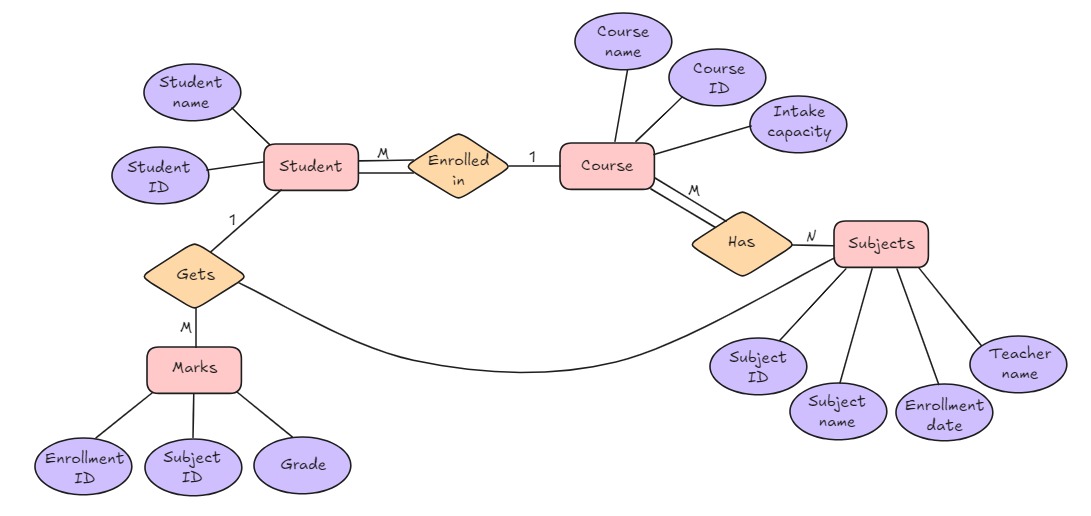
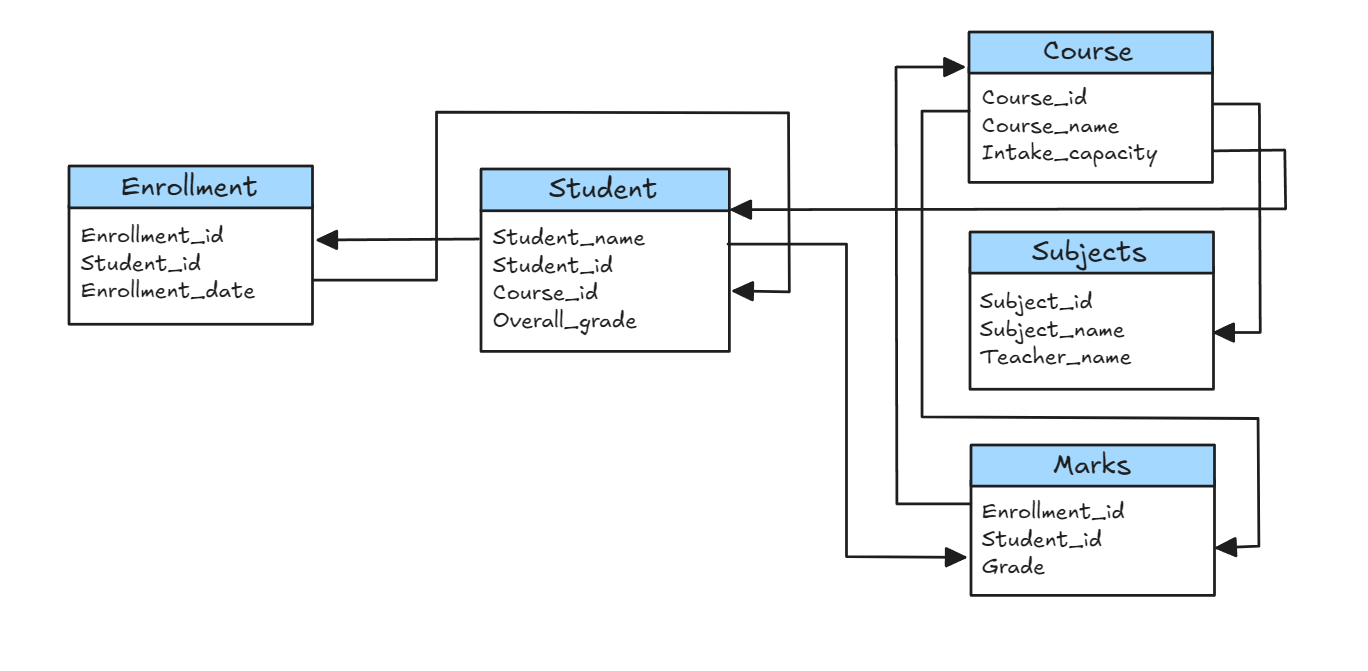
**ASSIGNMENT-3**

**Roll- 002311001094**

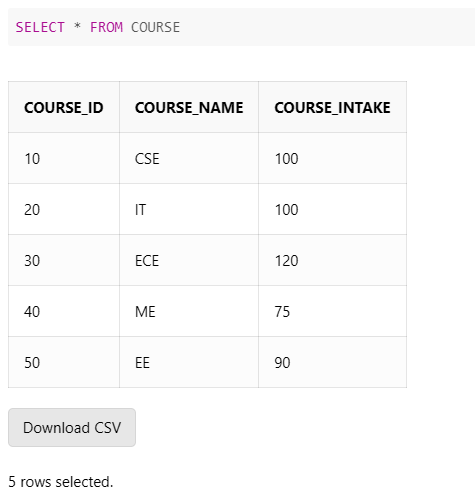
ER- Diagram



Database Schema



1.

Create Table COURSE (

COURSE\_ID number (2), COURSE\_NAME varchar2(10), COURSE\_INTAKE number (3),

PRIMARY KEY(COURSE\_ID))

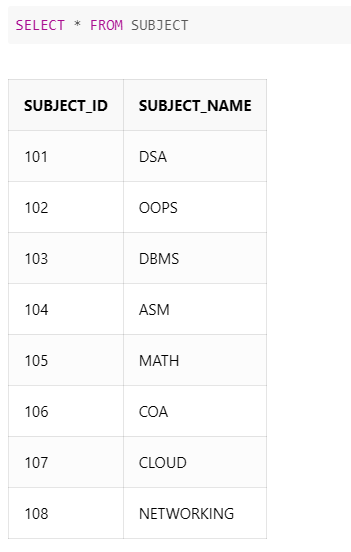
Insert into COURSE values (10, 'CSE', 100)

Insert into COURSE values (20, 'IT', 100)

Insert into COURSE values (30, 'ECE', 120)

Insert into COURSE values (40, 'ME', 75)

Insert into COURSE values (50, 'EE', 90)

CREATE TABLE SUBJECT (

SUBJECT\_ID NUMBER (3), SUBJECT\_NAME VARCHAR2(15),

PRIMARY KEY(SUBJECT\_ID))

INSERT INTO SUBJECT VALUES (101, 'DSA')

INSERT INTO SUBJECT VALUES (102, 'OOPS')

INSERT INTO SUBJECT VALUES (103, 'DBMS')

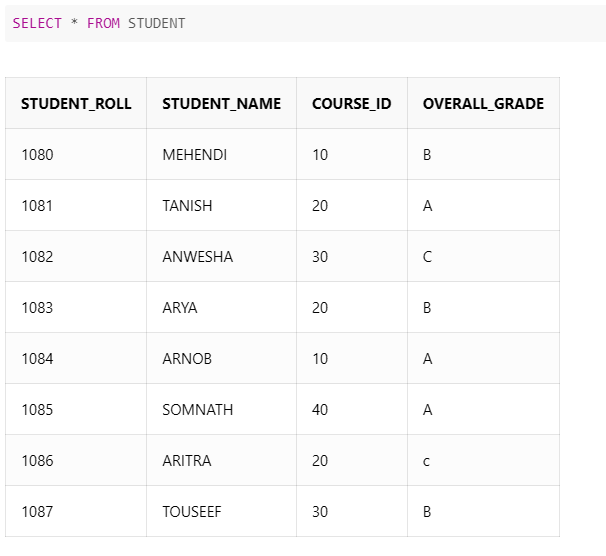
INSERT INTO SUBJECT VALUES (104, 'ASM')

INSERT INTO SUBJECT VALUES (105, 'MATH')

INSERT INTO SUBJECT VALUES (106, 'COA')

INSERT INTO SUBJECT VALUES (107, 'CLOUD')

INSERT INTO SUBJECT VALUES (108, 'NETWORKING')

CREATE TABLE STUDENT (

STUDENT\_ROLL NUMBER (5), STUDENT\_NAME VARCHAR2(25),

COURSE\_ID NUMBER (2), OVERALL\_GRADE VARCHAR2(1)

PRIMARY KEY(STUDENT\_ROLL),

FOREIGN KEY(COURSE\_ID) REFERENCES COURSE(COURSE\_ID)

ON DELETE CASCADE)

INSERT INTO STUDENT VALUES (1080, 'MEHENDI', 10, 'B')

INSERT INTO STUDENT VALUES (1081, 'TANISH', 20, 'A')

INSERT INTO STUDENT VALUES (1082, 'ANWESHA', 30, 'C')

INSERT INTO STUDENT VALUES (1083, 'ARYA', 20, 'B')

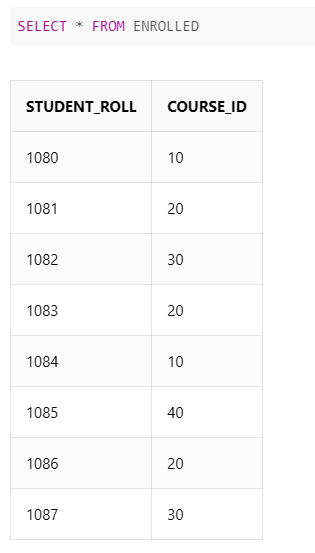
INSERT INTO STUDENT VALUES (1084, 'ARNOB', 10, 'A')

INSERT INTO STUDENT VALUES (1085, 'SOMNATH', 40, 'A')

INSERT INTO STUDENT VALUES (1086, 'ARITRA', 20, 'C')

INSERT INTO STUDENT VALUES (1087, 'TOUSEEF', 30, 'B')

CREATE TABLE ENROLLED (

STUDENT\_ROLL NUMBER (5), COURSE\_ID NUMBER (2),

FOREIGN KEY(STUDENT\_ROLL) REFERENCES STUDENT(STUDENT\_ROLL)

ON DELETE CASCADE,

FOREIGN KEY(COURSE\_ID) REFERENCES COURSE(COURSE\_ID)

ON DELETE CASCADE)

INSERT INTO ENROLLED VALUES (1080, 10)

INSERT INTO ENROLLED VALUES (1081, 20)

INSERT INTO ENROLLED VALUES (1082, 30)

INSERT INTO ENROLLED VALUES (1083, 20)

INSERT INTO ENROLLED VALUES (1084, 10)

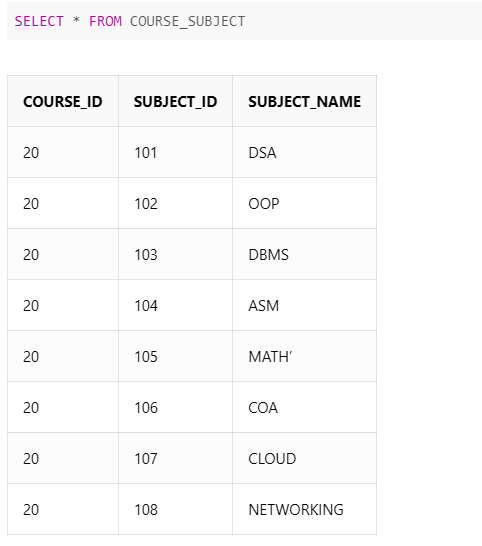
INSERT INTO ENROLLED VALUES (1085, 40)

INSERT INTO ENROLLED VALUES (1086, 20)

INSERT INTO ENROLLED VALUES (1087, 30)

CREATE TABLE COURSE\_SUBJECT(COURSE\_ID NUMBER (2), SUBJECT\_ID NUMBER (3), SUBJECT\_NAME VARCHAR (15),

FOREIGN KEY(COURSE\_ID) REFERENCES COURSE(COURSE\_ID) ON DELETE CASCADE, FOREIGN KEY(SUBJECT\_ID)

REFERENCES SUBJECT(SUBJECT\_ID) ON DELETE CASCADE)

INSERT INTO COURSE\_SUBJECT VALUES (20, 101, 'DSA')

INSERT INTO COURSE\_SUBJECT VALUES (20, 102, 'OOP')

INSERT INTO COURSE\_SUBJECT VALUES (20, 103, 'DBMS')

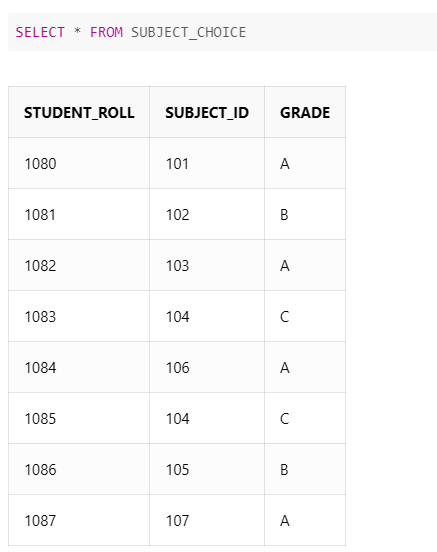
INSERT INTO COURSE\_SUBJECT VALUES (20, 104, 'ASM')

INSERT INTO COURSE\_SUBJECT VALUES (20, 105, 'MATH’')

INSERT INTO COURSE\_SUBJECT VALUES (20, 106, 'COA')

INSERT INTO COURSE\_SUBJECT VALUES (20, 107, 'CLOUD')

INSERT INTO COURSE\_SUBJECT VALUES (20, 108, 'NETWORKING')

CREATE TABLE SUBJECT\_CHOICE (STUDENT\_ROLL NUMBER (5),

SUBJECT\_ID NUMBER (3), GRADE VARCHAR2(1) ,

FOREIGN KEY(STUDENT\_ROLL) REFERENCES

STUDENT(STUDENT\_ROLL) ON DELETE CASCADE)

INSERT INTO SUBJECT\_CHOICE VALUES (1080, 101, 'A')

INSERT INTO SUBJECT\_CHOICE VALUES (1081, 102, 'B')

INSERT INTO SUBJECT\_CHOICE VALUES (1082, 103, 'A')

INSERT INTO SUBJECT\_CHOICE VALUES (1083, 104, 'C')

INSERT INTO SUBJECT\_CHOICE VALUES (1084, 106, 'A')

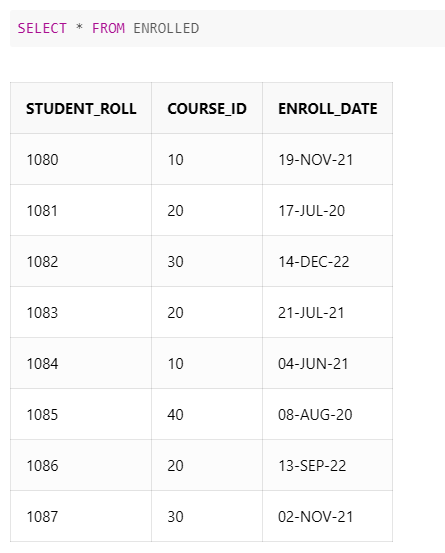
INSERT INTO SUBJECT\_CHOICE VALUES (1085, 104, 'C')

INSERT INTO SUBJECT\_CHOICE VALUES (1086, 105, 'B')

INSERT INTO SUBJECT\_CHOICE VALUES (1087, 107, 'A')

2.

ALTER TABLE ENROLLED

ADD (ENROLL\_DATE DATE)

UPDATE ENROLLED SET ENROLL\_DATE='19-NOV-21' WHERE STUDENT\_ROLL=1080

UPDATE ENROLLED SET ENROLL\_DATE='17-JUL-20' WHERE STUDENT\_ROLL=1081

UPDATE ENROLLED SET ENROLL\_DATE='14-DEC-22' WHERE STUDENT\_ROLL=1082

UPDATE ENROLLED SET ENROLL\_DATE='21-JUL-21' WHERE STUDENT\_ROLL=1083

UPDATE ENROLLED SET ENROLL\_DATE='04-JUN-21' WHERE STUDENT\_ROLL=1084

UPDATE ENROLLED SET ENROLL\_DATE='08-AUG-20' WHERE STUDENT\_ROLL=1085

UPDATE ENROLLED SET ENROLL\_DATE='13-SEP-22' WHERE STUDENT\_ROLL=1086

UPDATE ENROLLED SET ENROLL\_DATE='02-NOV-21' WHERE STUDENT\_ROLL=1087

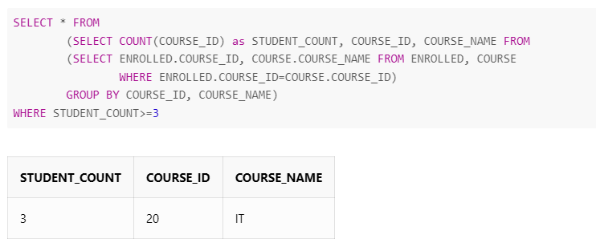
3.

ALTER TABLE COURSE

MODIFY COURSE\_NAME VARCHAR (10) NOT NULL;

4.

SELECT \* FROM

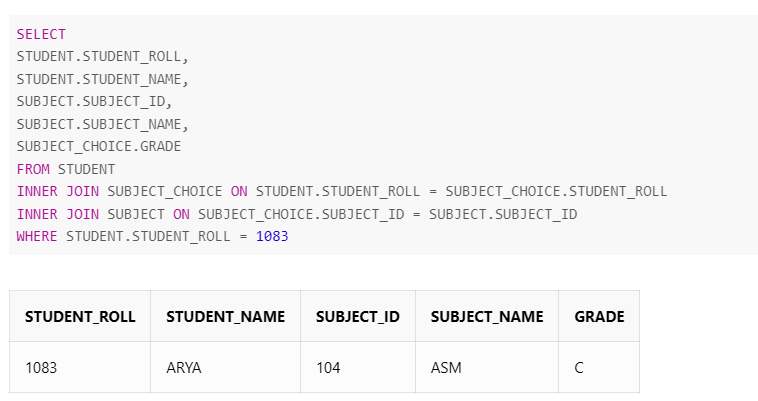
(SELECT COUNT(COURSE\_ID) as STUDENT\_COUNT, COURSE\_ID, COURSE\_NAME FROM

(SELECT ENROLLED.COURSE\_ID, COURSE.COURSE\_NAME FROM ENROLLED, COURSE

WHERE ENROLLED.COURSE\_ID=COURSE.COURSE\_ID)

GROUP BY COURSE\_ID, COURSE\_NAME)

WHERE STUDENT\_COUNT>=3;

5.

SELECT

STUDENT.STUDENT\_ROLL,

STUDENT.STUDENT\_NAME,

SUBJECT.SUBJECT\_ID,

SUBJECT.SUBJECT\_NAME,

SUBJECT\_CHOICE.GRADE

FROM STUDENT

INNER JOIN SUBJECT\_CHOICE ON STUDENT.STUDENT\_ROLL = SUBJECT\_CHOICE.STUDENT\_ROLL

INNER JOIN SUBJECT ON SUBJECT\_CHOICE.SUBJECT\_ID = SUBJECT.SUBJECT\_ID

WHERE STUDENT.STUDENT\_ROLL = 1083

6.

SELECT STUDENT\_COUNT, COURSE\_NAME FROM (

SELECT COUNT(COURSE\_ID) as STUDENT\_COUNT, COURSE\_ID, COURSE\_NAME

FROM (

SELECT ENROLLED.COURSE\_ID, COURSE.COURSE\_NAME

FROM ENROLLED, COURSE

WHERE ENROLLED.COURSE\_ID=COURSE.COURSE\_ID)

GROUP BY COURSE\_ID, COURSE\_NAME)

WHERE STUDENT\_COUNT = (

SELECT MAX(STUDENT\_COUNT) FROM (

SELECT COUNT(COURSE\_ID) AS STUDENT\_COUNT, COURSE\_ID, COURSE\_NAME

FROM (SELECT ENROLLED.COURSE\_ID, COURSE.COURSE\_NAME

FROM ENROLLED, COURSE

WHERE ENROLLED.COURSE\_ID=COURSE.COURSE\_ID)

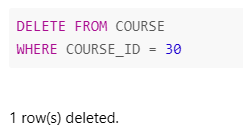
GROUP BY COURSE\_ID, COURSE\_NAME))

7.

SELECT COURSE.COURSE\_ID, COURSE\_NAME

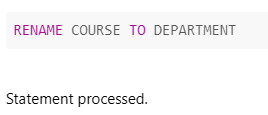
FROM COURSE LEFT JOIN STUDENT ON COURSE.COURSE\_ID = STUDENT.COURSE\_ID

WHERE STUDENT\_ROLL IS NULL;

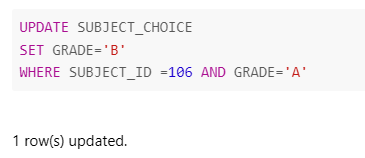
8.

DELETE FROM COURSE

WHERE COURSE\_ID = 30;

9.

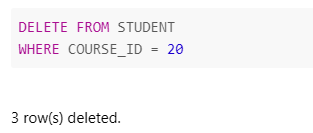
RENAME COURSE TO DEPARTMENT;

10.

UPDATE SUBJECT\_CHOICE

SET GRADE='B'

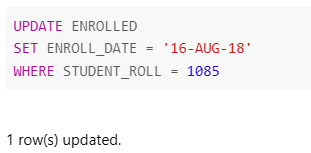
WHERE SUBJECT\_ID =106 AND GRADE='A';



11.

DELETE FROM STUDENT

WHERE COURSE\_ID = 20;



12.

UPDATE ENROLLED

SET ENROLL\_DATE = '16-AUG-18' WHERE STUDENT\_ROLL = 1085;