

Lab1DBGisolfi

Database Management Lab 1

1. Get full details (all fields) of all Restaurants whose headquarters is in Houston.

```
SELECT *  
FROM Restaurants AS R  
WHERE R.HQLocation = 'Houston';
```

Query1		
RNum	RestaurantName	HQLocation
R50	BombayPalace	Houston
R70	Giacomos	Houston

Cardinality = 2

2. Get customer numbers for customers who ordered from restaurant R10.

```
SELECT CNum  
FROM Orders  
WHERE RNum = 'R10';
```

Query2	
CNum	
C100	
C200	
C300	

Cardinality = 3

3. Get full details about all orders where the quantity is in the range 3 to 7, inclusive.

```
SELECT *  
FROM Orders  
WHERE Orders.Quant BETWEEN 3 AND 7;
```

Query3				
CNum	DNum	RNum	Quant	Price
C100	D1	R40	7	9.99
C200	D3	R10	4	16.99
C200	D3	R40	5	19.99
C200	D3	R50	6	18.99
C200	D3	R60	4	19.99
C300	D4	R20	5	22.99
C400	D6	R30	3	4.99
C400	D6	R70	3	2.99
C500	D5	R50	5	8.99
C500	D5	R40	4	8.99
C500	D6	R40	5	3.99

Cardinality = 11

4. Get all ListPrice/cityOfOrigin combinations from Dishes.

SELECT D.ListPrice, D.CityOfOrigin

FROM Dishes AS D;

Query4	
ListPrice	CityOfOrigin
9.99	Houston
24.99	Boston
19.99	NewOrleans
9.99	Houston
9.99	Boston
9.99	Houston

Cardinality = 6

5. Get all CNum/DNum/RNum triples such that the indicated customer, dish and restaurant are all colocated (associated with the same city). (This doesn't use the Orders table.)

SELECT C.CNum, D.DNum, R.RNum

FROM Customers AS C, Dishes AS D, Restaurants AS R

WHERE C.Hometown = D.CityOfOrigin

AND D.CityOfOrigin = R.HQLocation;

Query5		
CNum	DNum	RNum
C200	D5	R10
C300	D5	R10
C200	D2	R10
C300	D2	R10
C100	D6	R50
C400	D6	R50
C100	D4	R50
C400	D4	R50
C100	D1	R50
C400	D1	R50
C100	D6	R70
C400	D6	R70
C100	D4	R70
C400	D4	R70
C100	D1	R70
C400	D1	R70

Cardinality = 16

6. Get all CNum/DNum/RNum triples such that the indicated customer, dish and restaurant are not all co-located (associated with the same city). (This doesn't use the Orders table.)

```

SELECT DISTINCT C.CNum, D.DNum, R.RNum
FROM Customers AS C, Dishes AS D, Restaurants AS R
WHERE C.Hometown <> D.CityOfOrigin
AND D.CityOfOrigin <> R.HQLocation;

```

Cardinality = 111

7. Get all CNum/DNum/RNum triples such that no two of the indicated customer, dish and restaurant are co-located (associated with the same city). (This doesn't use the Orders table.)

```
SELECT C.CNum, D.DNum, R.RNum
FROM Customers AS C, Dishes AS D, Restaurants AS R
WHERE C.Hometown <> D.CityOfOrigin
AND D.CityOfOrigin <> R.HQLocation
AND C.Hometown <> R.HQLocation;
```

Cardinality = 79

8. Get Dish numbers for dishes ordered by a customer from Houston.

```
SELECT DISTINCT O.DNUM
FROM Customers AS C, Orders AS O
WHERE C.Hometown = 'Houston'
AND C.CNum = O.CNum;
```

Query8
DNUM
D1
D6

Cardinality = 2

9. Get Dish numbers for dishes ordered by a customer from Houston from a restaurant whose headquarters is in Houston.

```
SELECT DISTINCT O.DNUM
FROM Customers AS C, Orders AS O, Restaurants AS R
WHERE C.Hometown = 'Houston'
AND R.HQLocation = 'Houston'
AND C.CNum = O.CNum
AND O.RNum = R.RNum;
```

Query9
DNUM
D6

Cardinality = 1

10. Get all pairs of city names such that a customer from the first city ordered from a restaurant whose headquarters is in the second city.

```

SELECT DISTINCT C.Hometown, R.HQlocation
FROM Customers AS C, Restaurants AS R, Orders AS O
WHERE C.Hometown <> R.HQLocation
AND C.CNum = O.CNum
AND R.RNum = O.RNum;

```

Query10	
Hometown	HQlocation
Boston	Houston
Boston	LosAngeles
Boston	NewOrleans
Boston	Poughkeepsie
Houston	Boston
Houston	LosAngeles
LosAngeles	Houston
LosAngeles	NewOrleans

Cardinality = 8