Database Creation

```sql
DROP TABLE IF EXISTS Sailors;
DROP TABLE IF EXISTS Boats;
DROP TABLE IF EXISTS Reserves;

CREATE TABLE Sailors (
    sid INTEGER NOT NULL,
    sname VARCHAR(20) NOT NULL,
    rating INTEGER NOT NULL,
    age INTEGER NOT NULL,
    PRIMARY KEY (sid)
);

CREATE TABLE Boats (
    bid INTEGER NOT NULL,
    bname VARCHAR(20) NOT NULL,
    color VARCHAR(20) NOT NULL,
    PRIMARY KEY (bid)
);

CREATE TABLE Reserves (
    sid INTEGER NOT NULL,
    bid INTEGER NOT NULL,
    DAY DATE NOT NULL,
    PRIMARY KEY (sid, bid, DAY),
    FOREIGN KEY (sid) REFERENCES Sailors(sid),
    FOREIGN KEY (bid) REFERENCES Boats(bid)
);

INSERT INTO Sailors
VALUES (1, 'Devansh', 10, 20);
INSERT INTO Sailors
VALUES (2, 'Sebastian', 1, 62);
INSERT INTO Sailors
VALUES (3, 'Richard', 4, 64);
INSERT INTO Sailors
VALUES (4, 'Malhar', 8, 20);
INSERT INTO Sailors
VALUES (5, 'Mallory', 2, 24);
INSERT INTO Sailors
VALUES (6, 'Kinjal', 9, 20);
INSERT INTO Sailors
VALUES (7, 'Sakshi', 10, 20);
INSERT INTO Sailors
```

```
VALUES (8, 'Heetal', 8, 21);


INSERT INTO Boats
VALUES (1, 'B1', 'Red');
INSERT INTO Boats
VALUES (2, 'B2', 'Blue');
INSERT INTO Boats
VALUES (3, 'B3', 'Green');
INSERT INTO Boats
VALUES (4, 'B4', 'Red');
INSERT INTO Boats
VALUES (5, 'B5', 'Blue');
INSERT INTO Boats
VALUES (6, 'B6', 'Green');
INSERT INTO Boats
VALUES (7, 'B7', 'Red');
INSERT INTO Boats
VALUES (8, 'B8', 'Blue');
INSERT INTO Boats
VALUES (9, 'B9', 'Green');
INSERT INTO Boats
VALUES (10, 'B10', 'Red');


INSERT INTO Reserves
VALUES (1, 1, '2023-08-10');
INSERT INTO Reserves
VALUES (2, 2, '2023-08-10');
INSERT INTO Reserves
VALUES (1, 3, '2023-08-10');
INSERT INTO Reserves
VALUES (6, 4, '2023-08-11');
INSERT INTO Reserves
VALUES (8, 5, '2023-08-11');
INSERT INTO Reserves
VALUES (6, 6, '2023-08-11');
INSERT INTO Reserves
VALUES (7, 7, '2023-08-12');
INSERT INTO Reserves
VALUES (8, 8, '2023-08-12');
```

SQL ▾ < 1 / 1 > 1 - 8 of 8

```
SELECT * FROM Sailors;
```

sid	sname	rating	age
1	Devansh	10	20
2	Sebastian	1	62
3	Richard	4	64
4	Malhar	8	20
5	Mallory	2	24
6	Kinjal	9	20
7	Sakshi	10	20
8	Heetal	8	21

SQL ▾ < 1 / 1 > 1 - 10 of 10

```
SELECT * FROM Boats;
```

bid	bname	color
1	B1	Red
2	B2	Blue
3	B3	Green
4	B4	Red
5	B5	Blue
6	B6	Green
7	B7	Red
8	B8	Blue
9	B9	Green
10	B10	Red

SQL ▾ < 1 / 1 > 1 - 8 of 8

```
SELECT * FROM Reserves;
```

sid	bid	DAY
1	1	2023-08-10
2	2	2023-08-10
1	3	2023-08-10
6	4	2023-08-11
8	5	2023-08-11
6	6	2023-08-11
7	7	2023-08-12
8	8	2023-08-12

Query 1: Find Sailor IDs who have reserved red boats or green boats.

SQL ▾ 1 / 1 1 - 3 of 3

```
SELECT sid
FROM Reserves AS R
JOIN Boats AS B ON R.bid = B.bid
WHERE B.color = 'Red'
UNION
SELECT sid
FROM Reserves AS R
JOIN Boats AS B ON R.bid = B.bid
WHERE B.color = 'Green';
```

sid
1
6
7

Query 2: Find all Sailor Names who have reserved red and green boats.

SQL ▾ 1 / 1 1 - 2 of 2

```
Select S.sname
FROM Sailors AS S
JOIN Reserves AS R ON S.sid = R.sid
JOIN Boats AS B ON R.bid = B.bid
WHERE B.color = 'Red'
INTERSECT
Select S.sname
FROM Sailors AS S
JOIN Reserves AS R ON S.sid = R.sid
JOIN Boats AS B ON R.bid = B.bid
WHERE B.color = 'Green';
```

sname
Devansh
Kinjal

Query 3: Find Sailor Names who have reserved red boats but not green boats.

SQL ▾ 1 / 1 1 - 1 of 1

```
Select S.sname
FROM Sailors AS S
JOIN Reserves AS R ON S.sid = R.sid
JOIN Boats AS B ON R.bid = B.bid
WHERE B.color = 'Red'
EXCEPT
Select S.sname
FROM Sailors AS S
JOIN Reserves AS R ON S.sid = R.sid
JOIN Boats AS B ON R.bid = B.bid
WHERE B.color = 'Green';
```

sname
Sakshi