

OWNERS

ID	Name
1	Brenda
2	Fred
3	George
4	Kevin
5	Lily
6	Sue
7	Zach

VEHICLES

ID	OwnerID	ModelID	Mileage	LastService	PurchaseDate	PurchasePrice
1	1	1	137895	2018-01-15T00:00:00Z	2006-06-15T00:00:00Z	25000
2	1	24	10000	2017-01-01T00:00:00Z	2014-12-20T00:00:00Z	45000
3	2	8	66785	2017-12-10T00:00:00Z	2008-08-15T00:00:00Z	27595
4	3	12	40000	2017-07-18T00:00:00Z	2009-05-19T00:00:00Z	33000
5	3	19	25000	2017-08-12T00:00:00Z	2012-05-19T00:00:00Z	6500
6	4	18	122573	2018-01-19T00:00:00Z	2010-07-01T00:00:00Z	22500
7	5	7	67081	2017-11-30T00:00:00Z	2013-10-15T00:00:00Z	15300
8	6	10	85000	2017-09-15T00:00:00Z	2009-02-18T00:00:00Z	25000

MODELS

ID	ManufacturerID	VehicleTypeID	Name	MSRP
1	1	1	Taurus	27595
2	1	1	Focus	17860
3	1	2	Mustang	25585
4	1	4	Escape	23850
5	1	4	Explorer	31990
6	1	3	F-150	27610
7	2	1	Yaris	15635
8	2	1	Camry	23495
9	2	2	86	26255
10	2	3	Tacoma	25200
11	2	4	RAV4	24510
12	2	4	Highlander	31030
13	3	1	Accord	23570
14	3	2	Accord	24125
15	3	1	Civic	18840
16	3	2	Civic Si	24100
17	3	3	Ridgeline	29730
18	3	5	Gold Wing	23500
19	3	5	Rebel 500	6099
20	3	5	CBR600RR	11799
21	4	1	3	34900
22	4	1	7	83100
23	4	2	M3	54500
24	4	2	Z4	49700
25	4	4	X	33900
26	4	5	R NINE T	15495
27	4	5	S 1000 RR	15995

VEHICLETYPE

ID	Name
1	Sedan
2	Coup
3	Truck
4	SUV
5	Motorcycle

MANUFACTURER

ID	Name
1	Ford
2	Toyota
3	Honda
4	BMW

```

/* Owners (Name) */
/*      VARCHAR */
/* Manufacturer (Name) */
/*      VARCHAR */
/* VehicleType (Name) */
/*      VARCHAR */
/* Models ( ManufacturerID, VehicleTypeID, Name,  MSRP ) */
/*      INT      INT      VARCHAR      MONEY */
/* Vehicles( OwnerID, ModelID, Mileage, LastService, PurchaseDate, PurchasePrice) */
/*      INT      INT      INT      DATETIME      DATETIME      MONEY */

```

1 How many vehicle models per manufacturer?

```

SELECT
    Manufacturer.Name, COUNT(Models.ManufacturerID) as count
FROM
    Models, Manufacturer
WHERE
    Models.ManufacturerID = Manufacturer.ID
GROUP BY
    Manufacturer.Name

```

	Name	(No column name)
1	BMW	7
2	Ford	6
3	Honda	8
4	Toyota	6

answer

```

SELECT
    Manufacturer.Name, Models.Name
FROM
    Models, Manufacturer
WHERE
    Models.ManufacturerID = Manufacturer.ID

```

	Name	Name
1	Ford	Taurus
2	Ford	Focus
3	Ford	Mustang
4	Ford	Escape
5	Ford	Explorer
6	Ford	F-150
7	Toyota	Yaris
8	Toyota	Camry
9	Toyota	86
10	Toyota	Tacoma
11	Toyota	RAV4
12	Toyota	Highlander
13	Honda	Accord
14	Honda	Accord
15	Honda	Civic
16	Honda	Civic Si
17	Honda	Ridgeline
18	Honda	Gold Wing
19	Honda	Rebel 500
20	Honda	CBR600RR
21	BMW	3
22	BMW	7
23	BMW	M3
24	BMW	Z4
25	BMW	X
26	BMW	R NINE T
27	BMW	S 1000 RR

2 Per Vehicle Type?

answer

```
SELECT Name FROM VehicleType;
```

	Name
1	Sedan
2	Coup
3	Truck
4	SUV
5	Motorcycle

3 How many cars does each owner possess?

```
SELECT
    Owners.Name,
    Models.ManufacturerID AS Manuf,
    Manufacturer.Name as Brand,
    Vehicles.ModelID,
    Models.Name as Model
FROM
    Vehicles, Owners, Models, Manufacturer
WHERE
    Vehicles.ModelID = Models.ID AND
    Models.ManufacturerID = Manufacturer.ID AND
    Vehicles.OwnerID = Owners.ID
ORDER BY
    Owners.Name
```

	Name	Manuf	Name	ModelID	Name
1	Brenda	1	Ford	1	Taurus
2	Brenda	4	BMW	24	Z4
3	Fred	2	Toyota	8	Camry
4	George	3	Honda	19	Rebel 500
5	George	2	Toyota	12	Highlander
6	Kevin	3	Honda	18	Gold Wing
7	Lily	2	Toyota	7	Yaris
8	Sue	2	Toyota	10	Tacoma

answer

```
SELECT
    Owners.Name, COUNT(Owners.Name) as Amount_Car
FROM
    Vehicles, Owners, Models, Manufacturer
WHERE
    Vehicles.ModelID = Models.ID AND
    Models.ManufacturerID = Manufacturer.ID AND
    Vehicles.OwnerID = Owners.ID
GROUP BY
    Owners.Name
ORDER BY
    Amount_Car DESC, Owners.Name
```

	Name	Amount_Car
1	Brenda	2
2	George	2
3	Fred	1
4	Kevin	1
5	Lily	1
6	Sue	1

4 How many total miles are logged to each owner?

```
SELECT Owners.Name,  
       Vehicles.Mileage,  
       Manufacturer.Name AS Brand ,  
       Models.Name AS Model,  
       DATEDIFF(year, CONVERT(VARCHAR,Vehicles.PurchaseDate,101),  
                CONVERT(VARCHAR,Vehicles.LastService,101)) as year  
FROM   Vehicles, Owners, Models, Manufacturer  
WHERE  Vehicles.OwnerID = Owners.ID AND  
       Vehicles.ModelID = Models.ID AND  
       Models.ManufacturerID = Manufacturer.ID  
ORDER BY  
       Owners.Name
```

	Name	Mileage	Brand	Model	year
1	Brenda	137895	Ford	Taurus	12
2	Brenda	10000	BMW	Z4	3
3	Fred	66785	Toyota	Camry	9
4	George	25000	Honda	Rebel 500	5
5	George	40000	Toyota	Highlander	8
6	Kevin	122573	Honda	Gold Wing	8
7	Lily	67081	Toyota	Yaris	4
8	Sue	85000	Toyota	Tacoma	8

answer

```
SELECT  
  Owners.ID,  
  Owners.Name,  
  SUM(Vehicles.Mileage) as SumOfMilage  
FROM   Vehicles, Owners  
WHERE  Vehicles.OwnerID = Owners.ID  
GROUP BY  
  Owners.ID, Owners.Name
```

	ID	Name	SumOfMilage
1	1	Brenda	147895
2	2	Fred	66785
3	3	George	65000
4	4	Kevin	122573
5	5	Lily	67081
6	6	Sue	85000