CREATING TABLES:

DROP TABLE Branch;

GO

CREATE TABLE Branch(

Branch\_ID INT NOT NULL,

Branch\_Name VARCHAR(20) NOT NULL,

Branch\_Address VARCHAR(50) NOT NULL,

Branch\_City VARCHAR(50) NOT NULL,

Branch\_State VARCHAR(2) NOT NULL,

Branch\_Zip INT NOT NULL,

PRIMARY KEY (Branch\_ID)

);

DROP TABLE Customer;

GO

CREATE TABLE Customer(

Customer\_ID INT NOT NULL,

FName NVARCHAR(20) NOT NULL,

LName NVARCHAR(20) NOT NULL,

Cust\_Address NVARCHAR(50) NOT NULL,

Cust\_City NVARCHAR(50) NOT NULL,

Cust\_State NVARCHAR(2) NOT NULL,

Cust\_Zip INT NOT NULL

PRIMARY KEY (Customer\_ID)

);

DROP TABLE CarType;

GO

CREATE TABLE CarType(

CarTypeID INT NOT NULL,

CarType VARCHAR(10),

PRIMARY KEY (CarTypeID)

);

DROP TABLE Car;

GO

CREATE TABLE Car(

Car\_ID INT NOT NULL,

Price\_Per\_Day MONEY NOT NULL,

Initial\_Milage INT NOT NULL,

CarTypeID INT NOT NULL,

Branch\_ID INT NOT NULL,

PRIMARY KEY (Car\_ID),

FOREIGN KEY (Branch\_ID) REFERENCES Branch(Branch\_ID),

FOREIGN KEY (CarTypeID) REFERENCES CarType(CarTypeID)

);

DROP TABLE Pickup

GO

CREATE TABLE Pickup(

Car\_ID INT NOT NULL,

CarTypeID AS 1 PERSISTED, -- For Pickup Trucks

Make VARCHAR(15) NOT NULL,

Model VARCHAR(20) NOT NULL,

Plate\_Num VARCHAR(6) NOT NULL,

PRIMARY KEY (Car\_ID),

FOREIGN KEY (Car\_ID) REFERENCES Car(Car\_ID)

);

DROP TABLE SUV;

GO

CREATE TABLE SUV(

Car\_ID INT NOT NULL,

CarTypeID AS 2 PERSISTED, -- For SUVs

Make VARCHAR(15) NOT NULL,

Model VARCHAR(20) NOT NULL,

Plate\_Num VARCHAR(6) NOT NULL,

PRIMARY KEY (Car\_ID),

FOREIGN KEY (Car\_ID) REFERENCES Car(Car\_ID)

);

DROP TABLE Compact;

GO

CREATE TABLE Compact(

Car\_ID INT NOT NULL,

CarTypeID AS 3 PERSISTED, -- For Compact cars

Make VARCHAR(15) NOT NULL,

Model VARCHAR(20) NOT NULL,

Plate\_Num VARCHAR(6) NOT NULL,

PRIMARY KEY (Car\_ID),

FOREIGN KEY (Car\_ID) REFERENCES Car(Car\_ID)

);

DROP TABLE Mid\_Size;

GO

CREATE TABLE Mid\_Size(

Car\_ID INT NOT NULL,

CarTypeID AS 4 PERSISTED, -- For Pickup Trucks

Make VARCHAR(15) NOT NULL,

Model VARCHAR(20) NOT NULL,

Plate\_Num VARCHAR(6) NOT NULL,

PRIMARY KEY (Car\_ID),

FOREIGN KEY (Car\_ID) REFERENCES Car(Car\_ID)

);

DROP TABLE Rental;

GO

CREATE TABLE Rental(

Rental\_ID INT NOT NULL,

Car\_ID INT NOT NULL,

Branch\_ID INT NOT NULL,

Start\_Date DATE NOT NULL,

End\_Date DATE NOT NULL,

PRIMARY KEY (Rental\_ID),

FOREIGN KEY (Car\_ID) REFERENCES Car(Car\_ID),

FOREIGN KEY (Branch\_ID) REFERENCES Branch(Branch\_ID)

);

DROP TABLE Invoice

GO

CREATE TABLE Invoice(

Invoice\_ID INT NOT NULL,

Rental\_ID INT NOT NULL,

Customer\_ID INT NOT NULL,

Milage INT NOT NULL,

PRIMARY KEY (Invoice\_ID),

FOREIGN KEY (Rental\_ID) REFERENCES Rental(Rental\_ID),

FOREIGN KEY (Customer\_ID) REFERENCES Customer(Customer\_ID)

);

FILLING TABLES:

Branch:

INSERT INTO Branch

SELECT 1,'Branch West','123 Eastern Way', 'Denver', 'CO', '66182'

INSERT INTO Branch

SELECT 2,'Branch East','123 Western Ave.','New York','NY','99185'

INSERT INTO Branch

SELECT 3,'Branch South','123 Southern St.','Austin','TX','88135'

INSERT INTO Branch

SELECT 4,'Branch North','123 Northern Rd.','Minneapolis','MN','55122'

Car:

INSERT INTO Car

SELECT 1,20,15352,2,1

INSERT INTO Car

SELECT 2,30,2042,1,2

INSERT INTO Car

SELECT 3,6.25,66251,1,3

INSERT INTO Car

SELECT 4,25,10252,4,4

INSERT INTO Car

SELECT 5,15,8202,3,1

INSERT INTO Car

SELECT 6,23,14203,3,2

INSERT INTO Car

SELECT 7,60,202,2,3

INSERT INTO Car

SELECT 8,40,1000,4,4

CarType:

INSERT INTO CarType

SELECT 1,'Pickup' UNION ALL

SELECT 2, 'SUV' UNION ALL

SELECT 3, 'Compact' UNION ALL

SELECT 4, 'Mid Size'  
Compact:

INSERT INTO Compact

SELECT 5,'Ford','Fiesta','936ARG'

INSERT INTO Compact

SELECT 6,'Kia','Forte','AIU124'

Customer:

INSERT INTO Customer

SELECT 1,'Terry','Reyland','1549 Southbound Way','Firelight','MA','82522'

INSERT INTO Customer

SELECT 2,'Ferdinand','Rodriguez','9586 Northward Circle','Eastview','MN',25236

INSERT INTO Customer

SELECT 3,'Reiley','Born','00905 Westward Ave','Dallas','TX',89696

INSERT INTO Customer

SELECT 4,'Daryl','Wight','33432 East Lavendar Ave','Los Angeles','CA',66525

INSERT INTO Customer

SELECT 5,'Aaron','Moorning','7437 Tribal Station','Dead City','SD',82465

INSERT INTO Customer

SELECT 6,'Jonathan','Kyle','38 West Circle Drive','New Orleans','LA',38542

INSERT INTO Customer

SELECT 7,'Abigail','Trynalt','4859 Ingress Avenue','Denver','CO',88536

INSERT INTO Customer

SELECT 8,'Cynthia','Riley','9 Northpoint Way','Seattle','WA',77520

INSERT INTO Customer

SELECT 9,'Taylor','Raines','343 Westpoint Boulevard','Langley','VA',22352

INSERT INTO Customer

SELECT 10,'Amanda','Jordan','56 Albany Road','New York','NY',88526

INSERT INTO Customer

SELECT 11,'Paige','Midnight','554 Court Avenue','Salt Lake City','UT',44525

INSERT INTO Customer

SELECT 12,'Sarah','Connors','1876 Firelake St','Orlando','FL',91346

Invoice:

INSERT INTO Invoice

SELECT 1,1,8,235

INSERT INTO Invoice

SELECT 2,2,12,40

INSERT INTO Invoice

SELECT 3,3,6,95

INSERT INTO Invoice

SELECT 4,4,4,182

INSERT INTO Invoice

SELECT 5,5,2,182

INSERT INTO Invoice

SELECT 6,6,3,520

INSERT INTO Invoice

SELECT 7,7,5,320

INSERT INTO Invoice

SELECT 8,8,6,68

INSERT INTO Invoice

SELECT 9,9,7,148

INSERT INTO Invoice

SELECT 10,10,1,220

INSERT INTO Invoice

SELECT 11,11,11,67

INSERT INTO Invoice

SELECT 12,12,10,91

INSERT INTO Invoice

SELECT 13,13,9,22

INSERT INTO Invoice

SELECT 14,14,1,382

INSERT INTO Invoice

SELECT 15,15,8,982

INSERT INTO Invoice

SELECT 16,16,2,46

INSERT INTO Invoice

SELECT 17,17,7,120

INSERT INTO Invoice

SELECT 18,18,3,62

INSERT INTO Invoice

SELECT 19,19,2,76

INSERT INTO Invoice

SELECT 20,20,9,85

INSERT INTO Invoice

SELECT 21,21,8,99

INSERT INTO Invoice

SELECT 22,22,12,38

INSERT INTO Invoice

SELECT 23,23,4,495

INSERT INTO Invoice

SELECT 24,24,5,62

Mid\_Size:

INSERT INTO Mid\_Size

SELECT 4,'Kia','Sorrento','PRI852'

INSERT INTO Mid\_Size

SELECT 8,'Mazda','CX6','IRE192'

Pickup:

INSERT INTO Pickup

SELECT 2,'Chevy','Silverado','656AFD'

INSERT INTO Pickup

SELECT 3,'Ford','F150','852RDN'

Rental:

INSERT INTO Rental

SELECT 1,6,2,'4/6/2005','4/9/2005'

INSERT INTO Rental

SELECT 2,6,2,'4/10/2005','4/11/2005'

INSERT INTO Rental

SELECT 3,6,2,'4/15/2005','4/17/2005'

INSERT INTO Rental

SELECT 4,2,2,'4/21/2005','4/26/2005'

INSERT INTO Rental

SELECT 5,2,2,'4/30/2005','5/1/2005'

INSERT INTO Rental

SELECT 6,2,2,'5/5/2005','5/12/2005'

INSERT INTO Rental

SELECT 7,1,1,'5/15/2005','5/19/2005'

INSERT INTO Rental

SELECT 8,1,1,'5/16/2005','5/18/2005'

INSERT INTO Rental

SELECT 9,1,1,'5/26/2005','5/28/2005'

INSERT INTO Rental

SELECT 10,5,1,'5/30/2005','6/3/2005'

INSERT INTO Rental

SELECT 11,5,1,'6/6/2005','6/8/2005'

INSERT INTO Rental

SELECT 12,5,1,'6/12/2005','6/14/2005'

INSERT INTO Rental

SELECT 13,3,3,'6/19/2005','6/20/2005'

INSERT INTO Rental

SELECT 14,3,3,'6/22/2005','6/27/2005'

INSERT INTO Rental

SELECT 15,3,3,'7/2/2005','7/10/2005'

INSERT INTO Rental

SELECT 16,7,3,'7/6/2005','7/8/2005'

INSERT INTO Rental

SELECT 17,7,3,'7/15/2005','7/17/2005'

INSERT INTO Rental

SELECT 18,7,3,'7/20/2005','7/21/2005'

INSERT INTO Rental

SELECT 19,4,4,'7/23/2005','7/25/2005'

INSERT INTO Rental

SELECT 20,4,4,'7/29/2005','7/31/2005'

INSERT INTO Rental

SELECT 21,4,4,'8/2/2005','8/4/2005'

INSERT INTO Rental

SELECT 22,8,4,'8/5/2005','8/7/2005'

INSERT INTO Rental

SELECT 23,8,4,'8/10/2005','8/18/2005'

INSERT INTO Rental

SELECT 24,8,4,'8/15/2005','8/17/2005'

SUV:

INSERT INTO SUV

SELECT 1,'Ford','Explorder','932ABC'

INSERT INTO SUV

SELECT 7,'Honda','Accord','109CDL'

RELATIONSHIPS:



TEST QUERIES:

Query Use: Finding the total miles on the SUVs and how far they’ve been driven.

SELECT c.Car\_ID, suv.Make, suv.Model, c.Initial\_Milage, SUM(i.Milage) AS MilesDriven, c.Initial\_Milage + SUM(i.Milage) AS TotalMiles

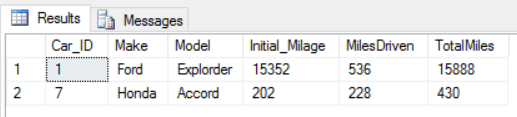
FROM SUV suv

INNER JOIN Car c ON c.Car\_ID = suv.Car\_ID

INNER JOIN Rental r ON c.Car\_ID = r.Car\_ID

INNER JOIN Invoice i ON i.Rental\_ID = r.Rental\_ID

GROUP BY c.Car\_ID,suv.Make,suv.Model, c.Initial\_Milage;



Query Use: Finding the number of days each car has been rented and how much revenue they’ve brought.

SELECT c.Car\_ID, SUM(DATEDIFF(DAY,r.Start\_Date,r.End\_Date)) AS DaysRented, (c.Price\_Per\_Day\*SUM(DATEDIFF(DAY,r.Start\_Date,r.End\_Date))) AS TotalRevenue

FROM Car c

INNER JOIN Rental r ON c.Car\_ID = r.Car\_ID

GROUP BY c.Car\_ID,c.Price\_Per\_Day;

