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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;

```