



--Comments:

--I used in the ride table @pickup and @droppingStations as INT because these are the ids
 --of dockingStation table , so we can get the address of a specific pickup or
 -- droppingStation by simply considering those INTs as IDs

```
CREATE TABLE scooterProvider
(SPId INT PRIMARY KEY,
SPname VARCHAR(40),
SPturnover INT,
SPfounding DATE)
```

```
CREATE TABLE electricScooter
(ESid INT PRIMARY KEY,
ESserialNumber INT,
SPid INT REFERENCES scooterProvider(SPId))
```

```
CREATE TABLE dockingStation
(DSid INT PRIMARY KEY,
street VARCHAR(50),
number INT,
city VARCHAR(50))
```

```

CREATE TABLE rider
(Rid INT PRIMARY KEY,
Rname VARCHAR(50),
Rage INT)

CREATE TABLE ride
(Rid INT REFERENCES rider(Rid),
ESid INT REFERENCES electricScooter(ESid),
pickup INT,
droppingStation INT,
startT TIME,
endT TIME,
price INT)

--b)
CREATE OR ALTER PROCEDURE updateRide(@rider VARCHAR(50), @scooter INT, @pickup INT,
@dropoff INT, @start TIME, @end TIME, @prive INT)
AS
    DECLARE @Rid INT, @ESid INT

    SET @Rid = (SELECT Rid FROM rider WHERE Rname = @rider)
    SET @ESid = (SELECT ESid FROM electricScooter WHERE ESserialNumber = @scooter)

    IF EXISTS
        (SELECT *
        FROM ride r
        WHERE r.ESid = @ESid AND r.endT = @end AND r.startT = @start)
        UPDATE ride
        SET ESid = @ESid, pickup = @pickup, droppingStation = @dropoff, price
= @prive
        WHERE ESid = @ESid AND endT = @end AND startT = @start
    ELSE
        INSERT ride(Rid, ESid, pickup, droppingStation, startT, endT, price)
        VALUES (@Rid, @ESid, @pickup, @dropoff, @start, @end, @prive)

GO

INSERT INTO scooterProvider VALUES (1, 'sp1',100,'2001-02-19')
INSERT INTO electricScooter VALUES (1, 1001, 1), (2, 35512, 1)
INSERT INTO dockingStation VALUES (1, 'strada1', 10, 'city1'), (2, 'strada2', 12,
'city2')
INSERT INTO rider VALUES (1 , 'r1', 100), (2, 'r2', 10), (3, 'r3', 3)

SELECT * FROM scooterProvider
SELECT * FROM electricScooter
SELECT * FROM dockingStation
SELECT * FROM rider
SELECT * FROM ride

EXEC updateRide @rider= 'r1', @scooter = 1001, @pickup = 1, @dropoff = 2, @start =
'5:20', @end = '6:20', @prive= 30
EXEC updateRide @rider= 'r1', @scooter = 35512, @pickup = 2, @dropoff = 1, @start =
'5:20', @end = '6:20', @prive= 0

--c)
CREATE OR ALTER VIEW showRiders

```

AS

```
SELECT r.Rname
FROM rider r
WHERE r.Rid IN
    (SELECT nr.Rid
     FROM (SELECT Rid, COUNT(Rid) nrRiders
           FROM ride
           GROUP BY Rid) AS nr
     WHERE nr.Rid = r.Rid AND nr.nrRiders > (SELECT AVG(nr1.nrRiders)
                                             FROM (SELECT Rid, COUNT(Rid) nrRiders
                                                   FROM ride
                                                   GROUP BY Rid) AS nr1))
```

GO

```
SELECT * FROM showRiders
```

--d)

```
CREATE OR ALTER FUNCTION showProviders(@S INT)
RETURNS TABLE
RETURN SELECT sp.SPname
FROM scooterProvider sp
WHERE sp.SPid IN
    (SELECT es.SPid
     FROM electricScooter es
     GROUP BY SPid
     HAVING COUNT(*) > @S)
```

GO

```
SELECT * FROM showProviders(0)
```