Quiz 5: Relational Algebra Quiz

Due Feb 19 at 2:59am

Points 100

Questions 18

Available Feb 7 at 2:59am - Feb 25 at 2:59am 18 days

Time Limit None

Allowed Attempts Unlimited

Instructions Instructions

A self check on basic relational algebra concepts.



Take the Quiz Again

Attempt History

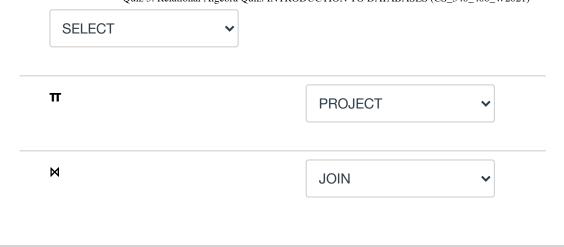
	Attempt	Time	Score	
KEPT	Attempt 4	13 minutes	85 out of 100	
LATEST	Attempt 4	13 minutes	85 out of 100	
	Attempt 3	96 minutes	65 out of 100	
	Attempt 2	4 minutes	20 out of 100	
	Attempt 1	299 minutes	15 out of 100	

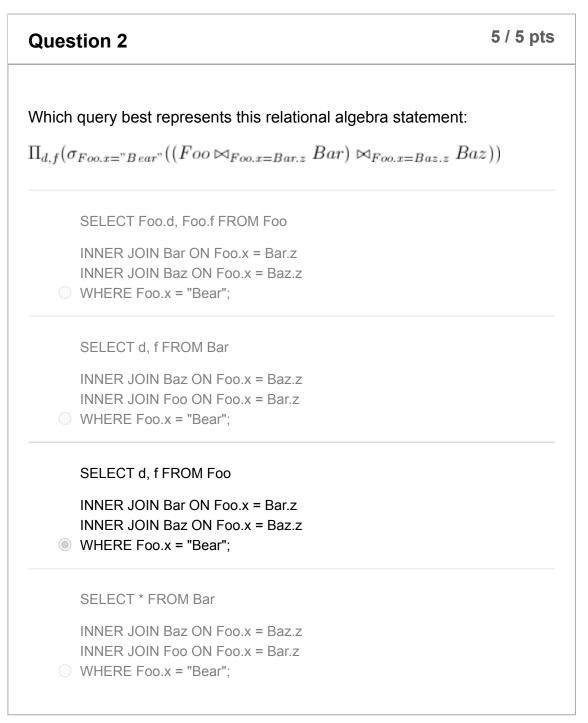
(!) Correct answers are hidden.

Score for this attempt: 85 out of 100

Submitted Feb 18 at 3:56pm This attempt took 13 minutes.

Question 1	15 / 15 pts
Identify these Relational Algebra operators	
σ	





Question 3	5 / 5 pts
Which query best represents this relational algebra statement:	
willing 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	

Question 4	5 / 5 pts
Which relational algebra command creates a new table where columns are to be included?	only certain
PROJECT	
SELECT	
O DELETE	

INNER JOIN Bar ON Foo.b = Bar.c

WHERE Foo.a < 100;</p>

PROGRAM

Question 5	5 / 5 pts
Which command contains all rows that are similar in two differe	nt tables?
■ INTERSECT	
JOIN	
OIFFERENCE	
UNION	

Incorrect

Two tables are _____ compatible if they have the same number of columns with the same types of corresponding data? INTERSECTION JOIN DIFFERENCE UNION

Question 7 5 / 5 pts

Based on this table:

Vehicle(vehicle_id, year, make_id, model_id)

Which command will list all information from Vehicle with the vehicle_id of the value '3'?

- SELECT Vehicle '3' GIVING Answer
- SELECT Vehicle WHERE vehicle_id=3 GIVING Answer
- SELECT Vehicle GIVING Answer WHERE vehicle_id='3'
- SELECT Vehicle WHERE vehicle id='3' RESULTS Answer

Incorrect

Question 8

0 / 5 pts

Based on the table:

Vehicle(vehicle_id, year, make_id, model_id)

Which command creates a new table named 'Make' that contains the fields 'make_id' and 'year'?

- JOIN Vehicle WITH (make_id, year) GIVING Make
- INNER JOIN Vehicle FROM Make WITH (make_id, year)
- PROJECT Vehicle OVER (make_id, year) GIVING Make

SELECT Vehicle OVER (make_id, year) GIVING Make

Question 9	5 / 5 pts
Based on the following tables:	
Vehicle(vehicle_id, year, make_id, year, model_id)	
Make(make_id, make_name, country)	
Which command creates a new table named Inventory that combound vehicle and Make tables based on make_id?	oines
JOIN Vehicle Make WHERE Vehicle.make_id=Make.make_id GIVING Inventory	3
SELECT Vehicle Make WHERE Vehicle.make_id=Make.make_id MAInventory	KING
UNION Vehicle Make JOIN Vehicle.make_id=Make.make_id GIVING Inventory	
O PROJECT Vehicle Make WHERE Vehicle.make_id=Make.make_id MAKING Inventory	

Incorrect

Question 10 0 / 5 pts

Which query below will return a number of row(s) where make_id field contains '1' from Vehicle and provides a total of the price field?

- SELECT COUNT(*), SUM(price) FROM Vehicle WHERE make id='1';
- SELECT FROM Vehicle SUM(price) WHERE make_id='1' COUNT(*);
- SELECT FROM Vehicle COUNT(price) SUM(*) WHERE make id='1';
- SELECT COUNT(*) WHERE make_id='1' SUM(price) FROM Vehicle;

Question 11 5 / 5 pts

Which query will return the row(s) with the make_id field containing '1' from the table Vehicle?

- SELECT FROM Vehicle COUNT(*) WHERE make_id='1';
- SELECT COUNT(*) WHERE make_id='1' FROM Vehicle;
- SELECT COUNT(*) FROM Vehicle WHERE make_id='1';
- SELECT FROM Vehicle WHERE make_id='1' COUNT(*);

Question 12 5 / 5 pts

When using SQL, the SELECT condition is typically specified in which clause of a query?	
WHERE	
O IF	
FROM	
O NOT	

Relational Algebra Identification Equations: Identify the best equation PROJECT Inventory WHERE price is less than 8500 $\pi \ (\text{(price} < 8500) \sigma \text{Inventory})$ $\pi \ (\sigma \ (\text{price} < 8500) \text{Inventory})$ $\pi \ (\sigma \ (\text{price} < 8500) \text{Inventory})$ $\pi \ (\sigma \ (\text{price} < 8500) \text{Inventory})$

Question 14 5 / 5 pts

Relational Algebra Identification Equations: Identify the best equation

JOIN make_id (Vehicle, Make) NEW MakeInfo

MakeInfo = σVehicle ⋈ σMake

Vehicle ⋈ Make πMakeInfo

Vehicle ⋈ Make π_{MakeInfo}

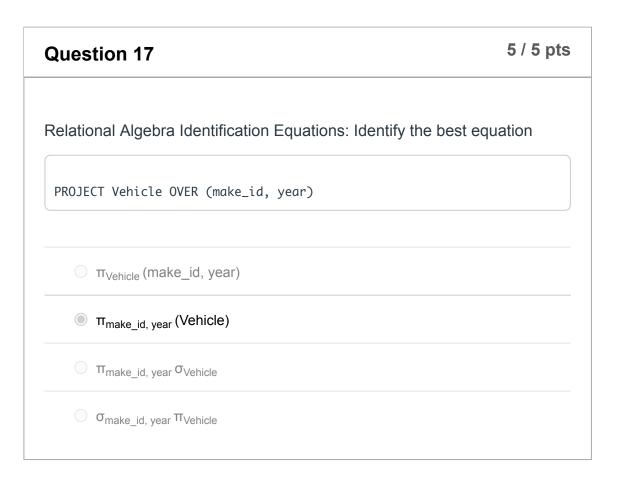
MakeInfo:= Vehicle ⋈ Make

Relational Algebra Identification Equations: Identify the best equation SELECT Vehicle WHERE vehicle_id=3 $\sigma_{make_id, 3} \text{ (Vehicle)}$ $\omega_{vehicle_id} = "3"(Vehicle)$ $\sigma_{vehicle_id} = "3"(Vehicle)$

Question 16 5 / 5 pts

Relational Algebra Identification Equations: Identify the best equation

SELECT Make WHERE make_id=2 $\sigma_{make_id} = "2"(Make)$ $\sigma_{Make} = 2 \text{ (make_id)}$ $\pi_{make_id} = "2"(\sigma_{Make})$ $\sigma_{make_id} \bowtie 2(Make)$



Question 18 5 / 5 pts

If we wanted to retrieve data from an employee database for all employees that work in department # 5.

Which single relational algebra expression would be best matched to display the employees first name, last name, and total salary using the following EMPLOYEE table headings?

mpid	lastname	firstname	department	salaryrate	salary
σ firs	$stname,\ lastname$	$ime,\ salary\ (au$	au department	=5 (EMPL	OYEE))
π $first$	$stname,\ lastname$	$me,\ salary$ (c	$\sigma \ department$	=5(EMPL	OYEE))
Θ fir	$stname,\ lastname$	$ame, \ salary (a)$	σ $department$	=5(EMPL	OYEE))
Θ fir	$stname,\ lastname$	ame, salary(a	o department	=5(EMPL	OYEE))

Quiz Score: 85 out of 100