ASSIGNMENT - III

TITLE :

Design at least 10 SQL queries for suitable database application using SQL DML Statements.
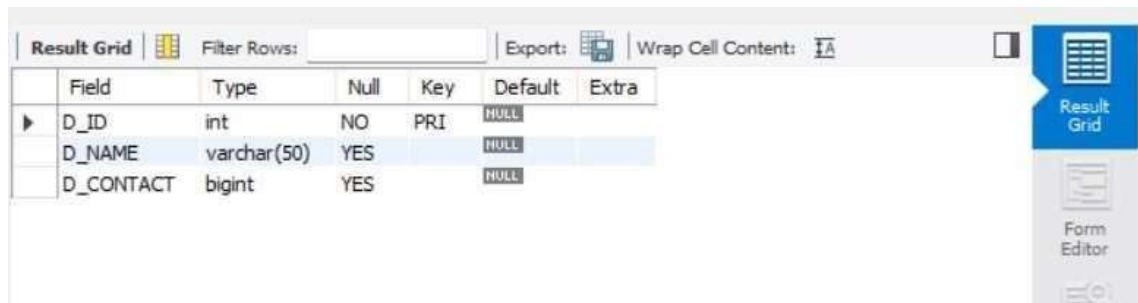
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QUERIES :

1) CREATE :

a) CREATE DATABASE PR3;
   USE PR3;

   CREATE TABLE DEPARTMENT(
   D_ID INT PRIMARY KEY,
   D_NAME VARCHAR(50),
   D_CONTACT BIGINT
   );
   DESC DEPARTMENT;

b) CREATE TABLE STUDENT(
   S_ID INT PRIMARY KEY,
   NAME VARCHAR(50),
   ROLL_NO INT,
   AGE INT,
   D_ID INT,
   FOREIGN KEY (D_ID) REFERENCES DEPARTMENT(D_ID)
   );
    DESC STUDENT;

2) INSERT :

a) INSERT INTO DEPARTMENT VALUES
   (465, 'AI&DS', 9544646642),
   (847, 'COMP', 7656452365),
   (364, 'IT', 8766647845),
   (763, 'E&TC', 9867765894),
   (273, 'MECH', 7768956543);

   SELECT * FROM DEPARTMENT;

b) INSERT INTO STUDENT VALUES
   (6587, 'Ayush', 45, 24, 465),
   (4938, 'Vinit', 07, 19, 847),
   (3498, 'Aditya', 56, 27, 364),
   (9476, 'Vivek', 19, 28, 763),
   (3947, 'Yash', 60, 31, 273);

   SELECT * FROM STUDENT;

3) UPDATE :

UPDATE STUDENT
SET AGE = AGE + 15
WHERE S_ID = 4938;

SELECT * FROM STUDENT;

4) DELETE :

DELETE FROM STUDENT
WHERE S_ID = 9476;

SELECT * FROM STUDENT;

5) UNION :

SELECT NAME, D_ID
FROM STUDENT
WHERE D_ID = 364
UNION
SELECT NAME, D_ID
FROM STUDENT
WHERE D_ID = 273;

NAME	D_ID
Aditya	364
Yash	273

6) SUM :

SELECT SUM(AGE) AS Total_Age FROM STUDENT;

Total_Age
116

7) GROUPBY :

SELECT S_ID, AVG(AGE) AS Avg_Age
FROM STUDENT
GROUP BY S_ID;

S_ID	Avg_Age
3498	27.0000
3947	31.0000
4938	34.0000
6587	24.0000

8) MAX & MIN :

SELECT MAX(AGE) AS Highest_Age, MIN(AGE) AS Lowest_Age FROM STUDENT;

Result Grid	Filter Rows:	Export:	Wrap Cell Content: 𝙄A	
	Highest_Age	Lowest_Age		
▶	34	24		

9) COUNT :

SELECT D_ID, COUNT(*) AS Student_Count
FROM STUDENT
GROUP BY D_ID;
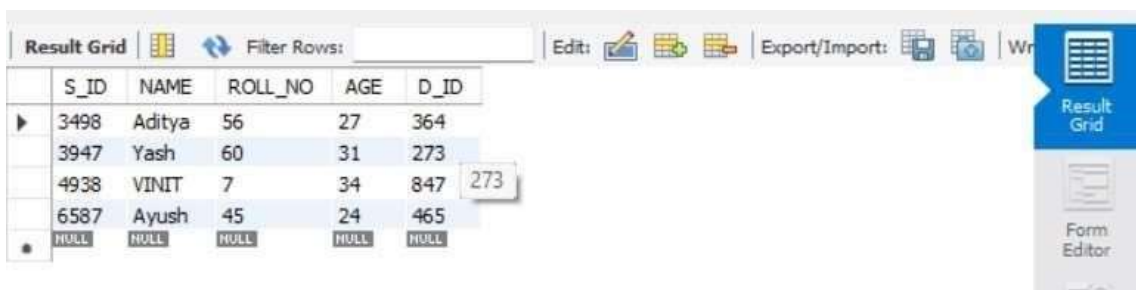
Result Grid	Filter Rows:	Export:	Wrap Cell Content: 𝙄A
	D_ID	Student Count	
▶	273	1	Refresh data re-executing the original query
	364	1	
	465	1	
	847	1	

10) UPDATE (UPPERCASE) :

UPDATE STUDENT
SET NAME = UPPER(NAME)
WHERE S_ID = 4938;

SELECT * FROM STUDENT;
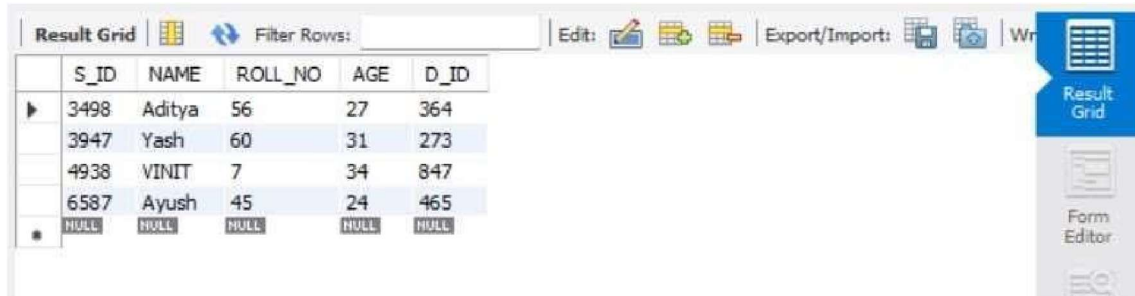
Result Grid	Filter Rows:		Edit:	Export/Import:	Wr
	S_ID	NAME	ROLL_NO	AGE	D_ID
▶	3498	Aditya	56	27	364
	3947	Yash	60	31	273
	4938	VINIT	7	34	847
	6587	Ayush	45	24	465
*	NULL	NULL	NULL	NULL	NULL

11) BITWISE OPERATER :

SELECT * FROM STUDENT
WHERE NAME = 'Aditya' OR AGE > 20;

S_ID	NAME	ROLL_NO	AGE	D_ID
3498	Aditya	56	27	364
3947	Yash	60	31	273
4938	VINIT	7	34	847
6587	Ayush	45	24	465
NULL	NULL	NULL	NULL	NULL

12) SPECIAL OPERATER :
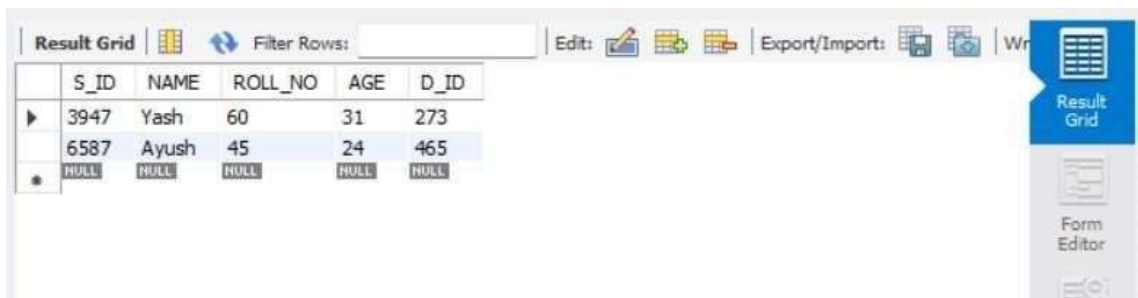
a) SELECT * FROM STUDENT
   WHERE NAME LIKE 'V%';

S_ID	NAME	ROLL_NO	AGE	D_ID
4938	VINIT	7	34	847
NULL	NULL	NULL	NULL	NULL

b) SELECT * FROM STUDENT
   WHERE NAME LIKE '%sh';

S_ID	NAME	ROLL_NO	AGE	D_ID
3947	Yash	60	31	273
6587	Ayush	45	24	465
NULL	NULL	NULL	NULL	NULL
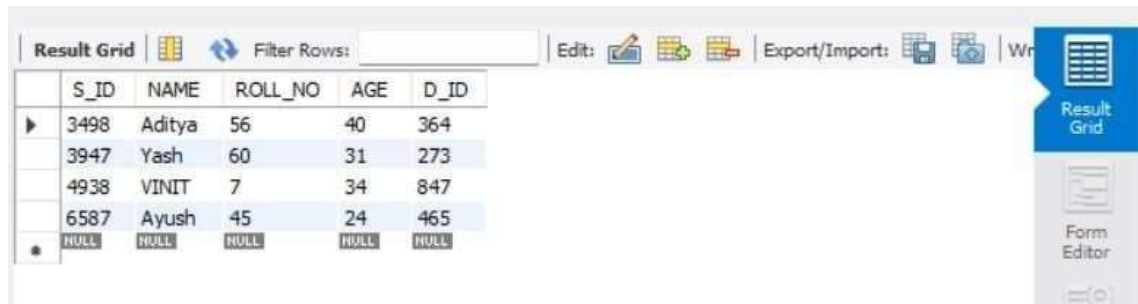
13) ROUND :

UPDATE STUDENT
SET AGE = ROUND(AGE / 20) * 20
WHERE S_ID = 3498;

SELECT * FROM STUDENT;

	S_ID	NAME	ROLL_NO	AGE	D_ID
▶	3498	Aditya	56	40	364
	3947	Yash	60	31	273
	4938	VINIT	7	34	847
	6587	Ayush	45	24	465
*	NULL	NULL	NULL	NULL	NULL

14) CONCAT :

SELECT CONCAT(NAME, ' , ', AGE) AS NAME_AND_CONTACT
FROM STUDENT;
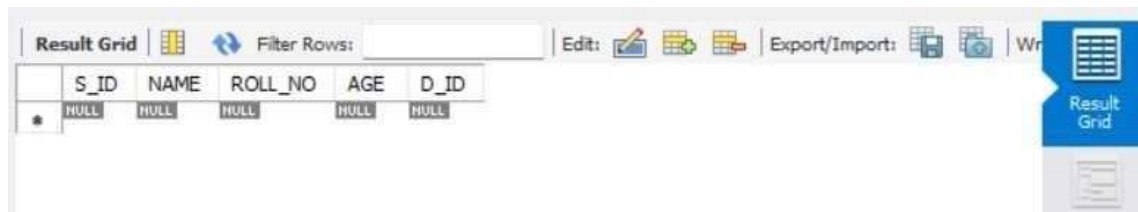
	NAME_AND_CONTACT
▶	Aditya , 40
	Yash , 31
	VINIT , 34
	Ayush , 24

15) IS NULL :

SELECT * FROM STUDENT
WHERE ROLL_NO IS NULL;

	S_ID	NAME	ROLL_NO	AGE	D_ID
*	NULL	NULL	NULL	NULL	NULL