

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

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

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

Q1: Find the names of sailors who have reserved boat number 103.

```
SELECT sname
```

```
FROM   Sailors S, Reserves R
```

```
WHERE  S.sid=R.sid AND R.bid=103
```

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

Q2: Find the sid's of sailors who've reserved at least two different boats on the same day.

```
SELECT R1.sid
FROM   Reserves R1, Reserves R2
WHERE  R1.sid=R2.sid and R1.day=R2.day
       and R1.bid<>R2.bid
```

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

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

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

Q3: Find sid's of sailors who've reserved a red or a green boat

```
SELECT sid
FROM Boats B, Reserves R
WHERE R.bid=B.bid
AND (B.color='red' OR B.color='green')
```

**OR**

```
(SELECT sid
FROM Boats B, Reserves R
WHERE R.bid=B.bid
      AND B.color='red')
UNION
(SELECT sid
FROM Boats B, Reserves R
WHERE R.bid=B.bid
      AND B.color='green')
```

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

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

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

Q4: Find sid's of sailors who've reserved a red and a green boat

```
SELECT R1.sid
FROM Boats B1, Reserves R1,
     Boats B2, Reserves R2
WHERE (R1.bid=B1.bid AND
       B1.color='red') AND
       (R2.bid=B2.bid AND
       B2.color='green') AND
       R1.sid=R2.sid
```

```
(SELECT sid
FROM Boats B, Reserves R
WHERE R.bid=B.bid AND B.color='red')
INTERSECT
(SELECT sid
FROM Boats B, Reserves R
WHERE R.bid=B.bid AND B.color='green')
```

*OR*

## Reserves R1

<u>sid</u>	<u>bid</u>	<u>day</u>
22	104	02/28/07
22	102	02/28/07
58	103	03/12/07

## Reserves R2

<u>sid</u>	<u>bid</u>	<u>day</u>
22	104	02/28/07
22	102	02/28/07
58	103	03/12/07

## Sailors

<u>sid</u>	sname	rating	age
22	dustin	7	45.0
31	lubber	8	55.5
58	rusty	10	35.0

## Boats

<u>bid</u>	bname	color
101	Interlake	blue
102	Interlake	red
103	Clipper	green
104	Marine	red

## Reserves R1

<u>sid</u>	<u>bid</u>	<u>day</u>
22	104	02/28/07
22	102	02/28/07
58	103	03/12/07

## Boats B1

<u>bid</u>	bname	color
101	Interlake	blue
102	Interlake	red
103	Clipper	green
104	Marine	red

## Reserves R2

<u>sid</u>	<u>bid</u>	<u>day</u>
22	104	02/28/07
22	102	02/28/07
58	103	03/12/07

## Boats B2

<u>bid</u>	bname	color
101	Interlake	blue
102	Interlake	red
103	Clipper	green
104	Marine	red