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/*****1. DATABASE TABLES*****/

people:

Pid	Pname	Page	Paddress	classStatus	leaseTime
1	Michael Cramer	27	24 Serrano Dr	Senior	0 Year
2	Kevin Soncuya	29	24 Serrano Dr	Senior	0 Year
3	Robert Lin	12	24 Serrano Dr	Senior	1 Year
4	Xiong Feng	42	24 Serrano Dr	Senior	1 Year
5	Calvin Lee	67	24 Serrano Dr	Senior	1 Year
6	Royce Somethin	36	235 Winston Dr	Junior	1 Year
7	Raymond Yu	42	235 Winston Dr	Junior	1 Year
8	George Lopez	2	235 Winston Dr	Sophomore	1/2 Year
9	George Washing	96	375 Buckingham Way	Freshman	1/2 Year
10	Abraham Lincoln	42	375 Buckingham Way	Freshman	1 Year
11	Lorena Lee	92	375 Buckingham Way	Freshman	0 Year
12	Random Name	85	26 Tapia Dr	Sophomore	0 Year
13	Haoe Yue	39	26 Tapia Dr	Senior	1/2 Year
14	Kevin Xu	42	McDonalds	Senior	1/2 Year
15	Tamera Mowry	66	27 Cardenez Dr	Freshman	1 Year
16	Svedka Bottle	93	27 Cardenez Dr	Freshman	1/2 Year
17	Smirnoff Bottle	90	27 Cardenez Dr	Sophomore	1 Year
18	Patron Drunk	21	235 Holloway	Senior	1/2 Year
19	Kaskade Harris	38	235 Holloway	Freshman	1 Year
20	Perina Leas	35	235 Holloway	Sophomore	1 Year

landlord:

id	name	Laddress
1	Jeremy Ibay	24 Serrano Dr
2	Marisa Abril	Winston Dr
3	Some Name	375 Buckingham Way
4	Hating Lee	26 Tapia Dr
5	Crystal Gem	27 Cardenez Dr
6	Garnet	235 Holloway

apartment:

address	internet	paid	water

24 Serrano Dr	Yes	Yes	Yes
235 Winston D	No	No	Yes
375 Buckingha	Yes	No	No
26 Tapia Dr	Yes	Yes	Yes
27 Cardenez D	No	Yes	Yes
235 Holloway	No	No	No

Company:

cname	phone	utilities

Bills Plumbing	415-242-9262	water
Resnet	510-425-6281	internet

/******2. SQL QUERIES******/

/*A. SELECT QUERY*/

/*Find the people with the addresses that has no water supplies */

select distinct P.Pname

...>from people P, apartment S

...> where P.Paddress = S.address AND S.water='No';

/*

George Washington

Lorena Lee

Patron Drunk

Kaskade Harris

Perina Leas

*/

/*Contact company water and company internet when there is 'no' status in apartment*/

```
select distinct A.address,C.cname, C.phone
from apartment A, company C
where A.water = 'No' AND C.utilities ='water'
UNION
select distinct A1.address,C1.cname, C1.phone
from apartment A1, company C1
where A1.internet = 'No' AND C1.utilities ='internet';
```

/*OUTPUT*/

```
235 Holloway Dr|Bills Plumbing|415-242-9262
235 Holloway Dr|Resnet|510-425-6281
235 Winston Dr|Resnet|510-425-6281
27 Cardenez Dr|Resnet|510-425-6281
375 Buckingham Dr|Bills Plumbing|415-242-9262
```

/*B. INDEXES */

/*CREATE INDEX*/

/*Pointer to create an index that helps people's age go in Ascending order*/

```
CREATE INDEX index_age
on people(Page ASC);
```

/*Output:*/

```
.schema people
CREATE TABLE people(Pid string primary key, Pname string, Page integer, Paddress string, classStatus
string, leaseTime string);
CREATE INDEX index_age
on people(Page ASC);
```

/*DROP INDEX*/

/*Delete the Index*/

```
DROP INDEX index_age;
```

/*OUTPUT*/

.schema people

CREATE TABLE people(Pid string primary key, Pname string, Page integer, Paddress string, classStatus string, leaseTime string);

/*C. GROUP BY / HAVING QUERIES*/

/*Find all address groups that have no internet but has water

1.

```
sqlite> SELECT A.address
...> FROM apartment A
...> GROUP BY A.address
...> HAVING A.internet='No' AND A.water='Yes';
```

/*OUTPUT*/

235 Winston Dr

27 Cardenez Dr

(2) /* Find all names of the Seniors who's lease time is one year and does not have internet*/

```
SELECT P.Pname
...> FROM people P
...> WHERE P.leaseTime = '1 Year' AND P.classStatus = 'Senior'
...> OR P.Pname IN (SELECT A.Address
...> FROM apartment A
...> GROUP BY A.address
...> HAVING A.internet = 'No');
```

/*OUTPUT*/

Robert Lin

Xiong Feng

Calvin Lee

*/

/*D. Aggregate Operators*/

1)

/*Select the max age from people who's lease time is one year with working internet

```
SELECT MAX(P.Page)
FROM people P
WHERE(P.leaseTime = '1 Year')
OR P.Page IN (SELECT A.address
```

```
FROM apartment A
GROUP BY A.internet
HAVING A.internet = 'Yes');
```

/*OUTPUT*/

90

2)

/*Select the average age of people whose class standing is a senior

```
SELECT AVG(P.Page)
```

```
...> From people P
```

```
...> Where P.classStatus = 'Senior';
```

/*OUTPUT*/

34.875

/*E. UPDATE QUERY*/

/*OUTPUT*/

```
select * from landlord;
```

1|Jeremy Ibay|24 Serrano Dr

2|Marisa Abril|Winston Dr

3|Some Name|Buckingham Dr

4|Hating Lee|26 Tapia Dr

5|Crystal Gems|27 Cardenez Dr

6|Garnet|235 Holloway Dr

/*UPDATES ADDRESS WHERE NAME IS MARISA ABRIL*/

```
UPDATE landlord
```

```
...> SET Laddress = '235 Winston Dr'
```

```
...> WHERE name = 'Marisa Abril';
```

/*OUTPUT*/

```
select * from landlord;
```

1|Jeremy Ibay|24 Serrano Dr
 2|Marisa Abril|235 Winston Dr
 3|Some Name|Buckingham Dr
 4|Hating Lee|26 Tapia Dr
 5|Crystal Gems|27 Cardenez Dr
 6|Garnet|235 Holloway Dr

/*F. COPY AND DELETE SPECIFIC ENTRIES*/

/*DELETE ADDRESSES WITH TAPIA DR*/

CREATE TABLE temp

...> AS SELECT*

...> FROM people

...> WHERE Paddress = '26 Tapia Dr';

DELETE FROM people

...> WHERE Paddress = '26 Tapia Dr';

/*OUTPUT

Pid	Pname	Page	Paddress	classStatus	leaseTime
-----	-----	----	-----	-----	-----
1	Michael Cramer	27	24 Serrano Dr	Senior	0 Year
2	Kevin Soncuya	29	24 Serrano Dr	Senior	0 Year
3	Robert Lin	12	24 Serrano Dr	Senior	1 Year
4	Xiong Feng	42	24 Serrano Dr	Senior	1 Year
5	Calvin Lee	67	24 Serrano Dr	Senior	1 Year
6	Royce Somethin	36	235 Winston Dr	Junior	1 Year
7	Raymond Yu	42	235 Winston Dr	Junior	1 Year
8	George Lopez	2	235 Winston Dr	Sophomore	1/2 Year
9	George Washington	96	375 Buckingham Way	Freshman	1/2 Year
10	Abraham Lincoln	42	375 Buckingham Way	Freshman	1 Year
11	Lorena Lee	92	375 Buckingham Way	Freshman	0 Year

14	Kevin Xu	42	McDonalds	Senior	1/2 Year
15	Tamera Mowry	66	27 Cardenez Dr	Freshman	1 Year
16	Svedka Bottle	93	27 Cardenez Dr	Freshman	1/2 Year
17	Smirnoff Bottle	90	27 Cardenez Dr	Sophomore	1 Year
18	Patron Drunk	21	235 Holloway	Senior	1/2 Year
19	Kaskade Harris	38	235 Holloway	Freshman	1 Year
20	Perina Leas	35	235 Holloway	Sophomore	1 Year

*/

/*G. REINSERT DELETED ENTRIES*/

/*INSERT TO TABLE WITH ADDRESS OF 26 TAPIA DRIVE*/

INSERT INTO people

...> SELECT* FROM temp

...> WHERE Paddress = '26 Tapia Dr';

DELETE FROM temp

...> WHERE Paddress = '26 Tapia Dr';

/*OUTPUT

Pid	Pname	Page	Paddress	classStatus	leaseTime
-----	-----	-----	-----	-----	-----
1	Michael Cramer	27	24 Serrano Dr	Senior	0 Year
2	Kevin Soncuya	29	24 Serrano Dr	Senior	0 Year
3	Robert Lin	12	24 Serrano Dr	Senior	1 Year
4	Xiong Feng	42	24 Serrano Dr	Senior	1 Year
5	Calvin Lee	67	24 Serrano Dr	Senior	1 Year
6	Royce Somethin	36	235 Winston Dr	Junior	1 Year
7	Raymond Yu	42	235 Winston Dr	Junior	1 Year
8	George Lopez	2	235 Winston Dr	Sophomore	1/2 Year
9	George Washing	96	375 Buckingham Way	Freshman	1/2 Year
10	Abraham Lincoln	42	375 Buckingham Way	Freshman	1 Year
11	Lorena Lee	92	375 Buckingham Way	Freshman	0 Year
14	Kevin Xu	42	McDonalds	Senior	1/2 Year
15	Tamera Mowry	66	27 Cardenez Dr	Freshman	1 Year
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17	Smirnoff Bottle	90	27 Cardenez Dr	Sophomore	1 Year
18	Patron Drunk	21	235 Holloway	Senior	1/2 Year
19	Kaskade Harris	38	235 Holloway	Freshman	1 Year
20	Perina Leas	35	235 Holloway	Sophomore	1 Year
12	Random Name	85	26 Tapia Dr	Sophomore	0 Year
13	Haoe Yue	39	26 Tapia Dr	Senior	1/2 Year

*/

/*H. VIEW QUERIES*/

/*Create views to contact landlords when lease time is 0 */

1.

```
create view [Contact Landlords] AS
select distinct P.Pname, L.name
from people P, landlord L
where P.Address = L.Laddress AND P.leaseTime='0 Year';
```

/*OUTPUT*/

```
select * from [Contact Landlords];
```

```
Kevin Soncuya|Jeremy Ibay
Michael Cramer|Jeremy Ibay
Random Name|Hating Lee
Lorena Lee|Some Name
```

2.

/*Create views to contact company water and company internet when there is 'no' status in apartment*/

```
create view [Contact company] AS
select distinct A.address,C.cname, C.phone
from apartment A, company C
where A.water = 'No' AND C.utilities ='water'
UNION
select distinct A1.address,C1.cname, C1.phone
from apartment A1, company C1
where A1.internet = 'No' AND C1.utilities ='internet';
```

/*OUTPUT*/

Select * from [Contact company];

235 Holloway Dr|Bills Plumbing|415-242-9262

235 Holloway Dr|Resnet|510-425-6281

235 Winston Dr|Resnet|510-425-6281

27 Cardenez Dr|Resnet|510-425-6281

375 Buckingham Dr|Bills Plumbing|415-242-9262