

Assingment 3

Question:

Create the following relational tables:

SAILOR (sid, sname, rating, age)

BOATS (bid, bname, color)

RESERVES (sid, bid, day)

Queries :

- (1) Find the name of sailors have reserved a red or a green boat.
- (2) Find the sid of all sailors who have 'Red' boats but not 'Green' boats.
- (3) Find the names of sailors who have boat no. = 103.
- (4) Find the color of the boats reserved by 'XYZ'.

```
mysql> create database A3mouli;  
Query OK, 1 row affected (0.11 sec)
```

```
mysql> use A3mouli;  
Database changed  
mysql> create table SAILOR(  
-> sid varchar(8) primary key,  
-> sname varchar(20),  
-> rating int,  
-> age int);  
Query OK, 0 rows affected (0.66 sec)
```

```
mysql> desc SAILOR;  
+-----+-----+-----+-----+-----+-----+  
| Field | Type      | Null | Key | Default | Extra |  
+-----+-----+-----+-----+-----+-----+  
| sid   | varchar(8) | NO   | PRI | NULL    |      |  
| sname | varchar(20) | YES  |     | NULL    |      |  
| rating | int        | YES  |     | NULL    |      |  
| age   | int        | YES  |     | NULL    |      |  
+-----+-----+-----+-----+-----+-----+  
4 rows in set (0.01 sec)
```

```
mysql> create table BOATS(  
-> bid int(5) primary key,  
-> bname varchar(20),  
-> color varchar(20));  
Query OK, 0 rows affected, 1 warning (0.42 sec)
```

```
mysql> desc BOATS;  
+-----+-----+-----+-----+-----+-----+  
| Field | Type      | Null | Key | Default | Extra |  
+-----+-----+-----+-----+-----+-----+  
| bid   | int       | NO   | PRI | NULL    |      |
```

bname	varchar(20)	YES	NULL
color	varchar(20)	YES	NULL

3 rows in set (0.00 sec)

```
mysql> create table RESERVES(
  -> sid varchar(8) references SAILOR(sid),
  -> bid int(5) references BOATS(bid),
  -> day date,
  -> primary key(sid, bid));
Query OK, 0 rows affected, 1 warning (1.02 sec)
```

```
mysql> desc RESERVES;
```

Field	Type	Null	Key	Default	Extra
sid	varchar(8)	NO	PRI	NULL	
bid	int	NO	PRI	NULL	
day	date	YES		NULL	

3 rows in set (0.00 sec)

```
mysql> insert into SAILOR values('s1', 'DEF', 8, 38);
Query OK, 1 row affected (0.09 sec)
```

```
mysql> insert into SAILOR values('s2', 'ABC', 5, 35);
Query OK, 1 row affected (0.08 sec)
```

```
mysql> insert into SAILOR values('s3', 'PQR', 6, 42);
Query OK, 1 row affected (0.08 sec)
```

```
mysql> insert into SAILOR values('s4', 'IOU', 6, 58);
Query OK, 1 row affected (0.09 sec)
```

```
mysql> insert into SAILOR values('s5', 'MNO', 9, 76);
Query OK, 1 row affected (0.08 sec)
```

```
mysql> insert into SAILOR values('s6', 'XYZ', 6, 46);
Query OK, 1 row affected (0.08 sec)
```

```
mysql> select * from SAILOR;
```

sid	sname	rating	age
s1	DEF	8	38
s2	ABC	5	35
s3	PQR	6	42
s4	IOU	6	58

s5	MNO	9	76
s6	XYZ	6	46

6 rows in set (0.00 sec)

```
mysql> insert into BOATS(101, 'Atlantis', 'Red');
ERROR 1064 (42000): You have an error in your SQL syntax; check the manual that corresponds to your MySQL server version for the right syntax to use near '101, 'Atlantis', 'Red')' at line 1
mysql> insert into BOATS values(101, 'Atlantis', 'Red');
Query OK, 1 row affected (0.08 sec)
```

```
mysql> insert into BOATS values(102, 'Ariel', 'Blue');
Query OK, 1 row affected (0.10 sec)
```

```
mysql> insert into BOATS values(103, 'Albatross', 'Yellow');
Query OK, 1 row affected (0.10 sec)
```

```
mysql> insert into BOATS values(104, 'Zephyr', 'Green');
Query OK, 1 row affected (0.12 sec)
```

```
mysql> insert into BOATS values(105, 'Calypso', 'Green');
Query OK, 1 row affected (0.07 sec)
```

```
mysql> insert into BOATS values(106, 'Jolly Roger', 'Red');
Query OK, 1 row affected (0.11 sec)
```

```
mysql> insert into BOATS values(107, 'Aurora', 'Blue');
Query OK, 1 row affected (0.09 sec)
```

```
mysql> select * from BOATS;
```

bid	bname	color
101	Atlantis	Red
102	Ariel	Blue
103	Albatross	Yellow
104	Zephyr	Green
105	Calypso	Green
106	Jolly Roger	Red
107	Aurora	Blue

7 rows in set (0.00 sec)

```
mysql> insert into RESERVES values('s1', 101, '2023-10-02');
Query OK, 1 row affected (0.10 sec)
```

```
mysql> insert into RESERVES values('s2', 102, '2022-11-02');
Query OK, 1 row affected (0.12 sec)
```

```
mysql> insert into RESERVES values('s3', 103, '2023-08-03');
Query OK, 1 row affected (0.08 sec)
```

```
mysql> insert into RESERVES values ('s4', 104, '2022-12-04');
Query OK, 1 row affected (0.10 sec)
```

```
mysql> insert into RESERVES values ('s5', 105, '2023-02-05');
Query OK, 1 row affected (0.08 sec)
```

```
mysql> insert into RESERVES values('s6', 106, '2023-01-07');
Query OK, 1 row affected (0.10 sec)
```

```
mysql> select * from RESERVES;
```

sid	bid	day
s1	101	2023-10-02
s2	102	2022-11-02
s3	103	2023-08-03
s4	104	2022-12-04
s5	105	2023-02-05
s6	106	2023-01-07

```
6 rows in set (0.00 sec)
```

```
mysql> SELECT sname FROM SAILOR WHERE EXISTS (SELECT * FROM RESERVES WHERE sid = SAILOR.sid
AND bid IN (SELECT bid FROM BOATS WHERE color IN ('Red', 'Green')));
```

sname
DEF
IOU
MNO
XYZ

```
4 rows in set (0.01 sec)
```

```
mysql> SELECT sid FROM RESERVES WHERE EXISTS (SELECT * FROM BOATS WHERE color = 'Red' AND bid
= RESERVES.bid) AND NOT EXISTS (SELECT * FROM BOATS WHERE color='Green' AND bid =
RESERVES.bid);
```

sid
s1
s6

```
2 rows in set (0.00 sec)
```

```
mysql> SELECT S.sname FROM SAILOR S, RESERVES R WHERE S.sid = R.sid AND R.bid = 103;
```

```
+-----+  
| sname |
```

```
+-----+  
| PQR   |
```

```
+-----+
```

```
1 row in set (0.01 sec)
```

```
mysql> SELECT B.color FROM BOATS B, SAILOR S, RESERVES R WHERE B.bid = R.bid AND R.sid = S.sid  
AND S.sname='XYZ';
```

```
+-----+
```

```
| color |
```

```
+-----+
```

```
| Red   |
```

```
+-----+
```

```
1 row in set (0.01 sec)
```

```
mysql>
```