1) Sailors Schema

Sailors(*sid:* integer, *sname:* string, *rating:* integer, *age:* real)
Boats(*bid:* integer, *bname:* string, *color:* string)
Reserves (*sid:* integer, *bid:* integer, *day:* date)

bid references Boats(bid)

sid references Sailors(sid)

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1. Find the names and ages of sailors with a rating above 7.

2. Find all sailors with a rating above 7.

3. Find the average age of all sailors.

4. Find the colors of boats reserved by Lubber.

5. Find the sailor name, boat_id, and reservation date for each reservation.

6. Find the names of sailors who have reserved a red boat.

7. Find the ages of sailors whose name begins and ends with B and has at least three characters.

8. Find the names of sailors who have reserved a red or a green boat.

9. Find the sids of sailors with age over 20 who have not reserved a red boat.

10. Find the names of sailors who have reserved both a red and a green boat.

11. Find the sids of all sailors who have reserved red boats but not green boats.

12. Find the sailors with the highest rating.

13. For each red boat, find the number of reservations for this boat.

14. Find the average age of sailors for each rating level that has at least two sailors.

15. Find the average age of sailors who are of voting age (i.e. at least 18 years old) for each rating level that has at least two sailors.

16. Find the average age of sailors who are of voting age (i.e., at least 18 years old) for each rating level that has at least two such sailors.

17. Consider the instance of Sailors shown in the below Figure. Let us define instance Sl of Sailors to consist of the first two tuples, instance S2 to be the last two tuples, and S to be the given instance.

Sid	Sname	Rating	Age
18	Jones	3	30.0
41	Jonah	6	56.0
22	Priscilla	7	44.0
63	Preetham	Null	15.0

(a) Show the left outer join of S with itself, with the join condition being sid=sid.
(b) Show the right outer join of S ,vith itself, with the join condition being sid=sid.
(c) Show the full outer join of S with itself, with the join condition being sid=sid.

18. Find the age of the youngest sailor who is eligible to vote (i.e., is at least 18 years old) for each rating level with at least two such sailors.

19. Find sailors whose rating is better than some sailor called David.

20. Compute increments for the ratings of persons who have sailed two different boats on the same day.

21. If you divide the sum just computed by the count, would the result be the same as the average? How would your answer change if these steps were carried out with respect to the age field instead of rating?

22. Find sailors whose rating is better than every sailor called David.
