**σ   π  ⋈ ⋃**

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

*Boats(bid: integer, bname: string, color: string)*

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

1. List only the name and rating for all Sailors.

**π sname, rating(Sailors)**

1. List all sailor information for sailors with a rating>8).

**σrating>8(Sailors)**

1. List the boat id for boats all red boats.

**π bid(σcolor=red(Boats))**

1. List the boat id for all red boats and all green boats.

**π bid(σcolor=red+color=green(Boats))**

1. List the name of every sailor who is aged 16 or under.

**πsname (σage<=16(Sailors))**

1. List the name and rating for all sailors who have a rating of 7 and below.

**πsname, rating (σrating<=7(Sailors))**

1. Count the number of reservations for boat number 4.

**π** (**σbid=4(Reserves))**

1. Find the names of sailors who have reserved boat 103.

**π sname(σbid=103(Reserves)**  **⋈ sid=sid (Sailors))**

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

**π sname(σcolor=red(Boats) ⋈** bid=bid (Reserves)**⋈ sid=sid (Sailors))**

1. Find the colors of the boats reserved by Lubber.

**π color(σsname=Lubber (Sailor)** **⋈ bid=bid(Reserves) ⋈ bid=bid(Boats))**

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

**π sname((σcolor=red(Boats) ⋈** bid=bid (Reserves)**⋈ sid=sid (Sailors) ⋃**

**(σcolor=green(Boats) ⋈** bid=bid (Reserves)**⋈ sid=sid (Sailors))**

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

**π sname((σage>20(Sailors) ⋈** bid=bid (Reserves))**⋈ sid=sid (Sailors) !=**

**(σcolor=red Boats) ⋈** bid=bid (Reserves**)** )**⋈ sid=sid (Sailors))**