SQL Queries for creating Tables

```
create schema cre;
use cre;
```

1. Driving Plan:

```
create table driving_plan(pType varchar(10) primary key, discount INT, annual_fee float,
Monthly_payment float);
```

2. Credit Card:

```
create table credit_card(cardNo INT primary key, NameOnCard varchar(10), CVV INT,
expiryDate datetime, billingAddress varchar(10));
```

3. User

```
create table 1ser(1sername varchar(10),1sername varchar(10),email varchar(10),address
varchar(10), firstName varchar(10),midInit varchar(10), lastName varchar(10),
phone INT, Uflag INT, pType varchar(10), cardNo INT, primary key(username), foreign
key(pType) references driving_plan(pType), foreign key(cardNo) references
credit_card(cardNo));
```

4. Location:

```
create table location(loName varchar(10), capacity INT, primary key(loName));
```

5. Car:

```
create table car(sNo INT, auxCable INT, umFlag INT, modelName varchar(10), cType
varchar(10), color varchar(10), hourlyRate float,
dailyRate float, 1sername1 INT, seatingCap INT, transType varchar(10), loName varchar(10),
primary key(sNo), foreign key(loName) references location(loName));
```

6. Reservation:

```
create table reservation ( 1sername varchar(10), lateFee float, loName varchar(10),
pickDateTime datetime,
retDateTime datetime, estCost float, lateBy time, retStatus INT, sNo INT, primary
key(1sername, pickDateTime, retDateTime),
foreign key(loName) references location(loName), foreign key (sNo) references car(sNo),
foreign key (1sername) references 1ser(1sername));
```

7. Ex Time:

```
create table ex_time(2sername varchar(10) ,pickDateTime datetime, retDateTime datetime,
extTime time,
primary key(2sername, pickDateTime, retDateTime, extTime),
foreign key(2sername, pickDateTime, retDateTime) references reservation(2sername,
pickDateTime, retDateTime));
```

8. Maintenance Request:

```
create table man_req(2sername varchar(10), date_time datetime, sNo INT, primary key(sNo,
date_time),
foreign key (2sername) references 2ser(2sername), foreign key (sNo) references car(sNo));
```

9. Problem:

```
create table prob(sNo INT, date_time datetime, problem varchar(10), primary key(sNo,
date_time, problem),
foreign key (sNo, date_time) references man_req(sNo, date_time));
```

Queries for manipulation and retrieval of data

1. Driving Plan

```
select * from driving_plan;
```

2. Checking Car Availability:

```
create view car_avail
as
select distinct modelName, cType, loName,
(select hourlyRate
from driving_plan
where pType='occasional') as hRate_occasional,
(select hourlyRate*(1-discount/100)
from driving_plan
where pType='frequent') as hRate_frequent,
 (select hourlyRate*(1-discount/100)
from driving_plan
where pType='daily') as hRate_daily,
color, dailyRate, seatingCap, transType, bluetooth, auxCable, pickDateTime as availableTill,
estCost
from (car natural join reservation), driving_plan
where pickDateTime>current_date() or retDateTime<current_date() or pickDateTime is null;
```

3. **Revenue Generated:**

```
select sNo, cType, modelName, sum(estCost), sum(lateFee)
from car natural join reservation
where floor(datediff(current_timestamp(), pickDatetime)<=3
group by sNo, cType
```

4. **Location Preference Report:**

```
select monthname(pickDateTime) as month_Name, loName as location, count(*) as
number_of_Reservations,
sum(hour(timediff(retDateTime, pickDateTime))) as total_hours
from car natural join reservation
where  floor(datediff(current_timestamp(), pickDateTime)/30)<=3
group by month_name
order by month(pickDateTime) desc
```

5. **Frequent User Report:**

```
select userName, pType, count(*) as number_of_reservations
from userr natural join reservation
group by username
order by count(*) desc
```

6. **Maintenance History Report:**

```
select modelName, date_time, userName, problem
from (prob natural join man_req) natural join car
group by modelName, problem
order by count(problem), problem asc
```

7. **Create Account:**

```
insert into userr(userName, pasword, Uflag) values(new.userName, new.pasword, new.Uflag)
```

- **Personal Inforation: (enter, update)**

```
update userr
set firstName=new.firstName, lastName=new.lastName, midInit=new.midInit,
email=new.email, phone=new.phone, address=new.address,  pType=new.pType
```

where userName=current.user

update credit_card
set name=new.name, number=new.number, cvv=new.cvv, expiry=new.expiry,
billing=new.billing
where userName=current.user

8. **Rental Information:**

select date(pickDateTime) as datee, time(pickDateTime) as from_date, time(retDateTime) as to_date, modelName, loName
from car natural join reservation
where current_date() < retDateTime and userName=current_user

9. **Previous Reservation:**

update reservation
set lateBy=floor(datediff(current_timestamp(), retDateTime)/30)
where current_timestamp()>retDateTime and retStatus=0;

select date(pickDateTime) as datee, time(pickDateTime) as from_date, time(retDateTime) as to_date, modelName, loName, lateBy
from car natural join reservation
where current_date() > retDateTime and userName=current_user