

## Question 1

50 / 50 pts

There are similarities between relational algebra operations and MySQL operations, select MySQL operations that best correspond to the

$\sigma$

WHERE

$\pi$

SELECT

$\bowtie$

Join

## Question 2

25 / 25 pts

Which query best represents this relational algebra statement:

$$\Pi_{d,f}(\sigma_{Foo.x = "Bear"}((Foo \bowtie_{Foo.x = Bar.z} Bar) \bowtie_{Foo.x = Baz.z} Baz))$$



SELECT Foo.d, Foo.f FROM Foo

INNER JOIN Bar ON Foo.x = Bar.z  
INNER JOIN Baz ON Foo.x = Baz.z  
WHERE Foo.x = "Bear";



SELECT d, f FROM Bar

INNER JOIN Baz ON Foo.x = Baz.z  
INNER JOIN Foo ON Foo.x = Bar.z  
WHERE Foo.x = "Bear";



SELECT d, f FROM Foo

INNER JOIN Bar ON Foo.x = Bar.z  
INNER JOIN Baz ON Foo.x = Baz.z  
WHERE Foo.x = "Bear";



SELECT \* FROM Bar

INNER JOIN Baz ON Foo.x = Baz.z

INNER JOIN Foo ON Foo.x = Bar.z  
WHERE Foo.x = "Bear";

### Question 3

25 / 25 pts

Which query best represents this relational algebra statement:

$\sigma_{Foo.a < 100} (Foo \bowtie_{Foo.b = Bar.c} Bar)$



SELECT Foo.a FROM Foo

INNER JOIN Bar ON Foo.b = Bar.c  
WHERE Foo.a < 100;



SELECT a FROM Foo

INNER JOIN Bar  
WHERE Foo.a < 100;



SELECT Foo.a FROM Foo

INNER JOIN Bar  
WHERE Foo.a < 100;



SELECT \* FROM Foo

INNER JOIN Bar ON Foo.b = Bar.c  
WHERE Foo.a < 100;

Quiz Score: **100** out of 100