



# **PCA 1**

**MAKAUT ODD SEMESTER 2024**

<b>NAME</b>	<b>RUPAK SARKAR</b>
<b>STREAM</b>	<b>MCA</b>
<b>SEMESTER</b>	<b>1<sup>ST</sup></b>
<b>SUBJECT</b>	<b>RELATIONAL DATABASE MANAGEMENT SYSTEM</b>
<b>SUBJECT CODE</b>	<b>CODE: MCAN-192</b>
<b>UNIVERSITY ROLL:</b>	<b>14271024036</b>

**Q. CREATE THE TABLES WITH THE FOLLOWING SCHEMA:**

**SAILORS(SID, SNAME, RATING, AGE)**

## BOATS(BID, BNAME, COLOR)

**RESERVES(SID, BID, DAY(DATE))**

Ans:

**SQL:** CREATE TABLE SAILORS(SID VARCHAR2(3) PRIMARY KEY, SNAME CHAR(20),  
RATING NUMBER(5), AGE NUMBER(5));

Results	Explain	Describe	Saved SQL	History					
Object Type <b>TABLE</b> Object <b>SAILORS</b>									
Table	Column	Data Type	Length	Precision	Scale	Primary Key	Nullable	Default	Comment
<u>SAILORS</u>	<u>SID</u>	VARCHAR2	3	-	-	1	-	-	-
	<u>SNAME</u>	CHAR	20	-	-	-	✓	-	-
	<u>RATING</u>	NUMBER	-	5	0	-	✓	-	-
	<u>AGE</u>	NUMBER	-	5	0	-	✓	-	-
1 - 4									

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SQL: CREATE TABLE BOATS(BID VARCHAR2(3) PRIMARY KEY, BNAME CHAR(20),  
COLOR CHAR(10));
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Results	Explain	Describe	Saved SQL	History					
Object Type <b>TABLE</b> Object <b>BOATS</b>									
Table	Column	Data Type	Length	Precision	Scale	Primary Key	Nullable	Default	Comment
<u>BOATS</u>	<u>BID</u>	VARCHAR2	3	-	-	1	-	-	-
	<u>BNAME</u>	CHAR	20	-	-	-	✓	-	-
	<u>COLOR</u>	CHAR	10	-	-	-	✓	-	-
1 - 3									

**SQL:** CREATE TABLE RESERVES(SID VARCHAR2(3), FOREIGN KEY(SID) REFERENCES SAILORS, BID VARCHAR2(3), FOREIGN KEY(BID) REFERENCES BOATS, DAY DATE);

<a href="#">Results</a>	<a href="#">Explain</a>	<a href="#">Describe</a>	<a href="#">Saved SQL</a>	<a href="#">History</a>
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Object Type	<b>TABLE</b>	Object	<b>RESERVES</b>
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Table	Column	Data Type	Length	Precision	Scale	Primary Key	Nullable	Default	Comment
<u>RESERVES</u>	<u>SID</u>	VARCHAR2	3	-	-	-	✓	-	-
	<u>BID</u>	VARCHAR2	3	-	-	-	✓	-	-
	<u>DAY</u>	DATE	7	-	-	-	✓	-	-

1 - 3

## VALUES OF THE TABLES:

VALUE OF SAILORS TABLE:

Results	Explain	Describe	Saved SQL
SID	SNAME	RATING	AGE
S01	RUPAK	5	22
S02	SAYAN	1	24
S03	CHIRU	4	22
S04	SUBRATA	5	21
S05	SUDIPTA	4	20

VALUE OF BOATS TABLE:

Results	Explain	Describe	Sav
BID	BNAME	COLOR	
101	DEAD	GREEN	
102	MEAD	YELLOW	
103	LEAD	RED	
104	PEAD	BLUE	
100	HEAD	RED	

5 rows returned in 0.00 seconds

VALUES OF RESERVES TABLE:

Results	Explain	Describe	Se
SID	BID	DAY	
S01	101	11/01/2002	
S02	101	11/02/2002	
S03	103	11/27/2002	

3 rows returned in 0.00 seconds

**Q.1. Find the information of all the sailors who have reserved boat reserved boat number 101.**

**SQL:** SELECT \* FROM SAILORS S WHERE S.SID IN (SELECT R.SID FROM RESERVES R WHERE R.BID = 101);

Results	Explain	Describe	Saved SQL	History
SID	SNAME	RATING	AGE	
S01	RUPAK	5	22	
S02	SAYAN	1	24	
2 rows returned in 0.00 seconds				<a href="#">Download</a>

**Q.2. FIND THE NAME OF THE BOAT RESERVED BY BOB.**

**SQL:** SELECT B.BNAME FROM BOATS B WHERE B.BID IN (SELECT R.BID FROM RESERVES R WHERE R.SID = (SELECT S.SID FROM SAILORS S WHERE S.SNAME = 'BOB' ));

Results	Explain	Describe	Saved SQL	History
BNAME				
MEAD				

**Q.3. FIND THE NAME OF THE SAILORS WHO HAVE RESERVED THE RED BOAT, AND LIST IN THE ORDER OF AGE.**

**SQL:** SELECT S.SNAME FROM SAILORS S WHERE S.SID IN (SELECT R.SID FROM RESERVES R WHERE R.BID IN (SELECT B.BID FROM BOATS B WHERE B.COLOR = 'RED')) ORDER BY S.AGE;

Results	Explain	Describe	Saved SQL	History
SNAME				
CHIRU				
1 rows returned in 0.02 seconds				<a href="#">Download</a>

**Q.4. FIND THE NAMES OF SAILORS WHO HAVE RESERVED AT LEAST ONE BOAT.**

**SQL:** SELECT DISTINCT S.SNAME FROM Sailors S WHERE S.SID IN (SELECT R.SID FROM RESERVES R);

Results	Explain	Describe	Saved SQL	History
SNAME				
BOB				
SAYAN				
CHIRU				
RUPAK				

4 rows returned in 0.01 seconds [Download](#)

**Q.5. FIND THE IDS AND NAMES OF SAILORS WHO HAVE RESERVED TWO DIFFERENT BOATS ON THE SAME DAY.**

**SQL:** SELECT DISTINCT S.SID, S.SNAME FROM SAILORS S JOIN RESERVES R1 ON S.SID = R1.SID JOIN RESERVES R2 ON S.SID = R2.SID WHERE R1.DAY = R2.DAY AND R1.BID <> R2.BID;

Results	Explain	Describe	Save
SID	SNAME		
S01	RUPAK		

1 rows returned in 0.01 seconds

**Q.6. FIND THE IDS OF SAILORS WHO HAVE RESERVED A RED BOAT OR A GREEN BOAT.**

**SQL:** SELECT DISTINCT R.SID FROM RESERVES R WHERE R.BID IN (SELECT B.BID FROM BOATS B WHERE B.COLOR = 'RED' OR B.COLOR = 'GREEN');

Results	Explain	Describe	Sa
SID			
S01			
S02			
S03			

3 rows returned in 0.00 seconds

**Q.7. FIND THE NAME AND AGE OF THE YOUNGEST SAILOR.**

**SQL:** SELECT SNAME, AGE FROM SAILORS WHERE AGE = (SELECT MIN(AGE) FROM SAILORS);

Results	Explain	Describe	Sa
SNAME	AGE		
SUDIPTA	20		

1 rows returned in 0.00 seconds

**Q.8. COUNT THE NUMBER OF DIFFERENT SAILOR NAMES.**

**SQL:** SELECT COUNT(DISTINCT SNAME) AS UNIQUE\_NAMES FROM SAILORS;

Results	Explain	Describe	Sav
UNIQUE_NAMES			
6			

1 rows returned in 0.00 seconds

**Q.9. FIND THE AVERAGE AGE OF SAILORS FOR EACH RATING LEVEL.**

**SQL:** SELECT RATING, AVG(AGE) AS AVG\_AGE FROM SAILORS GROUP BY RATING;

[illegible]