

2 encontre os nomes dos velejadores que reservaram um barco vermelho

```
SELECT DISTINCT sailor.sname
FROM sailor
JOIN reserve ON sailor.sid = reserve.sid
JOIN boat ON reserve.bid = boat.bid
WHERE boat.color = 'red';
```

3 encontre as cores dos barcos reservados pelo Lubber

```
SELECT DISTINCT boat.color
FROM sailor
JOIN reserve ON sailor.sid = reserve.sid
JOIN boat ON reserve.bid = boat.bid
WHERE sailor.sname = 'Lubber';
```

4 encontre os nomes dos velejadores que reservaram pelo menos um barco

```
SELECT DISTINCT sailor.sname
FROM sailor
JOIN reserve ON sailor.sid = reserve.sid;
```

5 Encontre os nomes dos marinheiros que reservaram um barco vermelho ou verde

```
SELECT DISTINCT sailor.sname
FROM sailor
JOIN reserve ON sailor.sid = reserve.sid
JOIN boat ON reserve.bid = boat.bid
WHERE boat.color = 'red' OR boat.color = 'green';
```

6 encontre os nomes dos velejadores que tenham reservados barcos vermelhos e barcos verdes

```
SELECT DISTINCT s1.sname
FROM sailor s1
```

```

JOIN reserve r1 ON s1.sid = r1.sid
JOIN boat b1 ON r1.bid = b1.bid
WHERE EXISTS (
    SELECT 1
    FROM sailor s2
    JOIN reserve r2 ON s2.sid = r2.sid
    JOIN boat b2 ON r2.bid = b2.bid
    WHERE s1.sname = s2.sname
    AND (b2.color = 'red' OR b2.color = 'green')
    GROUP BY s2.sname
    HAVING COUNT(DISTINCT b2.color) = 2
);

```

6a Encontre os nomes dos marinheiros que reservaram um barco vermelho, mas não um verde

```

SELECT DISTINCT sailor.sname
FROM sailor
JOIN reserve ON sailor.sid = reserve.sid
JOIN boat ON reserve.bid = boat.bid
WHERE boat.color = 'red'
AND sailor.sname NOT IN (
    SELECT DISTINCT sailor.sname
    FROM sailor
    JOIN reserve ON sailor.sid = reserve.sid
    JOIN boat ON reserve.bid = boat.bid
    WHERE boat.color = 'green'
);

```

7 encontre os nomes dos velejadores que tenham reservado pelo menos dois barcos diferentes

```

SELECT sailor.sname
FROM sailor
JOIN reserve ON sailor.sid = reserve.sid
GROUP BY sailor.sid, sailor.sname
HAVING COUNT(DISTINCT reserve.bid) >= 2;

```

8 encontre os nomes dos velejadores que reservaram todos os barcos

```
SELECT sailor.sname
FROM sailor
JOIN reserve ON sailor.sid = reserve.sid
GROUP BY sailor.sname
HAVING COUNT(DISTINCT reserve.bid) = (SELECT COUNT(*) FROM boat);
```

9 calcule o incremento dos rating dos velejadores que velejaram dois barcos diferentes no mesmo dia

```
SELECT r1.sid, r1.day, (s2.rating - s1.rating) AS rating_increment
FROM reserve r1
JOIN reserve r2 ON r1.sid = r2.sid AND r1.day = r2.day AND r1.bid <> r2.bid
JOIN sailor s1 ON r1.sid = s1.sid
JOIN sailor s2 ON r2.sid = s2.sid
WHERE (s2.rating - s1.rating) > 0;
```

10 Encontre o velejador mais velho

```
SELECT sname, age
FROM sailor
WHERE age = (SELECT MAX(age) FROM sailor);
```

11 Encontre o velejador mais novo

```
SELECT sname, age
FROM sailor
WHERE age = (SELECT MIN(age) FROM sailor);
```

12 Conte o número de barcos por cor

```
SELECT color, COUNT(*) AS count
FROM boat
GROUP BY color;
```

TABELAS

-- create tables according to the definition chapter 5.1 (livro da vaquinha)

```
create table sailor(
    sid    integer not null,
    sname  varchar(20),
    rating integer,
    age    numeric(4,1),
    constraint pk_sailor primary key (sid)
);
create table boat(
    bid    integer not null,
    bname  varchar(20),
    color  varchar(20),
    constraint pk_boat primary key (bid)
);
create table reserve(
    sid    integer,
    bid    integer,
    day    date,
    constraint pk_reserve primary key (sid,bid,day),
    constraint fk_reserve_sailor foreign key (sid) references sailor(sid),
    constraint fk_reserve_boat foreign key (bid) references boat(bid)
);

insert into sailor (sid,sname,rating,age)
values(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,'Horataio',7,35.0),
      (71,'Zorba',10,16.0), (74,'Horataio',9,35.0), (85,'Art',3,25.5),
      (95,'Bob',3,63.5);

insert into boat (bid,bname,color)
values (101,'Interlake','blue'), (102,'Interlake','red'),
      (103,'Clipper','green'), (104,'Marine','red');

insert into reserve(sid,bid,day)
values(22,101,'10/10/1998'), (22,102,'10/10/1998'), (22,103,'8/10/1998'),
      (22,104,'7/10/1998'), (31,102,'10/11/1998'), (31,103,'6/11/1998'),
      (31,104,'12/11/1998'), (64,101,'5/09/1998'), (64,102,'8/09/1998'),
      (74,103,'8/09/1998');
```

