

Techno India College of Technology

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Subject: Database Management System Lab
[BCAC491]

1. Find the names and ages of all sailors

select sname, age from Sailors;

SNAME	AGE
dinesh	45
bramha	33
lokesh	55.5
akash	25.5
ramesh	35
hari	35
Mahesh	16
hari	35
abhi	25.5
boby	63.5

2. Find all sailors with a rating above 7

select * from Sailors where rating>7;

SID	SNAME	RATING	AGE
31	lokesh	8	55.5
32	akash	8	25.5
58	ramesh	10	35
71	Mahesh	10	16
74	hari	9	35

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

select Sailors.sname from Reserves, Sailors where Reserves.sid = Sailors.sid and Reserves.bid=103;

SNAME
dinesh
lokesh
hari

4. Find the sid's of sailors who have reserved a red boat

SELECT Reserves.sid FROM Boats, Reserves WHERE Reserves.bid = Boats.bid AND Boats.color = 'red';

SID
22
22
31
31
64

5. Find the names of sailors who have reserved a red boat

SELECT Sailors.sname FROM Boats, Reserves, Sailors WHERE Reserves.bid = Boats.bid AND Boats.color = 'red' AND Reserves.sid = Sailors.sid;

SNAME
dinesh
dinesh
lokesh
lokesh
hari

6. Find the colors of boats reserved by lokesh

SELECT Boats.color FROM Boats, Reserves, Sailors WHERE Reserves.bid = Boats.bid AND Reserves.sid = Sailors.sid AND Sailors.sname = 'lokesh';

COLOR
red
green
red

7. Find the names of sailors who have reserved at least one boat

SELECT Sailors.sname FROM Reserves, Sailors WHERE Reserves.sid = Sailors.sid;

SNAME
dinesh
dinesh

dinesh
dinesh
lokesh
lokesh
lokesh
hari
hari
hari

8. Find the name and age of sailors whose name begin with 'b' and ends with 'y' and has at least three characters.

SELECT sname, age FROM Sailors WHERE sname like 'b%y';

SNAME	AGE
boby	63.5

UNION, INTERSECT, MINUS:

9. Find the names of sailors who have reserved a red or a green boat

SELECT Sailors.sname FROM Boats, Reserves, Sailors WHERE Reserves.bid = Boats.bid AND Boats.color = 'red' AND Reserves.sid = Sailors.sid

union all

SELECT Sailors.sname FROM Boats, Reserves, Sailors WHERE Reserves.bid = Boats.bid AND Boats.color = 'green' AND Reserves.sid = Sailors.sid;

SNAME
dinesh
dinesh
dinesh
lokesh
lokesh
lokesh
hari
hari

10. Find the names of sailors who have reserved both a red and a green boat

SELECT Sailors.sname FROM Boats, Reserves, Sailors WHERE Reserves.bid = Boats.bid AND Boats.color = 'red' AND Reserves.sid = Sailors.sid

intersect

SELECT Sailors.sname FROM Boats, Reserves, Sailors WHERE Reserves.bid = Boats.bid AND Boats.color = 'green' AND Reserves.sid = Sailors.sid;

SNAME
dinesh
hari
lokesh

11. Find the sid's of all sailors who have reserved red boats but not green boats

SELECT Sailors.sid FROM Boats, Reserves, Sailors WHERE Reserves.bid = Boats.bid AND Boats.color = 'red' AND Reserves.sid = Sailors.sid;

SID
22
22
31
31
64

12. Find all sid's of sailors who have a rating of 10 or reserved boat 104

SELECT sid FROM Sailors WHERE rating = 10

union

SELECT Sailors.sid FROM Boats, Reserves, Sailors WHERE Reserves.bid = 104 AND Reserves.sid = Sailors.sid;

SID
22
31
58
71

NESTED QUERIES:

13. Find the names of sailors who have reserved boat 103

select sname from Sailors where sid in (select sid from Reserves where bid = 103);

SNAME
dinesh
lokesh
hari

14. Find the names of sailors who have reserved a red boat

select sname from Sailors where sid in (select sid from Reserves where bid in (select bid from Boats where color = 'red'));

SNAME
dinesh
lokesh
hari

CORRELATED NESTED QUERIES:

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

select sname from Sailors where exists (select sid from Reserves where Reserves.sid = Sailors.sid and bid = 103);

SNAME
dinesh
lokesh
hari

SET COMPARISON OPERATORS:

16. Find sailors whose rating is better than some sailor called hari

select * from Sailors where rating > all (select rating from Sailors where sname = 'hari');

SID	SNAME	RATING	AGE
71	Mahesh	10	16

58	ramesh	10	35
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17. Find the sailor with the highest rating

select * from Sailors where rating >= all (select rating from Sailors);

SID	SNAME	RATING	AGE
71	Mahesh	10	16
58	ramesh	10	35

18. Find the name of sailors who have reserved both a red and a green boat

**select sname from Sailors where sid = any (
(select sid from Reserves where bid = all
(select bid from Boats where color = 'red' and color = 'green')));**

SNAME
dinesh
lokesh
hari
hari

19. Find the names of sailors who have reserved all boats

**SELECT sname FROM Sailors WHERE NOT EXISTS (
SELECT bid FROM Boats WHERE NOT EXISTS (
SELECT bid FROM Reserves WHERE Reserves.bid = Boats.bid AND Reserves.sid = Sailors.sid
));**

SNAME
dinesh

AGGREGATE OPERATORS:

20. Find the average age of sailors with a rating of 10

SELECT avg(age) FROM Sailors WHERE rating=10;

AVG(AGE)
25.5

21. Find the name and age of the oldest sailor

SELECT sname, age FROM Sailors where age = (select max(age) from Sailors);

SNAME	AGE
boby	63.5

22. Count the number of sailors

select count(*) from Sailors;

COUNT(*)
10

23. Count the number of different sailor names

select count(distinct sname) from Sailors;

COUNT(DISTINCTSNAME)
9

24. Find the names of sailors who are older than the oldest sailor with a rating of 10

select sname from Sailors where age > (select max(age) from Sailors where rating = 10);

SNAME
dinesh
lokesh
boby

GROUP BY CLAUSE:

25. Find the age of the youngest sailor for each rating level

select rating, min(age) from Sailors group by rating;

RATING	MIN(AGE)
7	35
1	33
8	25.5
10	16
9	35
3	25.5

26. Find the age of the youngest sailor who is eligible to vote(i.e., is at least 18 years old) for each rating level with at least two such sailors

SELECT rating, MIN(age) FROM Sailors WHERE age>18 GROUP BY rating HAVING COUNT(*) > 1;

RATING	MIN(AGE)
7	35
8	25.5
3	25.5

27. For each red boat find the number of reservations for this boat

SELECT Boats.bid, COUNT(*) FROM Boats, Reserves WHERE Reserves.bid = Boats.bid AND Boats.color = 'red' GROUP BY Boats.bid;

BID	COUNT(*)
104	2
102	3

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

SELECT Sailors.rating, AVG(Sailors.age) FROM Sailors GROUP BY Sailors.rating HAVING COUNT(*) > 1;

RATING	AVG(SAILORS.AGE)
7	40
8	40.5
10	25.5
3	44.5