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**21K-3200**

**DATABASE ASSIGNMENT - 2**

**BCS-5A**

**Question 1**

1. **color (**Boats ⨝boats,bid = reserves.bid ( SNAME = ‘Albert’ (Sailors) ⨝’sailors.sid = reserves.sid’ Reserves))
2. sid ( rating>=8 (Sailors) ) U (bid=103 (Reserves))
3. sname ( sailors - ( color = red (Reserves ⨝ reserves.bid = boats.bid Boats)
4. sid (age >20 (sailor) - color = red (Reserves ⨝ reserves.bid = boats.bid Boats))
5. sname ( count(bid>=2) (Sailors ⨝sailors.sid=reserves.sid Reserves))
6. sname (sid (Sailors) ⨝sailors.sid = reserves.sid sid , bid (Reserves))÷ bid (reserves))
7. sname( name=’BigBoat’ (Boats ⨝boats.bid = reserves.bid Reserves))
8. Bob\_rating 🡨 rating sname = ’Bob’ (Sailors))

SailorID 🡨 rating > Bob\_rating (Sailors))

1. Bob\_max\_rating 🡨 MAX rating sname = ’Bob’ (Sailors))

SailorID 🡨 rating > Bob\_rating (Sailors))

1. sid (MAX rating (Sailors))

**Question 2**

1. SELECT pizzeria FROM Frequents

NATURAL JOIN Person

WHRE Person.age <18;

Explanation: I used Natural Join here as there is nothing specified, and it can do join automatically.

1. SELECT name FROM Person

NATURAL JOIN Eats

WHERE Person.gender = ‘female’ AND (Eats.pizza= ‘mushroom’ OR Eats.pizza = ‘pepperoni’);

Explanation: It will simply produce the name of person whose gender is female and either she eats mushroom or pepperoni in her pizza.

1. SELECT pizzeria FROM Serves

INNER JOIN Eats ON Serves.pizza=Eats.pizza

WHERE Eats.name=’Amy’ AND Serves.price<10;

Explanation: I used Inner Join because here I have to specify the common attributes between Eats and Serves Table. It will produce pizzeria which is eaten by ‘Amy’ and having a price less than 10.

1. SELECT name FROM Person MINUS SELECT name FROM Frequents WHERE name IN (SELECT name, pizzeria FROM Frequents MINUS SELECT E.name, S.pizzeria FROM Eats E INNER JOIN Serves S ON E.pizza=S.pizza ) );

Explanation: It will produce results having names of people who are not in Frequents table and haven’t served or ate pizzeria. There are 3 sub queries in the main query.

1. SELECT name FROM Person MINUS SELECT name FROM Frequents WHERE name IN (SELECT E.name, S.pizzeria FROM Eats E INNER JOIN Serves S ON E.pizza=S.pizza ) MINUS SELECT name, pizzeria FROM Frequents);

Explanation: It will produce results having names of those who haven’t served or ate pizzeria and they are not in Frequent table as well. There are 3 sub queries in the main query.