

ROLL NO : 26

NAME: MAHAJAN MITALI DNYANESHWAR

CLASS: FYMCA –“A”

SUB: DBMS

ASSIGNMENT NO: 4

```
CREATE TABLE Sailor(sid int PRIMARY KEY, sname VARCHAR (50) NOT NULL, rating int NOT NULL, age REAL NOT NULL);
```

```
desc Sailor;
```

```
INSERT INTO Sailor (sid, sname, rating, age) VALUES (22,'Dustin',7,45.0);
```

```
INSERT INTO Sailor (sid, sname, rating, age) VALUES (29,'Brutus',1,33.0);
```

```
INSERT INTO Sailor (sid, sname, rating, age) VALUES (31,'Lubber',8,55.0);
```

```
INSERT INTO Sailor (sid, sname, rating, age) VALUES (32,'Andy',8,25.0);
```

```
INSERT INTO Sailor (sid, sname, rating, age) VALUES (58,'Rusty',10,35.0);
```

```
INSERT INTO Sailor (sid, sname, rating, age) VALUES (64,'Horatio',7,35.0);
```

```
INSERT INTO Sailor (sid, sname, rating, age) VALUES (71,'Zorba',10,16.0);
```

```
INSERT INTO Sailor (sid, sname, rating, age) VALUES (74,'Horatio',9,35.0);
```

```
INSERT INTO Sailor (sid, sname, rating, age) VALUES (85,'Art',3,25.5);
```

```
INSERT INTO Sailor (sid, sname, rating, age) VALUES (95,'Bob',3,63.5);
```

```
select * from Sailor;
```

SID	SNAME	RATING	AGE
22	Dustin	7	45
29	Brutus	1	33
31	Lubber	10	55
32	Andy	10	25
58	Rusty	12	35
64	Horatio	9	35
71	Zorba	12	16
74	Horatio	11	35
85	Art	3	25.5

```
CREATE TABLE Boat(bid int PRIMARY KEY, bname VARCHAR (50) NOT NULL, color VARCHAR(20) NOT NULL);
```

```
desc Boat;
```

```
INSERT INTO Boat (bid, bname, color) VALUES (101,'Interlake','blue');
```

```
INSERT INTO Boat (bid, bname, color) VALUES (102,'Interlake','red');
```

```
INSERT INTO Boat (bid, bname, color) VALUES (103,'Clipper','green');
```

```
INSERT INTO Boat (bid, bname, color) VALUES (104,'Marine','red');
```

```
select * from Boat;
```

BID	BNAME	COLOR
101	Interlake	blue
102	Interlake	red
103	Clipper	green
104	Marine	red

```

CREATE TABLE Reserves(
sid int , bid int , day DATE,
PRIMARY KEY (sid,bid),
FOREIGN KEY (sid) REFERENCES Sailor (sid),
FOREIGN KEY (bid) REFERENCES Boat (bid));
desc Reserves;
INSERT INTO Reserves (sid, bid, day) VALUES (22,101,'10-10-98');
INSERT INTO Reserves (sid, bid, day) VALUES (22,102,'10-10-98');
INSERT INTO Reserves (sid, bid, day) VALUES (22,103,'10-8-98');
INSERT INTO Reserves (sid, bid, day) VALUES (22,104,'10-7-98');
INSERT INTO Reserves (sid, bid, day) VALUES (31,102,'11-10-98');
INSERT INTO Reserves (sid, bid, day) VALUES (31,103,'11-6-98');
INSERT INTO Reserves (sid, bid, day) VALUES (31,104,'12-12-98');
INSERT INTO Reserves (sid, bid, day) VALUES (64,101,'9-5-98');
INSERT INTO Reserves (sid, bid, day) VALUES (64,102,'9-8-98');
INSERT INTO Reserves (sid, bid, day) VALUES (74,103,'9-8-98');
select * from Reserves;

```

SID	BID	DAY
22	101	10/10/0098
22	102	10/10/0098
22	103	10/08/0098
22	104	10/07/0098
31	102	11/10/0098
31	103	11/06/0098
31	104	12/12/0098
64	101	09/05/0098
64	102	09/08/0098
74	103	09/08/0098

Q 1) Find the minimum age of sailors for each rating level.

```
SELECT rating, MIN(age) as min_age
```

FROM sailor
GROUP BY rating;

RATING	MIN_AGE
1	33
11	35
7	45
3	25.5
10	25
12	16
9	35

Q2) Find number of boats of each color.

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

COLOR	BOAT_COLOR
green	1
red	2
blue	1

Q3) Find the age of the oldest sailor for each rating level. Print rating level also.

SELECT s.rating, MAX(s.age) AS oldest_age, b.color
FROM sailor s
JOIN reserves r ON s.sid=r.sid
JOIN boat b ON r.bid=b.bid
GROUP BY s.rating, b.color;

RATING	OLDEST_AGE	COLOR
7	45	blue
11	35	green
7	45	red
9	35	blue
7	45	green
10	55	green
9	35	red
10	55	red

Q4) Find the number of reservations of each boat in descending order of boat id.

```
SELECT r.bid,COUNT(*) AS reservation_count
FROM reserves r
GROUP BY r.bid
ORDER BY r.bid DESC;
```

BID	RESERVATION_COUNT
104	2
103	3
102	3
101	2

Q5) Find the average age of sailors for each rating level that has at least two sailors.

```
SELECT rating, AVG(age) AS avg_age
FROM Sailors
GROUP BY rating
HAVING COUNT(*) >= 2
ORDER BY rating;
```

RATING	AVG_AGE
10	40
12	25.5

Q6) Find the age of the youngest sailor who is eligible to vote(i.e at least 18 years old) for each rating level.

```

SELECT rating, MIN(age) AS youngest_voter_age
FROM Sailors
WHERE age >= 18
GROUP BY rating
ORDER BY rating;

```

RATING	YOUNGEST_VOTER_AGE
1	33
3	25.5
7	45
9	35
10	25
11	35
12	35

Q7) Print sailors name and date of boat reservation in ascending order of date of reservation.

```

SELECT s.sname,r.day
FROM sailor s
JOIN reserves r ON s.sid=r.sid
ORDER BY r.day ASC;

```

SNAME	DAY
Horatio	09/05/0098
Horatio	09/08/0098
Horatio	09/08/0098
Dustin	10/07/0098
Dustin	10/08/0098
Dustin	10/10/0098
Dustin	10/10/0098
Lubber	11/06/0098
Lubber	11/10/0098
Lubber	12/12/0098