Year 2 (Fall - 2020) –Database Systems 1 Project

Peristera Airlines

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INTRODUCTION

Around 400 BC, the Greek mathematician, astronomer, philosopher and statesman Architas designed the so-called oldest flying machine and built it in the shape of a bird and claimed to have flown with it for a distance of 200 meters. That instrument, which he called the dove (in Greek: Περιστέρα) "Peristera", might have been stuck on a rope or tube when flying.

This project is named as *Peristera* as an inspiration from "Peristera" the Greek island where the first idea of invention of a plane was created.

Aviation is considered the best, the fastest, and the more comfortable way to transport nowadays.

Most of the companies nowadays prefer to invest their businesses in airlines; and this inspired us to establish our database project about this idea, which is an airlines company.

SCOPE

This project scopes the daily workflow of an airline company (Peristera), it scopes only the workflow related to the airline company, employee in this

company, voyagers, and the daily routine expected to perform tasks and to help the voyagers to buy their tickets, not an airport.

We recommended (flight information, employee information, passengers' information, ticket information, plane information, the type of flight the passenger has selected, and the payment method the passenger has chosen to pay with).

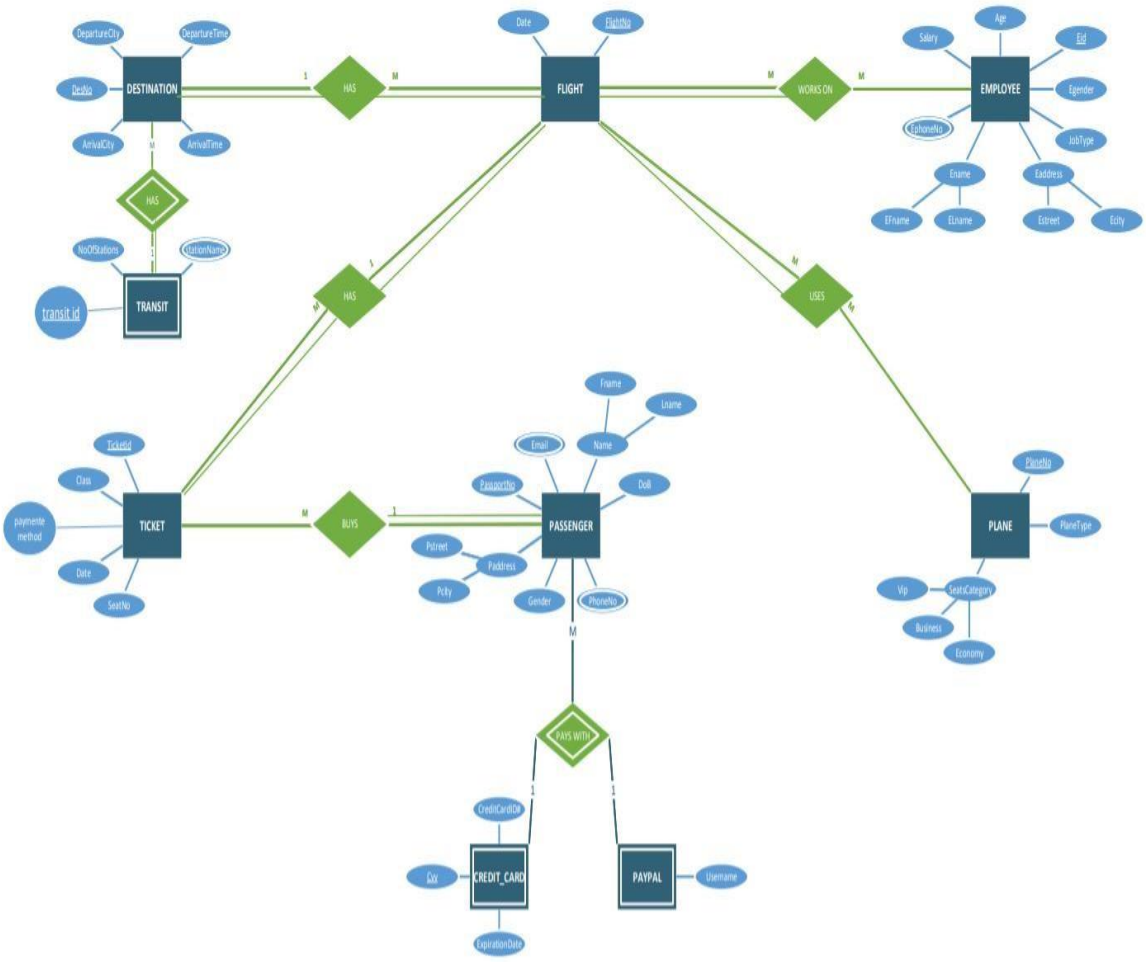
PURPOSE

The purpose of this project is to improve the development and the services that are provided to the passenger plus detecting the errors and flaws of the previous systems and fixing it.

And we seek for a better service for the passenger to make his flight easier, more comfortable, and his registration is more flexible and precise.

MODAL DESIGNS

Here are the ER diagram and the conceptual schema defining the project:


DepartureCity
DepartureTime
DestNo
DESTINATION
ArrivalCity
ArrivalTime
HAS
TRANSIT
NoOfStations
StationName
transit id
Date
FlightNo
FLIGHT
WORKS ON
Age
Salary
Eid
Egender
EphoneNO
JobType
EMPLOYEE
Ename
Eaddress
EFname
Elname
Estreet
Ecity
USES
TicketId
Class
paymente method
Date
SeatNo
TICKET
BUYS
Fname
Lname
Email
Name
PassportNo
DoB
Pstreet
Paddress
Pcity
Gender
PhoneNo
PASSENGER
PlaneNo
PlaneType
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Vip
SeatsCategory
Business
Economy
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CreditCardOn
Cvv
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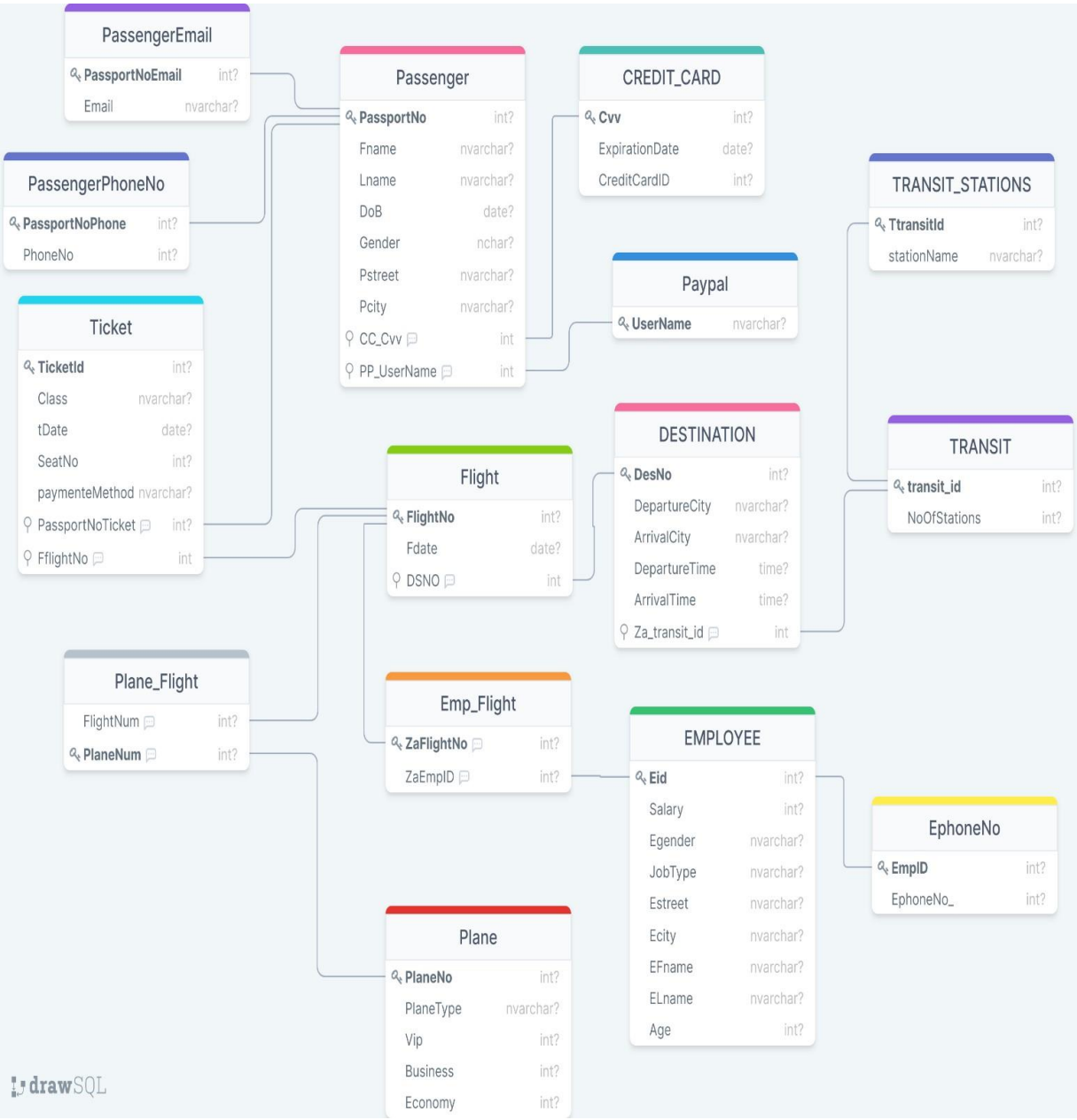
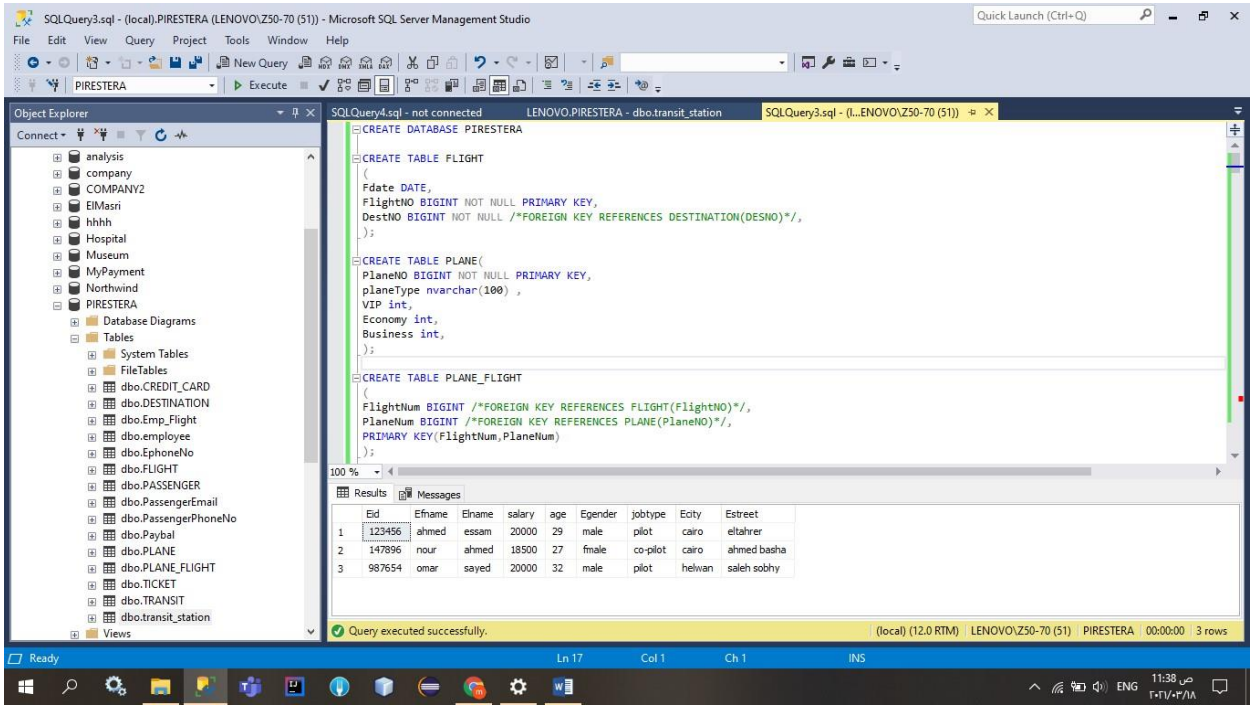
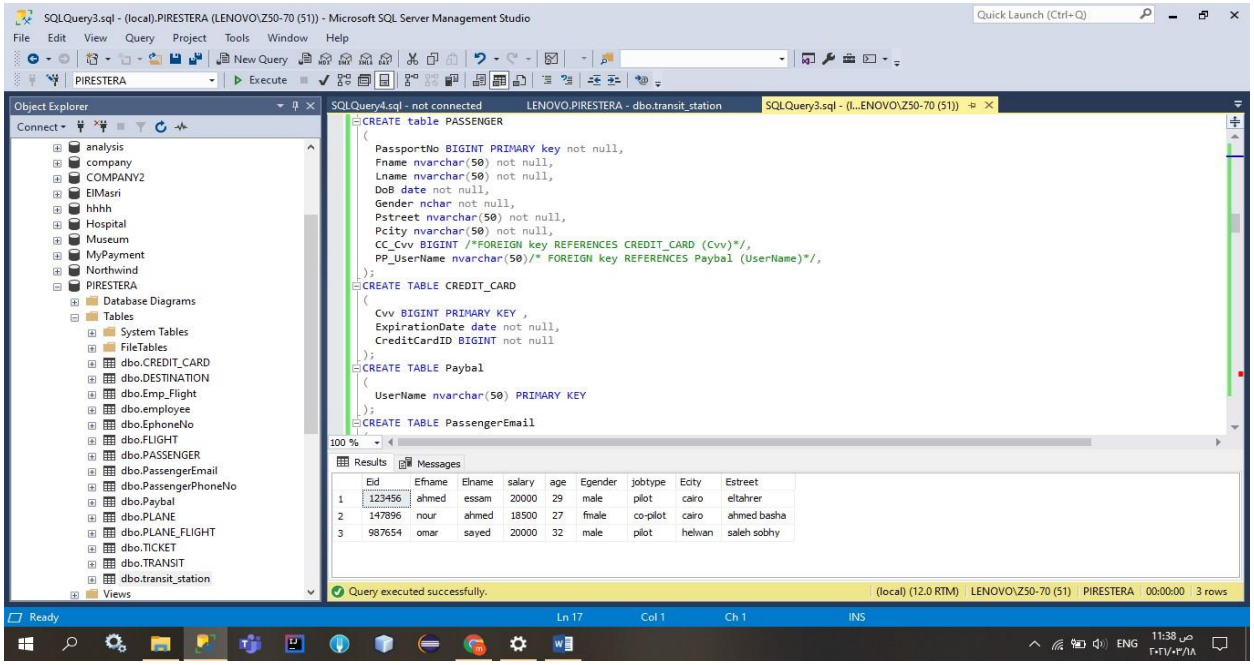
ExpirationDate
PAYPAL
Username

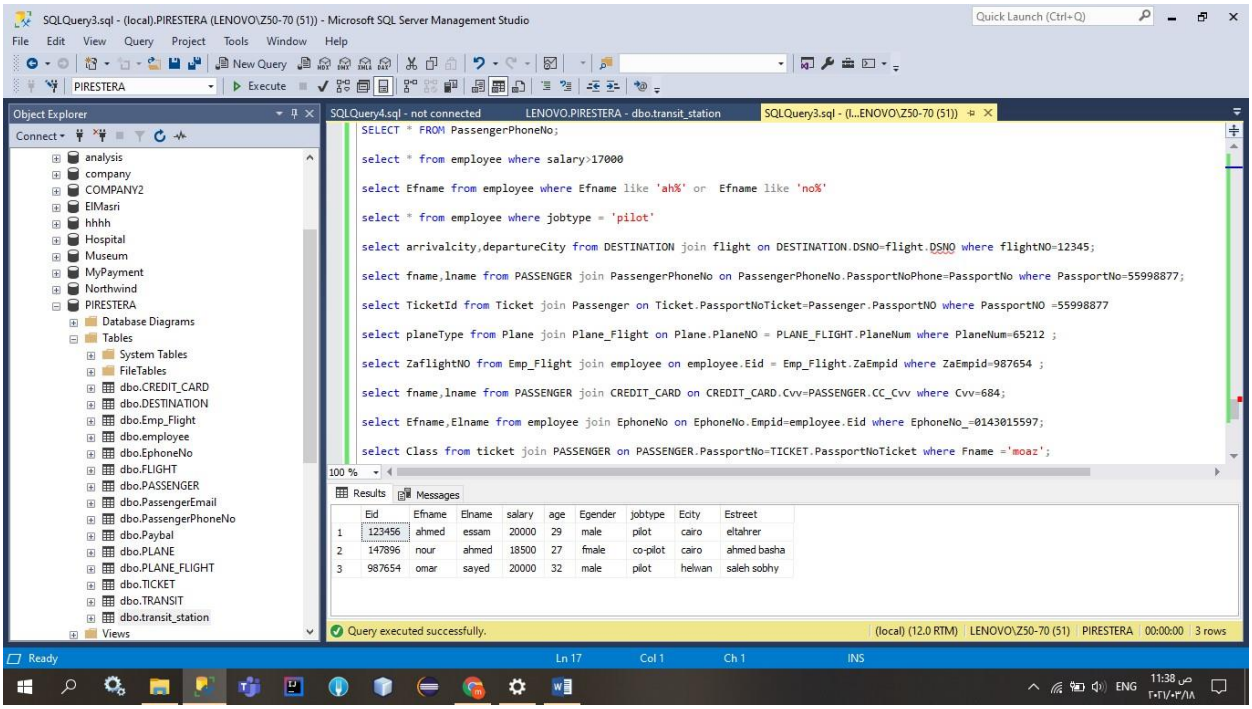

PassengerEmail
PassportNoEmail int?
Email nvarchar?
Passenger
PassportNo int?
Fname nvarchar?
Lname nvarchar?
DoB date?
Gender nchar?
Pstreet nvarchar?
Pcity nvarchar?
CC_Cvv int
PP_UserName int
CREDIT_CARD
Cvv int?
ExpirationDate date?
CreditCardID int?
PassengerPhoneNo
PassportNoPhone int?
PhoneNo int?
TRANSIT_STATIONS
TtransitId int?
stationName nvarchar?
Paypal
UserName nvarchar?
Ticket
TicketId int?
Class nvarchar?
tDate date?
SeatNo int?
paymenteMethod nvarchar?
PassportNoTicket int?
FflightNo int
DESTINATION
DesNo int?
DepartureCity nvarchar?
ArrivalCity nvarchar?
DepartureTime time?
ArrivalTime time?
Za_transit_id int
TRANSIT
transit_id int?
NoOfStations int?
Flight
FlightNo int?
Fdate date?
DSNO int
Plane_Flight
FlightNum int?
PlaneNum int?
Emp_Flight
ZaFlightNo int?
ZaEmpID int?
EMPLOYEE
Eid int?
Salary int?
Egender nvarchar?
JobType nvarchar?
Estreet nvarchar?
Ecity nvarchar?
EFname nvarchar?
ELname nvarchar?
Age int?
EphoneNo
EmpID int?
EphoneNo_ int?
Plane
PlaneNo int?
PlaneType nvarchar?
Vip int?
Business int?
Economy int?
drawSQL

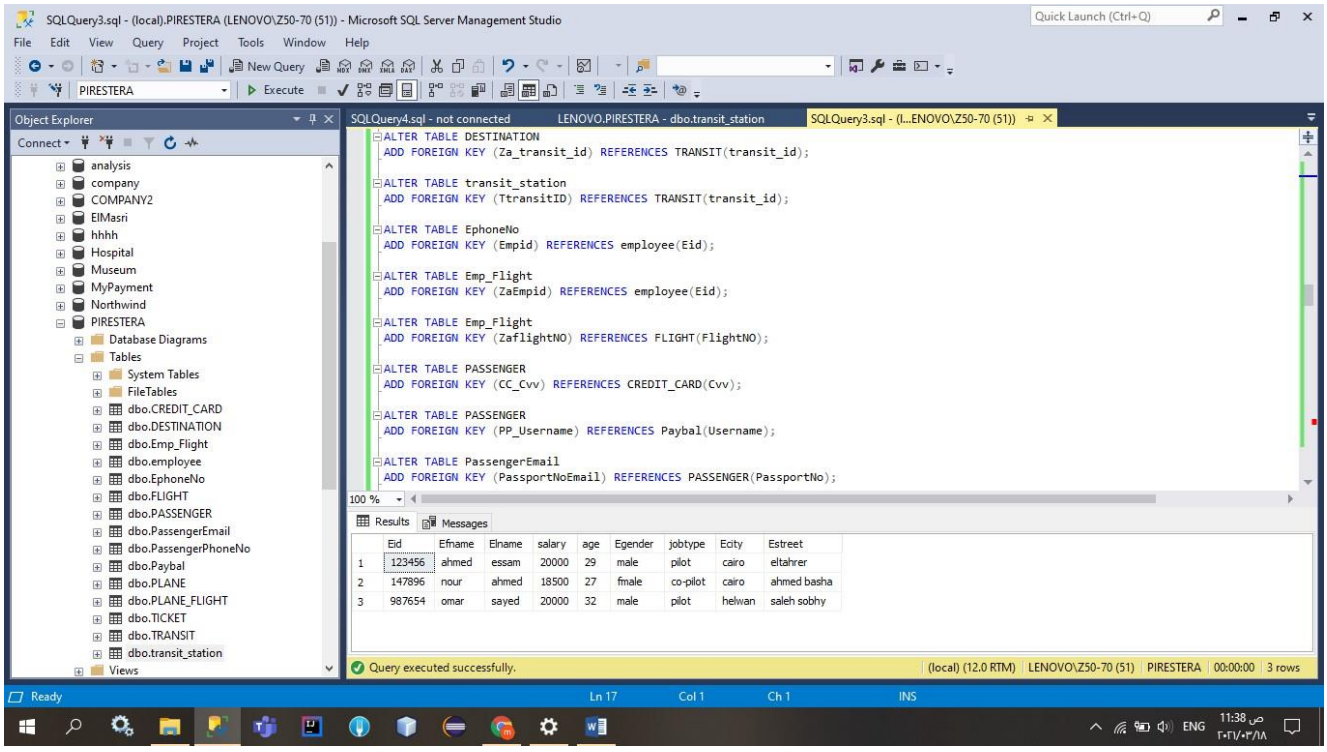
DDL


SQLQuery3.sql - (local).PIRESTERA (LENOVO\Z50-70 (51)) - Microsoft SQL Server Management Studio
CREATE DATABASE PIRESTERA
CREATE TABLE FLIGHT
(
Fdate DATE,
FlightNO BIGINT NOT NULL PRIMARY KEY,
DestNO BIGINT NOT NULL /*FOREIGN KEY REFERENCES DESTINATION(DESNO)*/,
);
CREATE TABLE PLANE(
PlaneNO BIGINT NOT NULL PRIMARY KEY,
planeType nvarchar(100) ,
VIP int,
Economy int,
Business int,
);
CREATE TABLE PLANE_FLIGHT
(
FlightNum BIGINT /*FOREIGN KEY REFERENCES FLIGHT(FlightNO)*/,
PlaneNum BIGINT /*FOREIGN KEY REFERENCES PLANE(PlaneNO)*/,
PRIMARY KEY(FlightNum,PlaneNum)
);
Query executed successfully.


SQLQuery3.sql - (local).PIRESTERA (LENOVO\Z50-70 (51)) - Microsoft SQL Server Management Studio
CREATE table PASSENGER
(
PassportNo BIGINT PRIMARY key not null,
Fname nvarchar(50) not null,
Lname nvarchar(50) not null,
DoB date not null,
Gender nchar not null,
Pstreet nvarchar(50) not null,
Pcity nvarchar(50) not null,
CC_Cvv BIGINT /*FOREIGN key REFERENCES CREDIT_CARD (Cvv)*/,
PP_UserName nvarchar(50)/* FOREIGN key REFERENCES Paybal (UserName)*/,
);
CREATE TABLE CREDIT_CARD
(
Cvv BIGINT PRIMARY KEY ,
ExpirationDate date not null,
CreditCardID BIGINT not null
);
CREATE TABLE Paybal
(
UserName nvarchar(50) PRIMARY KEY
);
CREATE TABLE PassengerEmail
Query executed successfully.

DML


SQLQuery3.sql - (local).PIRESTERA (LENOVO\Z50-70 (51)) - Microsoft SQL Server Management Studio
SELECT * FROM PassengerPhoneNo;
select * from employee where salary>17000
select Efname from employee where Efname like 'ah%' or Efname like 'no%'
select * from employee where jobtype = 'pilot'
select arrivalcity,departureCity from DESTINATION join flight on DESTINATION.DSNO=flight.DSNO where flightNO=12345;
select fname,lname from PASSENGER join PassengerPhoneNo on PassengerPhoneNo.PassportNoPhone=PassportNo where PassportNo=55998877;
select TicketId from Ticket join Passenger on Ticket.PassportNoTicket=Passenger.PassportNO where PassportNO =55998877
select planeType from Plane join Plane_Flight on Plane.PlaneNO = PLANE_FLIGHT.PlaneNum where PlaneNum=65212 ;
select ZaflightNO from Emp_Flight join employee on employee.Eid = Emp_Flight.ZaEmpid where ZaEmpid=987654 ;
select fname,lname from PASSENGER join CREDIT_CARD on CREDIT_CARD.Cvv=PASSENGER.CC_Cvv where Cvv=684;
select Efname,Elname from employee join EphoneNo on EphoneNo.Empid=employee.Eid where EphoneNo_=0143015597;
select Class from ticket join PASSENGER on PASSENGER.PassportNo=TICKET.PassportNoTicket where Fname ='moaz';
Eid Efname Elname salary age Egender jobtype Ecity Estreet
1 123456 ahmed essam 20000 29 male pilot cairo eltahrer
2 147896 nour ahmed 18500 27 fmale co-pilot cairo ahmed basha
3 987654 omar sayed 20000 32 male pilot helwan saleh sobhy
Query executed successfully.


SQLQuery3.sql - (local).PIRESTERA (LENOVO\Z50-70 (51)) - Microsoft SQL Server Management Studio
ALTER TABLE DESTINATION
ADD FOREIGN KEY (Za_transit_id) REFERENCES TRANSIT(transit_id);
ALTER TABLE transit_station
ADD FOREIGN KEY (TtransitID) REFERENCES TRANSIT(transit_id);
ALTER TABLE EphoneNo
ADD FOREIGN KEY (Empid) REFERENCES employee(Eid);
ALTER TABLE Emp_Flight
ADD FOREIGN KEY (ZaEmpid) REFERENCES employee(Eid);
ALTER TABLE Emp_Flight
ADD FOREIGN KEY (ZaflightNO) REFERENCES FLIGHT(FlightNO);
ALTER TABLE PASSENGER
ADD FOREIGN KEY (CC_Cvv) REFERENCES CREDIT_CARD(Cvv);
ALTER TABLE PASSENGER
ADD FOREIGN KEY (PP_Username) REFERENCES Paybal(Username);
ALTER TABLE PassengerEmail
ADD FOREIGN KEY (PassportNoEmail) REFERENCES PASSENGER(PassportNo);
Eid Efname Elname salary age Egender jobtype Ecity Estreet
1 123456 ahmed essam 20000 29 male pilot cairo eltahrer
2 147896 nour ahmed 18500 27 fmale co-pilot cairo ahmed basha
3 987654 omar sayed 20000 32 male pilot helwan saleh sobhy
Query executed successfully.

```
        ('moaz.younis52@gmail.com',55998877),
        ('omaralsabahy357@gmail.com',66332255),
        ('nour123@gmail.com',44778811),
        ('yorok0s.dou@gmail.com',44776611);

INSERT INTO Paybal (UserName)
VALUES  ('mfawky'),
        ('moaz.younis'),
        ('omaralsabahy'),
        ('yorok0s'),
        ('nour123');

INSERT INTO CREDIT_CARD (Cvv,ExpirationDate , CreditCardID)
VALUES  (684,'2019-12-01',456789),
        (512,'2020-07-15',541275),
        (984,'2019-06-29',541372),
        (356,'2020-08-04',542326),
        (157,'2021-12-15',411785);

INSERT INTO PASSENGER ( PassportNo, Fname, Lname, DoB, Gender, Pstreet, Pcity, CC_Cvv, PP_UserName )
VALUES  (11554488,'mohamed','fawky','2001-8-4','m','maadi','cairo',684,'mfawky' ),
        (55998877,'moaz','younis','2000-5-12','m','mostafa kamel','alex',512,'moaz.younis' ),
        (66332255,'omar','mohamed','2001-3-15','m','hadayek el ahram','giza',984,'omaralsabahy' ),
        (44778811,'mohamed','ahmed','2001-6-8','m','faisal','haram',356,'yorok0s' ),
        (44776611,'nour','ahmed','2001-7-9','m','15-may','helwan',157,'nour123' );

INSERT INTO PassengerPhoneNo ( PassportNoPhone, PhoneNo)
VALUES  (11554488,01113202467),
        (55998877,01094288001),
        (66332255,01146213450),
        (44778811,01085469587),
        (44776611,0100065987);
```

For code live:
https://github.com/Mohamed3bdelsatar/Peristera-Airline