	Malki	Jayathilaka	No.5/12, Rajakaruna road	Malabe	****	1989-04-08	malki@gmail.com	115875247

Administration

	Booking_ID	Booking_Date	Total_Amount	Booking_Type	Customer_ID	Package_ID
1	B0001	2019-01-23	12000.00	Online	C0001	P0001
2	B0002	2020-04-23	10500.00	Offline	C0002	P0002
3	B0003	2019-02-03	11000.00	Online	C0003	P0003
4	B0004	2018-02-23	10500.00	Offline	C0004	P0004
5	B0005	2018-10-27	13500.00	Online	C0005	P0005

Booking

	Customer_ID	First_Name	Last_Name	Home_No	Street_Name	City	Age
1	C0001	Nimsara	Nethum	hnl102	samagipura	Nugegoda	25
2	C0002	Heman	Harath	hnl102	mawathagama	Maharagama	34
3	C0003	Shahim	Hem	hnl102	nelumapura	Kandy	28
4	C0004	Peni	Silva	hnl102	ranawirumaw...	Negambo	57
5	C0005	Gihan	Pera	hnl102	samagimawa...	Homagama	42

Customer

	Customer_ID	Email
1	C0001	nim@gamil.com
2	C0002	herath@gmail.com
3	C0003	shahim@gamil.c...
4	C0004	peni@gamil.com
5	C0005	gihan@gamil.com

Customer\_Email

	Customer_ID	Phone_no
1	C0001	713701298
2	C0002	713701298
3	C0003	713701298
4	C0004	713701298
5	C0005	713701298

Customer\_Phone\_no

	Destination_ID	City	Name	Description	Country
1	D0001	Kandy	kani	Temple of Tooth	Srilanka
2	D0002	Homagama	shani	Galle Face	Srilanka
3	D0003	Hambant...	niamli	Safari Park	Srilanka
4	D0004	Maharaga...	janu	Shopping Mall	Srilanka
5	D0005	Kandy	hem...	Fort	Srilanka

Destination

	Transport_ID	Provider	Price	Booking_ID
1	T0001	ASD	11000.00	B0001
2	T0002	DEF	10000.00	B0002
3	T0003	AED	12000.00	B0003
4	T0004	SDR	15000.00	B0004
5	T0005	CVB	12000.00	B0005

Transport

	Transport_ID	Type
1	T0001	Bus
2	T0002	Train
3	T0003	Bus
4	T0004	Bus
5	T0005	Car

Transport\_type

	Package_ID	Package_Name	Price	Duration	Itinerary	Destination_ID	Guide_ID
1	P0001	Herath	19000.00	3	ASE	D0001	G0001
2	P0002	Menka	19000.00	6	ASE	D0002	G0002
3	P0003	Sahan	18000.00	3	ASE	D0003	G0003
4	P0004	Shan	10000.00	3	ASE	D0004	G0004
5	P0005	Pethum	15000.00	5	ASE	D0005	G0005

Tranport\_Package

	Payment_ID	Payment_Date	Method	Amount	Customer_ID
1	P0001	2019-10-02	CreditCrad	12000.00	C0001
2	P0002	2018-03-02	CashDeposite	12000.00	C0004
3	P0003	2018-10-22	CreditCrad	12000.00	C0003
4	P0004	2019-10-02	Paypal	12000.00	C0004
5	P0005	2019-12-20	CreditCrad	12000.00	C0005

Payment

	Payment_Date	Customer_ID	Payment_ID
1	2019-10-02	C0001	P0001
2	2018-03-02	C0002	P0002
3	2018-10-22	C0003	P0003
4	2019-10-02	C0004	P0004
5	2019-12-20	C0005	P0005

Customer\_Pay\_Payment

	Review_ID	Rating	Date	Comment	Customer_ID	Package_ID	Admin_ID
1	R0001	08%	2022-10-23	Good	C0001	P0001	A0001
2	R0002	07%	2020-10-20	Good	C0002	P0002	A0002
3	R0003	10%	2019-09-23	Good	C0003	P0003	A0003
4	R0004	12%	2022-10-23	Good	C0004	P0004	A0004
5	R0005	09%	2021-11-23	Good	C0005	P0005	A0005

Review

	Guide_ID	First_Name	Last_Name	Experience	Admin_ID
1	G0001	Eran	Pette	12	A0001
2	G0002	Hens	Deman	2	A0002
3	G0003	Ahem	Fan	9	A0003
4	G0004	Jani	Iran	5	A0004
5	G0005	Nima	Niker	10	A0005

Guide

	Guide_ID	Language
1	G0001	English
2	G0002	English
3	G0003	English
4	G0004	English
5	G0005	English

Guide\_Language

## **Performance Requirements**

A major role is played by Performance Requirements to make the system successful. They are as follows,

- System must be active 24 hours, 365 days for a Registered user to access the system without any inconvenience.
- Speed and Usability are the performance requirements for this system.

Registered users can view plan details.

Registered users can edit or delete his/her account details.

- System loads within a minimum time.
- Manager can add or remove shared experiences and feedback, manage User accounts, edit/update plan details.
- System allows Guests view plans without login to the system.
- System allows Trainer to respond the Users messages.
- Developer can update the system.
- Developer needs to detect bugs and errors to fix them.
- Design user friendly user interface.
- System provide ability for Manager to manage the staff accounts.

## **Security Requirements**

Data Protection, Payment Security, Data Privacy and Legal Compliance, Intrusion Detection and Prevention, Backup and Recovery, and Session Management are some main factors to be considered for security requirements.

Robust encryption is a necessity for a tourism and travel management system to preserve private information including usernames and reservation numbers. A few protocols are required for users and the system to transfer data safely. Role-based access control must be implemented to restrict system access according to user roles, such as admin, agent, or customer. Illegal access should also be prevented by firewalls and intrusion detection systems.



## Comments

Name and registration number	Individual contribution	Lessons learnt
IT23629912 A.M.D.M. Bhagya	<ul style="list-style-type: none"> <li>• Requirement Analysis</li> <li>• SQL Tables</li> <li>• Hypothetical scenario</li> <li>• Executed database with foreign, primary keys and sample results Hypothetical scenario</li> </ul>	I learned to create requirement analysis documents, ER diagrams, final reports and SQL tables within a database. This was a great opportunity to prove teamwork, and happiness is we were able to complete this within a very short period. I learned how to manage as the group leader. I am totally satisfied with the contribution and dedication of my team members.
IT23569768 A.S.A. Weerasinghe	<ul style="list-style-type: none"> <li>• SQL Tables</li> <li>• Designed and created the report</li> <li>• Executed database with foreign, primary keys and sample results Hypothetical scenario</li> </ul>	I learned to make a requirement analysis document, separate data requirements. I was able to solve the problems regarding the above sections.
IT23651760 U.L.R. Umais	<ul style="list-style-type: none"> <li>• SQL Tables</li> <li>• Executed database with foreign, primary keys and sample results</li> <li>• Design ER diagram</li> </ul>	Learn to create tables and databases, add values to tables, design a schema, design an ER diagram.
IT23654808 A.C.M. Mirshad	<ul style="list-style-type: none"> <li>• SQL Tables</li> <li>• Relational model schema</li> <li>• Executed database with foreign, primary keys and sample results</li> </ul>	I was able to solve the problems regarding the above sections. Learn to create tables and databases, add values to tables, design a schema

