

ICS 321 Fall 2009

# SQL Common Mistakes

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# Q1: Find the sids of sailors who have never reserved a boat

*What I had in mind:*

```
SELECT S.sid  
FROM Sailors S  
EXCEPT  
SELECT R.sid  
FROM Reserves R
```

# #1

```
SELECT S1.sid
FROM Sailors S1
WHERE NOT EXISTS
(
  SELECT R1.sid
  FROM Reserves R1, Sailors S2
  WHERE R1.sid=S2.sid
)
```

# #2

```
SELECT S.sid  
FROM Sailors S  
WHERE S.sid NOT IN  
  ( SELECT R.sid  
    FROM Reserves R  
  )
```

# #3

```
SELECT S1.sid  
FROM Sailors S1  
WHERE EXISTS  
    (  
        SELECT R1.sid  
        FROM Reserves R1  
        WHERE R1.sid=S1.sid  
    )
```

# Q2: Find the NAMES of sailors who have never reserved a boat

- Re-use answer from Q1

```
SELECT S2.sname
FROM Sailors S2
WHERE S2.sid IN (
    SELECT S.sid
    FROM Sailors S
EXCEPT
    SELECT R.sid
    FROM Reserves R
)
```

# #1

```
SELECT S.sname
FROM Sailors S
WHERE S.sid NOT IN (
    SELECT R.sid
    FROM Reserves R
    WHERE S.sid=R.sid
)
```

# Q4: Find the names of sailors who have made exactly 7 reservations

- What I had in mind:

```
SELECT S.sname
```

```
FROM Sailors S
```

```
WHERE 7 = (
```

```
    SELECT COUNT(*)
```

```
    FROM Reserves R
```

```
    WHERE S.sid=R.sid
```

```
)
```



# #1

```
SELECT S1.sname
FROM Sailors S1, Reserves R1
WHERE ( SELECT COUNT( R2.sid )
        FROM Reserves R2, Sailors S2
        WHERE R2.sid=S2.sid
      ) = 7
```

## #2

```
SELECT S1.sname
FROM Sailors S1, Reserves R1
WHERE S1.sid = R1.sid AND R1.sid IN
(
  SELECT R2.sid
  FROM Reserves R2
  WHERE COUNT(R2.bid) = 7
)
```

# #3

```
SELECT S1.sname  
FROM Sailors S1, Reserves R1  
WHERE S1.sid = R1.sid  
GROUP BY S.name  
HAVING COUNT(*)=7
```

# #4

```
SELECT S.sname
FROM Sailors S
WHERE 7 =
(
    SELECT COUNT(*)
    FROM (
        SELECT R.bid, R.day
        FROM Reserves R
        WHERE R.sid=S.sid )
)
```