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Assignment 2

CS 300 ON

Database Management Systems

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

Π sname, rating(S)

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

σ rating > 8(S)

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

Ⲡ bid (σ color = ‘red’ (B))

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

Π bid (σ color = ‘red’ (B) ∪ σ color = ‘green’ (B))

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

Π name (σ age ≤ 16 (S)

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

Π name, rating (σ rating ≤ 7 (S))

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

⍴R(myCount) ζ COUNT bid (σ bid = 4 (R))

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

Π sname (S ⨝ (σ bid = 103 (R)

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

Π sname ( S ⨝ (R ⨝ σ color = ‘red’ (B)))

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

Π color(B ⨝ (R ⨝ (σ sname = ‘Lubber’ (S))))

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

Π sname ( S ⨝ (R ⨝ σ color = ‘red’ (B))) ∩ Π sname ( S ⨝ (R ⨝ σ color = ‘green’ (B)))

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

Π sname (Π sid (σ age > 20 (S) - Π sid (σ color = ‘red’ (R)))