**Details Q1**

create table RentalCenters (

       CenterCode varchar(30) primary key,

       Phone varchar(20),

       [Address] nvarchar(200)

)

create table Vehicles (

       PlateNumber varchar(20) primary key,

       Model nvarchar(100),

       Producer nvarchar(100),

       [Year] int

)

create table Customers (

       customerID int primary key,

       [Name] nvarchar (100),

       Phone varchar(20)

)

create table Rent (

       customerID int references Customers(customerID),

       PlateNumber varchar(20) references Vehicles(PlateNumber),

       CenterCode varchar(30) references RentalCenters(CenterCode),

       fromTime Datetime,

       toTime Datetime

       primary key (customerID, PlateNumber, fromTime)

)

**Details Q2**

Select all loans from the branch 1 where the DateOut are in September 2016 as follows:

Table

Description automatically generated

**Details Q3**

Write a query to select LoanID, DateOut, BookID, Title, AuthorName, PublisherID of all loans having the DateOut from 05th September 2016 to 12th September 2016 as follow:

Graphical user interface, table

Description automatically generated with medium confidence

**Details Q4**

Write a query to display BookID, Title, AuthorName, PublisherName, BranchID, BranchName, No\_Of\_Copies corresponding to books in the 'Central' or 'Sharpstown' branches, display the results in descending order of BranchID then in ascending order of Title for rows of the same branch as follows:

Table

Description automatically generated

**Details Q5**

Write a query to display BookID, Title, AuthorName, PublisherName, TotalNumberOfCopies corresponding to each book having the TotalNumberOfCopies greater than or equal to 9; where the TotalNumberOfCopies of a book is the total number of copies of this book in all the branches.

Table

Description automatically generated

**Details Q6**

Write a query to display BranchID, BranchName, Address, NumberOfLoans corresponding to the branches having the smallest and the highest number of loans in September 2016 as in the following figure. Note that NumberOfLoans of a branch is the number of loans made in September 2016 (based on DateOut) of this branch as follow:

Graphical user interface, table

Description automatically generated

**Details Q7**

Write a query to display, for each of the three publishers 'Singer', 'Newton' and 'GST', the total number of copies of books of the given publisher in each branch. Display the results with PublisherID, PublisherName, BranchID, BranchName, TotalNumberOfBookCopies as in the following figure. Note that in each row, the TotalNumberOfBookCopies is the total number of copies of all books of a given publisher in a given branch; TotalNumberOfBookCopies is NULL if the publisher has no book in the given branch.

Table

Description automatically generated

**Details Q8**

Create a stored procedure named Proc2 for calculating the total number of copies of all books of a given publisher in all branches, where publisherID int is the input parameter of the procedure and TotalNumberOfCopies int is an output parameter of the procedure.

For example, when we execute the procedure Proc2 for the publisher 4 by using the following statements, the result should be as in the following figure:

declare @x int

exec Proc2 4, @x output

select @x as TotalNumberOfCopies

Table

Description automatically generated

**Details Q9**

Create a trigger named Tr2 for the delete statement on table Copies so that when we call a delete statement to remove one or more rows from the table Copies, instead of removing the rows from the table Copies, the system updates the corresponding rows to set the No\_Of\_Copies to NULL.

for example, when we execute the following statement, the results should be as in the following figure:

delete from Copies

where BookID = 20

select \* from Copies where BookID = 20

Graphical user interface, table

Description automatically generated

**Details Q10**

Write a query insert a loan with LoanID = 60, BookID = 13, BranchID = 2, CardNo=1 and the DateOut is 2 March 2023 and the DueDate is 12 March 2023.