CS386D Database Systems
HW 10 Solutions

Part 3

1. Constructs like views, recursive queries

2. Enterprise information integration (EII) and business workflows to name two.

3. σ_{person} ((Frequents ⋈ Likes) ⋈ Sells)

4. a) Sells: 3
   b) Happy: 1
   c) Likes: 2

5. bar, beer, p

6. a) 5
   b) 1 (beer)

7. a) OpenDays(r,d) := Restaurant(r, d, _, _)

   b) ClosedDays(r,d) := Restaurant(r,_,_,_) AND Restaurant(_, d,_,_) AND NOT
   Restaurant(r, d,_,_)
   OR,
   ClosedDays(r,d) := Restaurant(r,_,_,_) AND Restaurant(_, d,_,_) AND NOT
   OpenDays(r,d)
   (This is based on the assumption that all days are present in the table. This was a hard
   problem. Other equivalent answers are possible)

   c) No
   d) Cannot be determined. The database does not indicate the restaurant is open. The
   database also does not say it is close. So under the open world assumption, it simply
   can't be determined.

8. a) Not safe. The unsafe variable is price.
   b) Not safe. The unsafe variables are r2, d2, o2, c2.
   c) Safe.