

Giving a database schema:

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

<i>Sid</i>	<i>Sname</i>	<i>Rating</i>	<i>Age</i>
22	Dustin	7	45.0
29	Brutus	1	33.0
31	Lubber	8	55.5
32	Andy	8	25.5
58	Rusty	10	35.0
64	Horatio	7	35.0
71	Zorba	10	16.0
74	Horatio	9	35.0
85	Art	3	25.5
95	Bob	3	63.5

**Sailors**

<i>Sid</i>	<i>Bid</i>	<i>Day</i>
22	101	10/10/08
22	102	10/10/08
22	103	10/08/08
22	104	10/07/08
31	102	11/10/08
31	103	11/06/08
31	104	11/12/08
64	101	9/05/08
64	102	9/08/08
74	103	9/08/08

**Reserves**

<i>Bid</i>	<i>Bname</i>	<i>Color</i>
101	Interlake	Blue
102	Interlake	Red
103	Clipper	Green
104	Marine	Red

**Boats**

Using relational algebra expression to answer below queries

1. Find the names of sailors who have reserved boat 103
2. Find the names of sailors who have reserved a red boat
3. Find the colors of boats reserved by Lubber.
4. Find the names of sailors who have reserved at least one boat.
5. Find the names of sailors who have reserved a red or a green boat
6. Find the names of sailors who have reserved a red and a green boat
7. Find the sids of sailors with age over 20 who have not reserved a red boat
8. Find the names of sailors who have reserved all boats
9. Find the names of sailors who have reserved all boats called Interlake
10. Find the names of sailors who have reserved at least two boats