

INF 551 – Spring 2018

Quiz 6: Constraints, Views, & MongoDB (10 points), 15 minutes

Consider again the following tables similar to that you have seen in class (key attributes are underlined):

Beers(name, manf), Drinkers(name, city), Bars(name, city)
Likes(drinker, beer), Frequents(drinker, bar), Sells(bar, beer, price)

1. [2 points] Write a “create table” command for creating the Likes table. Make sure that primary key and foreign key(s) are properly defined. Use the “cascade” policy to handle updates and delete.

```
CREATE TABLE Likes(  
  drinker VARCHAR(100),  
  beer VARCHAR(100),  
  PRIMARY KEY(drinker, beer),  
  FOREIGN KEY(drinker) REFERENCES Drinkers(name) ON DELETE CASCADE ON UPDATE CASCADE,  
  FOREIGN KEY(beer) REFERENCES Beers(name) ON DELETE CASCADE ON UPDATE CASCADE  
);
```
2. [2 points] Can you use the “set null” policy instead in the above question? Explain your answer.
No. Set null is not ok since drinker and beer are both part of primary key. And primary key attributes cannot take null values.
3. [2 points] Define a view SellsView that lists, for each city, the maximum price of beers sold at the bars in the city.

```
CREATE VIEW SellsView AS  
SELECT city, MAX(price) AS maxprice  
FROM Bars, Sells  
WHERE Bars.name = Sells.bar  
GROUP BY city;
```
4. [2 points] Write a SQL query that uses the view defined above to find the maximum price of beers sold at bars in LA.

```
SELECT maxprice  
FROM SellsView  
WHERE city = “LA”;
```
5. [2 points] Now suppose we store the tables in MongoDB. Write a MongoDB query to find all bars which sell the beer “Bud” at a price > 3.

```
db.Sells.find({"beer": "Bud", "price": {$gt: 3}}, {"bar": 1, "_id": 0})
```