

BCAC491 Database Management System Lab

ASSIGNMENT #3

Consider the following relational schema & instances:

Sailors (sid: integer, sname: string, rating: integer, age: real)

Boats (bid: integer, bname: string)

Reserves (sid: integer, bid: integer, day: date)

SAILORS

sid	sname	rating	Age
22	dinesh	7	45.0
29	bramha	1	33.0
31	lokesb	8	55.5
32	akash	8	25.5
58	ramesb	10	35.0
64	hari	7	35.0
71	Mahesh	10	16.0
74	hari	9	35.0
85	abbi	3	25.5
95	boby	3	63.5

RESERVES

sid	bid	day
22	101	10-oct-98
22	102	10-oct-98
22	103	10-oct-98
22	104	10-jul-98
31	102	11-oct-98
31	103	11-jun-98
31	104	11-dec-98
64	101	9-may-98
64	102	9-aug-98
74	103	9-aug-98

BOATS

bid	bname	Color
101	interlake	blue
102	interlake	red
103	clipper	green
104	marine	red

Write the SQL queries and their corresponding results for the following:

1. Find the names and ages of all sailors
2. Find all sailors with a rating above 7
3. Find the names of sailors who have reserved boat number 103
4. Find the sid's of sailors who have reserved a red boat
5. Find the names of sailors who have reserved a red boat
6. Find the colors of boats reserved by lokesh
7. Find the names of sailors who have reserved at least one boat
8. Find the name and age of sailors whose name begin with 'b' and ends with 'y' and has at least three characters.

UNION, INTERSECT, MINUS

9. Find the names of sailors who have reserved a red or a green boat
10. Find the names of sailors who have reserved both a red and a green boat
11. Find the sid's of all sailors who have reserved red boats but not green boats
12. Find all sid's of sailors who have a rating of 10 or reserved boat 104

NESTED QUERIES:

13. Find the names of sailors who have reserved boat 103
14. Find the names of sailors who have reserved a red boat

CORRELATED NESTED QUERIES:

15. Find the names of sailors who have reserved boat number 103

SET COMPARISON OPERATORS:

16. Find sailors whose rating is better than some sailor called hari
17. Find the sailor with the highest rating
18. Find the name of sailors who have reserved both a red and a green boat
19. Find the names of sailors who have reserved all boats

AGGREGATE OPERATORS:

- 20. Find the average age of sailors with a rating of 10
- 21. Find the name and age of the oldest sailor
- 22. Count the number of sailors
- 23. Count the number of different sailor names
- 24. Find the names of sailors who are older than the oldest sailor with a rating of 10

GROUP BY CLAUSE:

- 25. Find the age of the youngest sailor for each rating level
- 26. 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
- 27. For each red boat find the number of reservations for this boat
- 28. Find the average age of sailors for each rating level that has at least two sailors