

John_Marshall

Homework Assignment Trip Expenses

Summer 2 2023

salesperson(SSN, IName, startYear, deptNo)

trip(tripID, SSN, fromCity, toCity, departureDate, returnDate)

expense(tripID, accountNumber, amount)

Question 1:

Salesperson Table Primary Key: SSN

Trip Table Primary Key: tripID

Expense Table Primary Key: accountNumber

Question 2:

Salesperson: No Foreign Keys present

Trip: SSN is a Foreign Key which references the Salesperson table

Expense: tripID is a Foreign Key which references the Trip table

Question 3:

Creation order: salesperson, trip , Expense

Salesperson

NAME	DESCRIPTION	DATA TYPE	PK	FK	Null
SSN	Employee Hyphenated Social Security Number	CHAR(9)	Y	N	N
IName	Employees first and Last Name	VARCHAR(25)	N	N	Y
startYear	Start Year of Employee	CHAR(4)	N	N	Y
deptNo	Department Number of Emp. Dept.	CHAR(3)	N	N	Y

Trip

NAME	DESCRIPTION	DATA TYPE	PK	FK	Null
tripID	ID of trip booked	CHAR(3)	Y	N	N
SSN	Employee Hyphenated Social Security Number	CHAR(9)	N	Y	N
fromCity	Home City Name	VARCHAR(10)	N	N	Y
toCity	Destination City Name	VARCHAR(10)	N	N	Y
DepartureDate	Date of Departure	VARCHAR(10)	N	N	Y
returnDate	Date of Return	VARCHAR(10)	N	N	Y

Expense

NAME	DESCRIPTION	DATA TYPE	PK	FK	Null
accountNumber	Account Number	CHAR(5)	Y	N	N
tripID	ID of trip booked	CHAR(3)	N	Y	N
amount	Cost of Trip	VARCHAR(5)	N	N	Y

1. Find the SSN and Name of Sales Representatives that took trips to 'CHICAGO'.

```
SELECT SalesPerson.SSN, SalesPerson.IName
FROM SalesPerson
JOIN Trip
ON SalesPerson.SSN=Trip.SSN
WHERE toCity='CHICAGO';
```

2. Find the total trip expenses incurred by the salesman with SSN = '123-45-6789'.

```
SELECT Expense.amount
FROM Expense
JOIN Trip
ON Expense.tripID=Trip.tripID
JOIN SalesPerson
ON Trip.SSN = SalesPerson.SSN
WHERE SalesPerson.SSN='123456789';
```

3. Find the tripID, SSN, fromCity, tocity, departureDate, returnDate, and amount for trips that exceed \$2000 in expenses.

```
SELECT Trip.tripID, SalesPerson.SSN, Trip.fromCity, Trip.tocity,
Trip.departureDate, Trip.returnDate, Expense.amount
FROM Expense
JOIN Trip
ON Expense.tripID=Trip.tripID
JOIN SalesPerson
ON Trip.SSN = SalesPerson.SSN
WHERE Expense.amount>2000;
```