

NAME : NUR QURRATU'AINI BINTI SABRI

ID : 2022487838

GROUP : A4CDCS1103D

1. Create new database (LEARN)

- `CREATE DATABASE LEARN_QURRATU;`

2. Create table statement

table STUDENT

- `CREATE TABLE STUDENT (
STUD_ID VARCHAR(10) NOT NULL UNIQUE,
STUD_NAME VARCHAR(50) NOT NULL,
STUD_PROG VARCHAR(15),
STUD_CGPA DECIMAL(5,2),
PRIMARY KEY(STUD_ID));`

	STUD_ID	STUD_NAME	STUD_PROGRAM	STUD_CGPA
*	NULL	NULL	NULL	NULL

table LECTURER

- `CREATE TABLE LECTURER (
LEC_ID VARCHAR(6) NOT NULL UNIQUE,
LEC_NAME VARCHAR(50) NOT NULL,
LEC_FACULTY VARCHAR(6),
SALARY DECIMAL(8,2),
PRIMARY KEY(LEC_ID));`

	LEC_ID	LEC_NAME	LEC_FACULTY	SALARY
*	NULL	NULL	NULL	NULL

table TEACH

- `CREATE TABLE TEACH (
TEACH_ID INTEGER NOT NULL UNIQUE,
STUD_ID VARCHAR(10),
LEC_ID VARCHAR(6),
SEMESTER VARCHAR(10),
PRIMARY KEY(TEACH_ID),
FOREIGN KEY(STUD_ID) REFERENCES STUDENT(STUD_ID),
FOREIGN KEY(LEC_ID) REFERENCES LECTURER(LEC_ID));`

	TEACH_ID	STUD_ID	LEC_ID	SEMESTER
*	NULL	NULL	NULL	NULL

3. Insert Record into the table

table STUDENT

- `INSERT INTO STUDENT VALUES ('S1234','Siti','CS110',3.1);`
- `INSERT INTO STUDENT VALUES ('S1235','Muhamad','CS143',3.2);`
- `INSERT INTO STUDENT VALUES ('S1236','Aliya','CS111',3.3);`
- `INSERT INTO STUDENT VALUES ('S1237','Munir','CS143',2.5);`

	STUD_ID	STUD_NAME	STUD_PROG	STUD_CGPA
▶	S1234	Siti	CS110	3.10
	S1235	Muhamad	CS143	3.20
	S1236	Aliya	CS111	3.30
	S1237	Munir	CS143	2.50
*	NULL	NULL	NULL	NULL

table LECTURER

- `INSERT INTO LECTURER VALUES ('L01','Nasir','CS143',3000.00);`
- `INSERT INTO LECTURER VALUES ('L02','Siti Rozana','CS110',4000.00);`
- `INSERT INTO LECTURER VALUES ('L03','Samsiah','CS110',2500.00);`

	LEC_ID	LEC_NAME	LEC_FACULTY	SALARY
▶	L01	Nasir	CS143	3000.00
	L02	Siti Rozana	CS110	4000.00
	L03	Samsiah	CS110	2500.00
*	NULL	NULL	NULL	NULL

table TEACH

- `INSERT INTO TEACH VALUES (1,'S1234','L01','JULAI 19');`
- `INSERT INTO TEACH VALUES (2,'S1236','L01','MAC 19');`
- `INSERT INTO TEACH VALUES (3,'S1236','L02','MAC 20');`

	TEACH_ID	STUD_ID	LEC_ID	SEMESTER
▶	1	S1234	L01	JULAI 19
	2	S1236	L01	MAC 19
	3	S1236	L02	MAC 20
*	NULL	NULL	NULL	NULL

4. Altering the table structure

- a) Add new column stud_DOB in student table. (Show the table record before add and after add)

statement

- `ALTER TABLE STUDENT
ADD STUD_DOB DATE;`

before

	STUD_ID	STUD_NAME	STUD_PROG	STUD_CGPA
▶	S1234	Siti	CS110	3.10
	S1235	Muhamad	CS143	3.20
	S1236	Aliya	CS111	3.30
	S1237	Munir	CS143	2.50
*	NULL	NULL	NULL	NULL

after

	STUD_ID	STUD_NAME	STUD_PROG	STUD_CGPA	STUD_DOB
▶	S1234	Siti	CS110	3.10	NULL
	S1235	Muhamad	CS143	3.20	NULL
	S1236	Aliya	CS111	3.30	NULL
	S1237	Munir	CS143	2.50	NULL
*	NULL	NULL	NULL	NULL	NULL

- b) Remove STUD_ADDRESS from student table. (show the table record before and after remove)

statement

- `ALTER TABLE STUDENT
ADD STUD_ADDRESS VARCHAR(50);`
- `ALTER TABLE STUDENT
DROP STUD_ADDRESS;`

before

	STUD_ID	STUD_NAME	STUD_PROG	STUD_CGPA	STUD_DOB	STUD_ADDRESS
▶	S1234	Siti	CS110	3.10	NULL	NULL
	S1235	Muhamad	CS143	3.20	NULL	NULL
	S1236	Aliya	CS111	3.30	NULL	NULL
	S1237	Munir	CS143	2.50	NULL	NULL
*	NULL	NULL	NULL	NULL	NULL	NULL

after

	STUD_ID	STUD_NAME	STUD_PROG	STUD_CGPA	STUD_DOB
▶	S1234	Siti	CS110	3.10	NULL
	S1235	Muhamad	CS143	3.20	NULL
	S1236	Aliya	CS111	3.30	NULL
	S1237	Munir	CS143	2.50	NULL
*	NULL	NULL	NULL	NULL	NULL

5. Update data

- a) Update student name 'Siti' to 'siti Rahimah' for student id S1234 (show table record before and after update)

statement

- `UPDATE STUDENT`
`SET STUD_NAME = 'Siti Rahimah'`
`WHERE STUD_ID = 'S1234';`

before

	STUD_ID	STUD_NAME	STUD_PROG	STUD_CGPA	STUD_DOB
▶	S1234	Siti	CS110	3.10	NULL
	S1235	Muhamad	CS143	3.20	NULL
	S1236	Aliya	CS111	3.30	NULL
	S1237	Munir	CS143	2.50	NULL
*	NULL	NULL	NULL	NULL	NULL

after

	STUD_ID	STUD_NAME	STUD_PROG	STUD_CGPA	STUD_DOB
▶	S1234	Siti Rahimah	CS110	3.10	NULL
	S1235	Muhamad	CS143	3.20	NULL
	S1236	Aliya	CS111	3.30	NULL
	S1237	Munir	CS143	2.50	NULL
*	NULL	NULL	NULL	NULL	NULL

- b) Update lecture name to mohd nasir and salary 6000.00 for lecturer id L01 (show table record before and after update)

statement

- `UPDATE LECTURER`
`SET LEC_NAME = 'Mohd Nasir', SALARY = 6000.00`
`WHERE LEC_ID = 'L01';`

before

	LEC_ID	LEC_NAME	LEC_FACULTY	SALARY
▶	L01	Nasir	CS143	3000.00
	L02	Siti Rozana	CS110	4000.00
	L03	Samsiah	CS110	2500.00
*	NULL	NULL	NULL	NULL

after

	LEC_ID	LEC_NAME	LEC_FACULTY	SALARY
▶	L01	Mohd Nasir	CS143	6000.00
	L02	Siti Rozana	CS110	4000.00
	L03	Samsiah	CS110	2500.00
*	NULL	NULL	NULL	NULL

6. Delete table rows

- a) Delete Record student where student id 'S1237' (show the table before and after delete)

statement

- `DELETE FROM STUDENT`
`WHERE STUD_ID = 'S1237';`

before

	STUD_ID	STUD_NAME	STUD_PROG	STUD_CGPA	STUD_DOB
▶	S1234	Siti Rahimah	CS110	3.10	NULL
	S1235	Muhamad	CS143	3.20	NULL
	S1236	Aliya	CS111	3.30	NULL
	S1237	Munir	CS143	2.50	NULL
*	NULL	NULL	NULL	NULL	NULL

after

	STUD_ID	STUD_NAME	STUD_PROG	STUD_CGPA	STUD_DOB
▶	S1234	Siti Rahimah	CS110	3.10	NULL
	S1235	Muhamad	CS143	3.20	NULL
	S1236	Aliya	CS111	3.30	NULL
*	NULL	NULL	NULL	NULL	NULL