

데이터베이스 설계 레포트 5

분반: 2분반

학번: 2018136035

이름: 박동진

제출 날짜: 2023-04-05

1. 가격이 3이상인 술을 파는 바의 이름을 검색하시오.

SQL 문 작성 및 실행

```
ra> #sqlexec_{SELECT DISTINCT bar FROM Serves where price >= 3};
-----
Down Under Pub
James Joyce Pub
The Edge
-----
3 tuples returned
ra>
```

관계 대수식 작성 및 실행

```
ra> #project_{bar} #select_{price >= 3} Serves;
(bar:string)
-----
Down Under Pub
James Joyce Pub
The Edge
-----
3 tuples returned
ra>
```

2. 'Dixie'를 판매하는 바의 이름과 가격을 검색하시오.

SQL 문 작성 및 실행

```
ra> #sqlexec_{SELECT bar, price FROM Serves where beer = 'Dixie'};
-----
James Joyce Pub, 3
Satisfaction, 2.75
-----
2 tuples returned
ra>
```

관계 대수식 작성 및 실행

```
ra> #project_{bar, price} #select_{beer = 'Dixie'} Serves;
(bar:string, price:number)
-----
James Joyce Pub, 3
Satisfaction, 2.75
-----
2 tuples returned
ra>
```

3. 일주일에 2번 바를 이용하는 음주가 이름, 주소, 바 이름을 검색하시오.

SQL 문 작성 및 실행

```
ra> #sqlexec_{SELECT drinker, address, bar FROM Frequents JOIN Drinker ON drinker = name WHERE times_a_week = 2};
-----
Amy, 100 W. Main Street, James Joyce Pub
Ben, 101 W. Main Street, Satisfaction
Dan, 300 N. Duke Street, Down Under Pub
Dan, 300 N. Duke Street, Satisfaction
Dan, 300 N. Duke Street, Talk of the Town
Eve, 100 W. Main Street, James Joyce Pub
-----
6 tuples returned
```

관계 대수식 작성 및 실행

```
ra> #project_{drinker, address, bar} (#select_{times_a_week = 2} Frequents #join_{drinker = name} Drinker);
(drinker:string, address:string, bar:string)
-----
Amy, 100 W. Main Street, James Joyce Pub
Ben, 101 W. Main Street, Satisfaction
Dan, 300 N. Duke Street, Down Under Pub
Dan, 300 N. Duke Street, Satisfaction
Dan, 300 N. Duke Street, Talk of the Town
Eve, 100 W. Main Street, James Joyce Pub
-----
6 tuples returned
```

4. 'Budweiser'와 'Corona'를 좋아하는 음주가의 이름과 주소를 검색하시오.

SQL 문 작성 및 실행

```
ra> #sqlexec_{SELECT name, address FROM Drinker JOIN Likes ON name = drinker WHERE beer = 'Budweiser' or beer = 'Corona'};
-----
Amy, 100 W. Main Street
Ben, 101 W. Main Street
Dan, 300 N. Duke Street
Dan, 300 N. Duke Street
Eve, 100 W. Main Street
-----
5 tuples returned
```

관계 대수식 작성 및 실행

```
ra> #project_{name, address} (#select_{beer = 'Budweiser' or beer = 'Corona'} Likes #join_{name = drinker} Drinker);
(name:string, address:string)
-----
Amy, 100 W. Main Street
Ben, 101 W. Main Street
Dan, 300 N. Duke Street
Eve, 100 W. Main Street
-----
4 tuples returned
```

5. 'Ben'이 자주 가는 술집에서 'Ben'이 좋아하는 술을 얼마에 파는지 바의 이름, 술 이름, 가격을 검색하시오.

SQL 문 작성 및 실행

```
ra> #sqlexec_{SELECT s.bar, s.beer, s.price FROM Serves s JOIN FREQUENTS f ON s.bar = f.bar JOIN Likes l ON f.drinker = l.drinker and l.beer = s.beer WHERE f.drinker = 'Ben'};
-----
James Joyce Pub, Amstel, 3
Satisfaction, Amstel, 2.75
Talk of the Town, Amstel, 2.5
Satisfaction, Budweiser, 2.25
Talk of the Town, Budweiser, 2.2
-----
5 tuples returned
```

관계 대수식 작성 및 실행

```
ra> #project_{Serves.bar, Serves.beer, Serves.price} ((#select_{FREQUENTS.drinker = 'Ben'} FREQUENTS) #join_{FREQUENTS.drinker = Likes.drinker} Likes #join_{Serves.bar = FREQUENTS.bar and Likes.beer = Serves.beer} Serves);
(bar:string, beer:string, price:number)
-----
James Joyce Pub, Amstel, 3
Satisfaction, Amstel, 2.75
Talk of the Town, Amstel, 2.5
Satisfaction, Budweiser, 2.25
Talk of the Town, Budweiser, 2.2
-----
5 tuples returned
```