Recap 1: JOIN

Find the total number of unique sailors who have reserved each boat (ordered the number of sailors in descending order). Display the count, boat name, and boat id

> Boats (bid, bname, color) Sailors (sid, sname, rating, age) Reserves (sid, bid, day)

Refer to http://www.cs.virginia.edu/~up3f/cs4750/inclass/alldbs.sgl

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Recap 3: JOIN

Find the average age of sailors who have reserved each boat? Show boat name, bid, and the average age. Order results by bid. (from Recap 2)

In addition, only show the boat info where the average age of sailors who have reserved that boat is > 35 years old.

> Boats (bid, bname, color) Sailors (sid, sname, rating, age) Reserves (sid, bid, day)

Refer to http://www.cs.virginia.edu/~up3f/cs4750/inclass/alldbs.sgl

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Recap 2: JOIN

Find the average age of sailors who have reserved each boat. Show boat name, boat id, and the average age. Order results by boat id.

> Boats (bid, bname, color) Sailors (sid, sname, rating, age) Reserves (sid, bid, day)

Refer to http://www.cs.virginia.edu/~up3f/cs4750/inclass/alldbs.sgl

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Recap 4: Self Join

Find the average salary for each job that is greater than the average salary of all employees

practice_emp empno ename 1200 Smith Clerk 7499 Allen Salesman 2000 7521 Ward Salesman 7566 Jones Manager 3375 7654 Martin Salesman 1650 3250 7698 Blake Manager 7782 Clark Manager 2850 3500 7788 Analyst Scott 7839 King President 6500 7844 Turner Salesman 1900 1500 7876 Adams Clerk 7900 Clerk 1350 James 7902 Ford Analyst 3500 7934 Miller Clerk 1700

(Note: The table shows sample data, not a complete set of data, refer to https://www.cs.virginia.edu/~up3f/cs4750/assigns/employees.sgl)

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Recap 5: Self Join

Find all students (sid) who live in the same city and on the same street as their mentor

Mentorship (mentee sid, mentor_sid)
-- mentor_sid is a mentor of another student mentee_sid
Study (sid, credits) -- credits the student has taken
Enrollment (dept id, sid) -- dept the student is enrolled in
Student (sid, street, city) -- street, city the student lives

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Let's Try 1: Subqueries in SELECT

For each person, find the average salary of their job (assume we will display empno, ename, and average salary of the person's job)

practice_emp empno ename 1200 2000 7499 Allen Salesman 7521 Ward 1650 Salesman 7566 3375 Jones Manager 7654 Martin 1650 Salesman 7698 Blake Manager 3250 Manager 2850 Clark Scott Analyst 3500 6500 7839 King President 7844 1900 Turner Salesman 1500 7876 Clerk Adams 1350 7900 Clerk James

Analyst

Clerk

7902

7934

Ford

Miller

Step 1: Find each person's empno and ename

<u>Step 2</u>: Given the job of the person, find the average salary of that job

(Note: The table shows sample data, not a complete set of data, refer to https://www.cs.virginia.edu/~up3f/cs4750/assigns/employees.sql)

3500

1700

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Let's Try 1: Self Join

For each person, find the average salary of their job (assume we will display empno, ename, and average salary of the person's job)

oractice_	_emp		1
empno	ename	job	sal
7369	Smith	Clerk	1200
7499	Allen	Salesman	2000
7521	Ward	Salesman	1650
7566	Jones	Manager	3375
7654	Martin	Salesman	1650
7698	Blake	Manager	3250
7782	Clark	Manager	2850
7788	Scott	Analyst	3500
7839	King	President	6500
7844	Turner	Salesman	1900
7876	Adams	Clerk	1500
7900	James	Clerk	1350
7902	Ford	Analyst	3500
7934	Miller	Clerk	1700
		•	

(Note: The table shows sample data, not a complete set of data, refer to https://www.cs.virginia.edu/~up3f/cs4750/assigns/employees.sql)

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Let's Try 1: Subqueries in FROM

For each person, find the average salary of their job (assume we will display empho, ename, and average salary of the person's job)

practice_emp empno ename 7369 1200 2000 7499 Allen Salesman 1650 7521 Ward Salesman 7566 Manager 3375 Jones 7654 Martin 1650 Salesman 7698 Blake Manager 3250 Clark Manager 7782 7788 Scott Analyst 3500 7839 King President 6500 7844 Salesman 1900 Turner 1500 7876 Adams Clerk 1350 7900 Clerk James 7902 3500 Ford Analyst 7934 Miller 1700 Clerk

Step 1: Find average salary of each job

Step 2: For each person, find the average salary of that the person's job

(Note: The table shows sample data, not a complete set of data, refer to https://www.cs.virginia.edu/~up3f/cs4750/assigns/employees.sql)

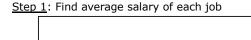
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Let's Try 1: Subqueries in WITH

For each person, find the average salary of their job (assume we will display empno, name, and average salary of the person's job)

	practice_emp empno ename job sal										
empno	ename	sal									
7369	Smith	Clerk	1200								
7499	Allen	Salesman	2000								
7521	Ward	Salesman	1650								
7566	Jones	Manager	3375								
7654	Martin	Salesman	1650								
7698	Blake	Manager	3250								
7782	Clark	Manager	2850								
7788	Scott	Analyst	3500								
7839	King	President	6500								
7844	Turner	Salesman	1900								
7876	Adams	Clerk	1500								
7900	James	Clerk	1350								
7902	Ford	Analyst	3500								
7934	Miller	Clerk	1700								



Step 2: For each person, find the average salary of that the person's job

(Note: The table shows sample data, not a complete set of data, refer to https://www.cs.virginia.edu/~up3f/cs4750/assigns/employees.sgl)

refer to http://www.cs.virginia.edu/~up3f/cs4750/inclass/alldbs.sgl)

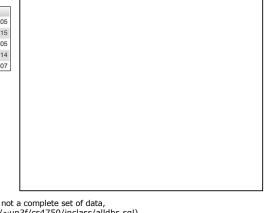
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Let's Try 2: Join (1)

For each sailor, find the number of boats they have reserved (assume we will display sname and the number of boats)

Sai	lors			Res	Reserves			
sid	sname	rating	age	sid	bid	day		
22	Yuppy	9	35	22	101	2003-06-05		
04	Lordelman	0	55.5	22	104	2003-06-15		
31	Lubber	8	55.5	44	102	2003-06-05		
44	Guppy	5	35	48		2003-06-14		
48	Ole Red	8	92.3	58		2003-06-07		
	Duratu	10	40					



(Note: The table shows sample data, not a complete set of data, refer to http://www.cs.virginia.edu/~up3f/cs4750/inclass/alldbs.sgl)

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Let's Try 2: Join (2)

For each sailor, find the number of boats they have reserved (assume we will display sname and the number of boats)

	lors sname	rating	200		serv	day
						2003-06-05
22	Yuppy	9	35			
31	Lubber	8	55.5			2003-06-15
44	Guppy	5	35			2003-06-05
						2003-06-14
48	Ole Red	8	92.3	58	103	2003-06-07
58	Rusty	10	40			
<i>.</i>						
(No	te: The	table	show	ıs sa	mpi	e data, no

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Let's Try 2: Subqueries in SELECT

For each sailor, find the number of boats they have reserved (assume we will display sname and the number of boats)

Sai	lors		Reserves			
sid	sname	rating	age	sid	bid	day
22	Yuppy	9	35	22	101	2003-06-05
31	Lubber	8	55.5	22	104	2003-06-15
31		O		44	102	2003-06-05
44	Guppy	5	35	48	105	2003-06-14
48	Ole Red	8	92.3	58	103	2003-06-07
58	Rusty	10	40			

03-06-15
03-06-05
03-06-14
03-06-07
ata no

(Note: The table shows sample data, not a complete set of data, refer to http://www.cs.virginia.edu/~up3f/cs4750/inclass/alldbs.sql)

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