# ***Ahsanullah University of Science & Technology***

Department of Computer Science & Engineering



Travel Agency Management System

CSE 3224

Information System Design & Software Engineering Lab

Submitted By:

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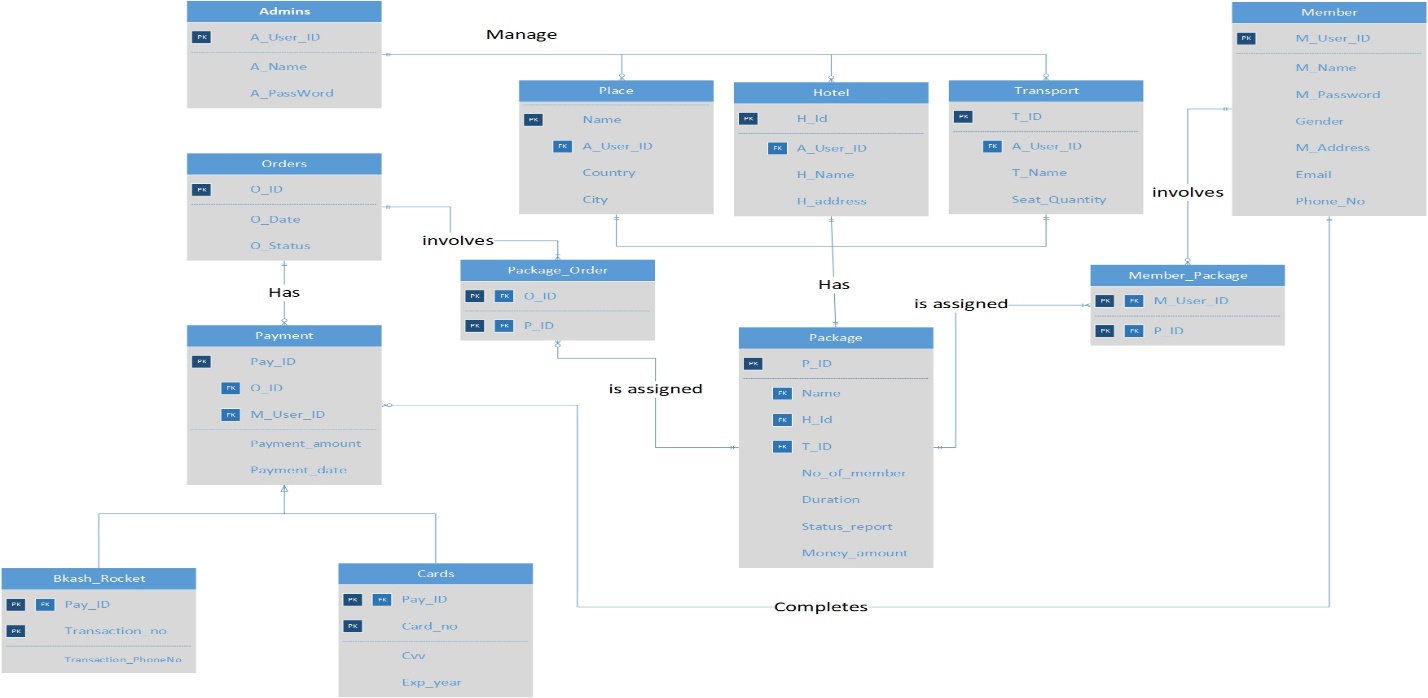
Project Introduction:

ER-Modeling is a data modeling technique used in Software Engineering to produce a conceptual data model of an information system. Diagram created using this ER – Modeling technique are called entity relationship diagrams or ER diagrams or ERD. It is mainly a process that Graphically demonstrates an information of system’s entities and relationships between those entities. It is used to organize data within databases and visually understand how the separated elements are related to each other and working together. 3 key components of ERD are – Entity, Relationship & Attribute

List of Entity, Primary, Foreign & Composite keys:

|  |  |  |  |
| --- | --- | --- | --- |
| Entity | Primary key | Foreign key | Composite key |
| Admin | A\_User\_ID |  |  |
| Member | M\_User\_ID |  |  |
| Place | Name | A\_User\_ID |  |
| Hotel | H\_ID | A\_User\_ID |  |
| Transport | T\_ID | A\_User\_ID |  |
| Package | P\_ID | Name, H\_ID, T\_ID |  |
| Order | O\_ID |  |  |
| Package\_Order |  |  | O\_ID, P\_ID |
| Payment | Pay\_ID | M\_User\_ID, O\_ID |  |
| Bkash/Rocket |  | Pay\_ID | Pay\_ID, Transaction\_no |
| Card |  | Pay\_ID | Pay\_ID, Card\_no |

ER Diagram:



SQL Commands:

CREATE TABLE Orders

(

O\_ID varchar(20) not null,

O\_Date date not null,

O\_Status char(20) not null,

PRIMARY KEY (O\_ID),

);

CREATE TABLE Payment

(

Pay\_ID varchar(20) not null,

O\_ID varchar(20) not null,

M\_user\_ID varchar(20) not null,

Payment\_amount Int not null,

Payment\_date date not null,

PRIMARY KEY (Pay\_ID),

FOREIGN KEY (O\_ID) REFERENCES Orders(O\_ID),

FOREIGN KEY (M\_User\_ID) REFERENCES Member(M\_User\_ID)

);

CREATE TABLE Bkash\_Rocket

(

Pay\_ID varchar(20) not null,

Transaction\_no varchar(30) not null,

Transaction\_PhoneNo varchar(30),

PRIMARY KEY (Pay\_ID,Transaction\_no),

FOREIGN KEY (Pay\_ID) REFERENCES Payment (Pay\_ID) ON DELETE CASCADE

);

CREATE TABLE Cards(

Pay\_ID varchar(20) not null,

Card\_no int not null,

cvv int not null,

Exp\_year int not null,

PRIMARY KEY (Pay\_ID,Card\_no),

FOREIGN KEY (Pay\_ID) REFERENCES Payment (Pay\_ID) ON DELETE CASCADE

);

CREATE TABLE Place(

Name varchar(30) not null,

A\_User\_ID varchar(30) not null,

Country varchar(30) not null,

City varchar(30) not null,

PRIMARY KEY (Name),

FOREIGN KEY (A\_User\_ID) REFERENCES Admin (A\_User\_ID)

);

CREATE TABLE Hotel(

H\_Id varchar(30) not null,

A\_User\_ID varchar(30) not null,

H\_Name varchar(20) not null,

H\_address varchar(30) not null,

PRIMARY KEY (H\_Id),

FOREIGN KEY (A\_User\_ID) REFERENCES Admin (A\_User\_ID)

);

CREATE TABLE Transport(

T\_ID varchar(30) not null,

A\_User\_ID varchar(30) not null,

T\_Name varchar(20) not null,

Seat\_Quantity int ,

PRIMARY KEY (T\_ID),

FOREIGN KEY (A\_User\_ID) REFERENCES Admin (A\_User\_ID)

);

CREATE TABLE Package

(

P\_ID varchar(20) not null,

Name varchar(30) not null,

H\_Id varchar(30) not null,

T\_ID varchar(30) not null,

No\_of\_member int not null,

Duration varchar(30) not null,

Status\_report char(30) not null,

Money\_amount int not null,

PRIMARY KEY (P\_ID),

FOREIGN KEY (Name) REFERENCES Place (Name),

FOREIGN KEY (H\_Id) REFERENCES Hotel (H\_Id),

FOREIGN KEY (T\_ID) REFERENCES Transport (T\_ID),

);

CREATE TABLE Package\_Order(

O\_ID varchar(20) not null,

P\_ID varchar(20) not null,

PRIMARY KEY (O\_ID,P\_ID),

FOREIGN KEY (O\_ID) REFERENCES Orders (O\_ID),

FOREIGN KEY (P\_ID) REFERENCES Package (P\_ID),

);

CREATE TABLE Member\_Package(

M\_User\_ID varchar(20) not null,

P\_ID varchar(20) not null,

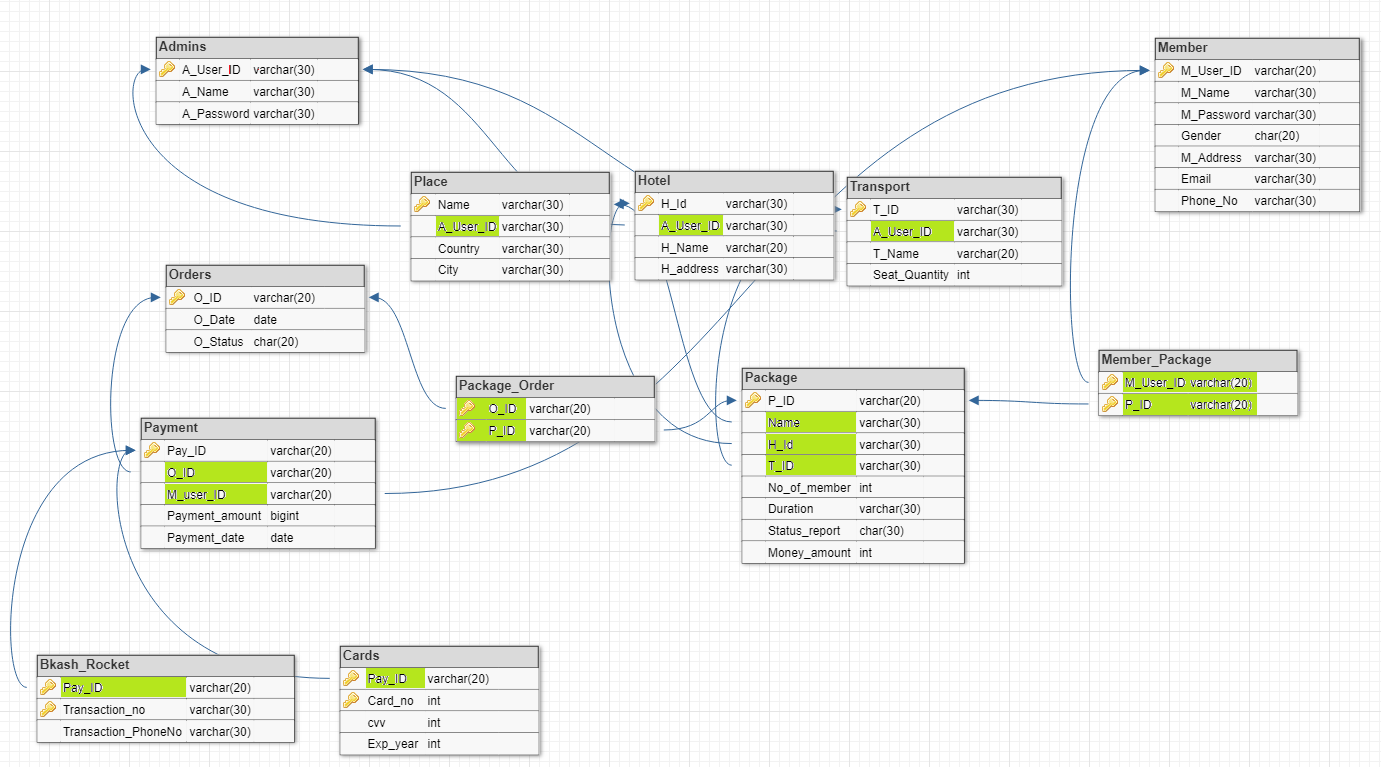
PRIMARY KEY (M\_User\_ID,P\_ID),

FOREIGN KEY (M\_User\_ID) REFERENCES Member (M\_User\_ID),

FOREIGN KEY (P\_ID) REFERENCES Package (P\_ID)

);

Relational Table Model:



Conclusion:

The entity relationship diagram (ERD) is the logical structure of database and shows relationships of entity sets stored in a database. We have illustrated all the entities, attributes, data types and relationships of our entity relationship diagram. We have also illustrated SQL commands based on ER diagram. Above mentioned diagrams helped us to see the futurity of our project and now we can easily visualize the whole system more evidently.