# 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