

\* WEEK - 6:

1) If boat number is 103. Then find the name of sailors:

Select bid, sname from reserves natural join sailors  
where bid = 103;

BID	SNAME
103	Dustin
103	Lubber
103	Horatio

2) Find the names of sailors who have never reserved boat no 103:

Select bid, sname from reserves natural join sailors  
where bid != 103;

BID	SNAME
104	Dustin
102	Dustin
101	Horatio

3) Red boats are reserved, find the name of sailors:

Select distinct(sname), color from sailors, boats,  
reserves where boats.color = 'red' and reserves.sid  
= sailors.sid;

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SNAME	COLOR
HORATIO	RED

- 4) What is the color of the boat reserved by Lubber:  
 select bid, sname, color from sailors natural join  
 boats where sname = 'Lubber';

BID	SNAME	COLOR
102	LUBBER	RED
:	:	:

- 5) Find the names of sailors who have reserved both  
 a red and a green boat?

Select sname, sid from sailors natural join  
 reserves natural join boats where color = 'red')  
 intersect (select sname, sid from sailors natural  
 join reserves natural join boats where color = 'green'));

SNAME	SID
Dustin	22
:	:

- 6) Find the names of sailors who have reserved a  
 red but not a green boat?

~~(Select sname, sid from sailors natural join reserves  
 natural join boats where color = 'red')) minus~~

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(select sname, sid from sailors natural join reserves natural join boats where color='green');

SNAME SID

Horatio 64

Find sid of sailor with age over 20 who have not reserved a red boat:

select sname, age, color from sailors natural join reserves natural join boats where age > 20 and color != 'red';

SNAME AGE COLOR

Dustin 45 green

Dustin 45 blue

Dustin 45 green

8) Find the names of sailors who reserved all the boats:

select sid from sailors natural join reserves natural join boats having (select count(distinct(bid)) from boats) = count(distinct(bid)) group by sid, name;

SID SNAME

22 Dustin

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- 9) Find sailors who have reserved atleast 2 different boats:

Select sid, sname from sailors natural join reserves natural join boats having count(bid)>2  
group by sid,sname;

<u>SID</u>	<u>SNAME</u>
22	Dustin
31	Sobhu
64	Horatio

- 10) Write a SQL query to find the ages of sailors whose names begins and ends with 'b' atleast 3 characters:

Select sid,sname,age from sailors where trim(sname) like 'B%b' and length(trim(sname))>=3;

<u>SID</u>	<u>SNAME</u>	<u>AGE</u>
95	Bob	63.5

- 11) Find names of sailors who have reserved red boat list in order of age:

Select ename, color, age from reserves natural join sailors natural join boats where color='red'  
order by age;

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SNAME    COLOR    AGE

Horatio    Red    35

Dustin    Red    45.

- 12) Find the names of sailors who have reserved atleast one boat:

select sid, sname from reserves natural join  
 sailors natural join boats having count(bid)  $\geq 1$   
 group by sid, sname;

SID                SNAME  
 ---                ---  
 31                Lubber.  
 :                :

- 13) Find the ids & names of sailors who have reserved 2 different boats on the same day.

select sid, sname, day from sailors natural join boats  
 natural join reserves having count(distinct(bid))  $> 2$   
 group by sid, sname, name, day;

SID    SNAME    DAY  
 ---    ---    ---  
 22    DUSTIN    10-OCT-98.

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## WEEK-7: NESTED SUB QUERIES:

- 1) Find all customers who have both a loan & account at bank:  
Select distinct (customer-name) from browser where customer\_name in (select customer-name from depositor);
- 2) Find all customers who do not have a loan at the bank but do not have an account at the bank  
select distinct (customer-name) from browser where customer\_name not in (select customer-name from depositor);
- 3) Find the names of customers who have loan at the bank and whose names are neither SMITH nor Jones.  
select distinct (customer-name) from browser where customer\_name not in ('SMITH', 'JONES');

## \* SET OPERATIONS:

- 1) Customer names who is having only account in bank but not loan:

(select customer-name from depositor) minus (select customer-name from browser);

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- 2) Customer name who have both loan & account in bank:

Select customer-name from browser) union ( select customer-name from depositor);

Co-related sub queries:

- To create table from another table:

Create table new as select \* from emp;

- Rank based on salary using rank() in employee database:

select \* from (select sal, rank() over(order by sal desc) as R from emp);

sal	R
50,000	1
30,000	2

- Ranks based on salary using dense\_rank():

select \* from employee (select sal, dense\_rank()  
over (order by sal dense) as R from emp);

sal	R
50,000	1
30,000	2

- 4<sup>th</sup> highest paid employee details

select \* from (select sal, rank() over(order by sal desc) as R from emp) where R=4;

12/5/23  
of