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Retro Video Games Lab 1

Database Management 308N-113

**Query0Users**

Get full details about each table, sorted by (each field of) the primary key. (4 queries)

Cardinality: 5

| **Query0Users** | | | |
| --- | --- | --- | --- |
| **UNum** | **UserName** | **Mastery** | **Hometown** |
| U10 | Sheldon | 20 | Tokyo |
| U20 | Missy | 10 | NewYork |
| U30 | Meemaw | 30 | NewYork |
| U40 | George | 20 | Tokyo |
| U50 | Mary | 30 | Seattle |

SELECT Users.\*

FROM Users;

**Query0Games**

Get full details about each table, sorted by (each field of) the primary key. (4 queries)

Cardinality: 6

| **Query0Games** | | | | |
| --- | --- | --- | --- | --- |
| **GNum** | **GameName** | **ListPrice** | **Version** | **CityCreated** |
| G100 | Pong | 9.99 | 12 | Tokyo |
| G200 | PacMan | 24.99 | 6 | NewYork |
| G300 | Zelda | 19.99 | 8 | Peking |
| G400 | Doom | 9.99 | 15 | Tokyo |
| G500 | MarioBros | 19.99 | 10 | NewYork |
| G600 | Pitfall | 9.99 | 4 | Tokyo |

SELECT Games.\*

FROM Games;

**Query0Consoles**

Get full details about each table, sorted by (each field of) the primary key. (4 queries)

Cardinality: 7

| **Query0Consoles** | | | |
| --- | --- | --- | --- |
| **CNum** | **ConsoleName** | **Price** | **ManuLoc** |
| C1 | Atari | 99.99 | NewYork |
| C2 | Intellivision | 129.99 | Peking |
| C3 | Nintendo | 119.99 | Seattle |
| C4 | PlayStation | 89.99 | Seattle |
| C5 | Coleco | 189.99 | Tokyo |
| C6 | Gameboy | 129.99 | Poughkeepsie |
| C7 | SegaGenesis | 129.99 | Tokyo |

SELECT Consoles.\*

FROM Consoles;

**Query0Plays**

Get full details about each table, sorted by (each field of) the primary key. (4 queries)

Cardinality: 24

|  |  |  |  |
| --- | --- | --- | --- |
| **Plays** | | | |
| **UNum** | **GNum** | **CNum** | **TimesPlayed** |
| U10 | G100 | C1 | 22 |
| U10 | G100 | C4 | 72 |
| U20 | G300 | C1 | 44 |
| U20 | G300 | C2 | 25 |
| U20 | G300 | C3 | 27 |
| U20 | G300 | C4 | 55 |
| U20 | G300 | C5 | 69 |
| U20 | G300 | C6 | 44 |
| U20 | G300 | C7 | 86 |
| U20 | G500 | C2 | 14 |
| U30 | G300 | C1 | 21 |
| U30 | G400 | C2 | 52 |
| U40 | G600 | C3 | 33 |
| U40 | G600 | C7 | 38 |
| U50 | G100 | C4 | 15 |
| U50 | G200 | C2 | 27 |
| U50 | G200 | C4 | 14 |
| U50 | G300 | C4 | 2 |
| U50 | G400 | C4 | 8 |
| U50 | G500 | C4 | 44 |
| U50 | G500 | C5 | 56 |
| U50 | G500 | C7 | 1 |
| U50 | G600 | C2 | 24 |
| U50 | G600 | C4 | 55 |

SELECT Plays.\*

FROM Plays;

**Query1**

Get full details (all fields) of all Consoles manufactured in Tokyo. (Use ManuLoc)

Cardinality: 2

| **Query1** | | | |
| --- | --- | --- | --- |
| **CNum** | **ConsoleName** | **Price** | **ManuLoc** |
| C5 | Coleco | 189.99 | Tokyo |
| C7 | SegaGenesis | 129.99 | Tokyo |

SELECT Consoles.\*

FROM Consoles

WHERE Consoles.ManuLoc = 'Tokyo';

**Query2**

Get user numbers for Users who played on Console C1.

Cardinality: 3

| **Query2** |
| --- |
| **UNum** |
| U10 |
| U20 |
| U30 |

SELECT DISTINCT U.UNum

FROM Users AS U, Plays AS P

WHERE U.UNum = P.UNum

AND P.CNum = 'C1';

**Query3**

Get full details about all Plays where the TimesPlayed is in the range 30 to 70, inclusive.

Cardinality: 10

| **Query3** | | | |
| --- | --- | --- | --- |
| **UNum** | **GNum** | **CNum** | **TimesPlayed** |
| U20 | G300 | C1 | 44 |
| U20 | G300 | C4 | 55 |
| U20 | G300 | C5 | 69 |
| U20 | G300 | C6 | 44 |
| U30 | G400 | C2 | 52 |
| U40 | G600 | C3 | 33 |
| U40 | G600 | C7 | 38 |
| U50 | G500 | C4 | 44 |
| U50 | G500 | C5 | 56 |
| U50 | G600 | C4 | 55 |

SELECT Plays.\*

FROM Plays

WHERE TimesPlayed <= 70

AND TimesPlayed >= 30;

**Query4**

Get all ListPrice/CityCreated combinations from Games.

Cardinality: 6

| **Query4** | |
| --- | --- |
| **ListPrice** | **CityCreated** |
| 9.99 | Tokyo |
| 24.99 | NewYork |
| 19.99 | Peking |
| 9.99 | Tokyo |
| 19.99 | NewYork |
| 9.99 | Tokyo |

SELECT Games.ListPrice, Games.CityCreated

FROM Games;

**Query5**

Get all UNum/GNum/CNum triples such that the indicated User, Game and Console are all colocated (associated with the same city). (This doesn’t use the Plays table.)

Cardinality: 16

|  |  |  |
| --- | --- | --- |
| **Query5** | | |
| **UNum** | **GNum** | **CNum** |
| U10 | G100 | C5 |
| U10 | G100 | C7 |
| U10 | G400 | C5 |
| U10 | G400 | C7 |
| U10 | G600 | C5 |
| U10 | G600 | C7 |
| U20 | G200 | C1 |
| U20 | G500 | C1 |
| U30 | G200 | C1 |
| U30 | G500 | C1 |
| U40 | G100 | C5 |
| U40 | G100 | C7 |
| U40 | G400 | C5 |
| U40 | G400 | C7 |
| U40 | G600 | C5 |
| U40 | G600 | C7 |

SELECT U.UNum, G.GNum, C.CNum

FROM Users AS U, Games AS G, Consoles AS C

WHERE U.Hometown = G.CityCreated

AND G.Citycreated = C.ManuLoc

ORDER BY U.UNum, G.GNum, C.CNum;

**Query6**

Get all UNum/GNum/CNum triples such that the indicated User, Game and Console are not all colocated (associated with the same city). (This doesn’t use the Plays table.)

Cardinality: 115

SELECT U.UNum, G.GNum, C.CNum

FROM Users AS U, Games AS G, Consoles AS C

WHERE (U.Hometown = G.CityCreated

AND U.Hometown <> C.ManuLoc)

OR (U.Hometown = C.ManuLoc

AND U.Hometown <> G.CityCreated)

OR (G.CityCreated = C.ManuLoc

AND G.CityCreated <> U.Hometown)

ORDER BY U.UNum, G.GNum, C.CNum;

**Query7**

Get all UNum/GNum/CNum triples such that no two of the indicated User, Game and Console are co-located (associated with the same city). (This doesn’t use the Plays table.)

Cardinality: 79

SELECT U.UNum, G.GNum, C.CNum

FROM Users AS U, Games AS G, Consoles AS C

WHERE U.Hometown <> G.CityCreated

AND G.Citycreated <> C.ManuLoc

AND U.Hometown <> C.ManuLoc

ORDER BY U.UNum, G.GNum, C.CNum;

**Query8**

Get Game numbers for games played by a user from Tokyo.

Cardinality: 2

| **Query8** |
| --- |
| **GNum** |
| G100 |
| G600 |

SELECT DISTINCT G.GNum

FROM Games AS G, Plays AS P, Users AS U

WHERE G.GNum = P.GNum

AND P.UNum = U.UNum

AND U.Hometown = 'Tokyo';

**Query9**

Get Game numbers for games played by a user from Tokyo on a Console manufactured in Tokyo.

Cardinality: 1

| **Query9** |
| --- |
| **GNum** |
| G600 |

SELECT G.GNum

FROM Users AS U, Games AS G, Consoles AS C, Plays AS P

WHERE G.GNum = P.GNum

AND P.UNum = U.UNum

AND U.Hometown = 'Tokyo'

AND P.CNum = C.CNum

AND C.ManuLoc = 'Tokyo';

**Query10**

Get all pairs of city names such that a user from the first city played on a console manufactured in the second city.

Cardinality: 11

| **Query10** | |
| --- | --- |
| **HTCity** | **MLCity** |
| NewYork | NewYork |
| NewYork | Peking |
| NewYork | Poughkeepsie |
| NewYork | Seattle |
| NewYork | Tokyo |
| Seattle | Peking |
| Seattle | Seattle |
| Seattle | Tokyo |
| Tokyo | NewYork |
| Tokyo | Seattle |
| Tokyo | Tokyo |

SELECT DISTINCT Hometown AS HTCity, ManuLoc AS MLCity

FROM Users AS U, Plays AS P, Consoles AS C

WHERE U.UNum = P.UNum

AND P.CNum = C.CNum;