資工三 109590004 呂育瑋

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Q1(a).

UPDATE COURSE

SET CreditHour = 3

WHERE CourseName = 'Database Systems'

AND Department = 'EECS';

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Q1(b).

DELETE FROM STUDENT

WHERE `Name` = 'Edward'

AND StudentNumber = '001';

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Q1(c).

SELECT CourseName

FROM COURSE

WHERE CourseNumber IN (

SELECT CourseNumber

FROM SECTION

WHERE Instructor = 'Liu'

AND `Year` IN (2020, 2022)

);

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Q1(d).

SELECT CourseNumber, Semester, `Year`, COUNT(\*) AS Students

FROM SECTION AS SEC

INNER JOIN GRADE\_REPORT AS GR USING(SectionNumber)

WHERE Instructor = 'Liu'

GROUP BY CourseNumber, Semester, `Year`;

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Q1(e).

SELECT PREREQUISITE.PrerequisiteCourseNumber, PRECOURSE.CourseName AS PrerequisiteCourseName

FROM COURSE

INNER JOIN PREREQUISITE USING(CourseNumber)

INNER JOIN COURSE AS PRECOURSE

ON PREREQUISITE.PrerequisiteCourseNumber = PRECOURSE.CourseNumber

WHERE COURSE.CourseName = 'Web Programming'

AND COURSE.Department = 'EECS';

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Q1(f).

SELECT `Name`, COURSE.CourseNumber, CourseName, CreditHour, Semester, `Year`, Grade

FROM STUDENT

INNER JOIN GRADE\_REPORT USING(StudentNumber)

INNER JOIN SECTION USING(SectionNumber)

INNER JOIN COURSE USING(CourseNumber)

WHERE Class = 3;

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Q1(g).

SELECT `Name`

FROM STUDENT

WHERE StudentNumber IN (

SELECT StudentNumber

FROM GRADE\_REPORT

WHERE

Grade >= 80

);

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Q1(h).

SELECT `Name`, Major

FROM STUDENT AS ST

WHERE NOT EXISTS (

SELECT StudentNumber

FROM GRADE\_REPORT AS GR

WHERE ST.StudentNumber = GR.StudentNumber

AND Grade < 60

);

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Q1(i).

SELECT `Name`, Major

FROM STUDENT AS ST

WHERE EXISTS (

SELECT StudentNumber

FROM GRADE\_REPORT AS GR

WHERE ST.StudentNumber = GR.StudentNumber

AND Grade < 60

)

ORDER BY ST.StudentNumber ASC;

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Q1(j).

SELECT `Name`, AVG(Grade) as AverageGrade

FROM GRADE\_REPORT AS GR

INNER JOIN STUDENT AS ST USING(StudentNumber)

INNER JOIN SECTION AS SEC USING(SectionNumber)

WHERE `Year` = 2022

GROUP BY ST.StudentNumber HAVING AverageGrade > 80;

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Q1(k).

SELECT Major, COUNT(\*)

FROM (

SELECT Major, AVG(Grade) AS AverageGrade

FROM GRADE\_REPORT AS GR

INNER JOIN STUDENT AS ST USING(StudentNumber)

GROUP BY Major, ST.StudentNumber HAVING AverageGrade < 60

) AVGTABLE

GROUP BY Major;

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Q1(l).

CREATE VIEW STUDENT\_INFO\_VIEW

AS

SELECT StudentNumber, `Name`, CourseName, Semester, `Year`, Grade

FROM STUDENT

INNER JOIN GRADE\_REPORT USING(StudentNumber)

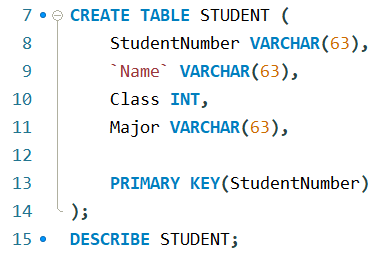
INNER JOIN SECTION USING(SectionNumber)

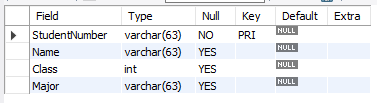
INNER JOIN COURSE USING(CourseNumber);

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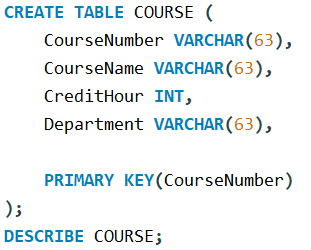
Q2(a).

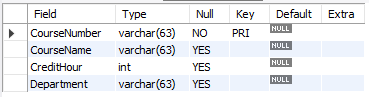
CREATE TABLE STUDENT



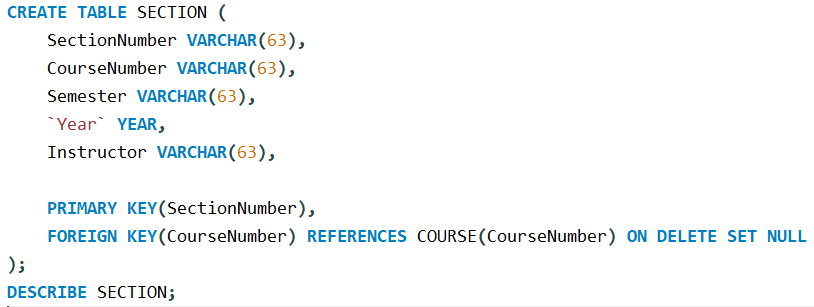


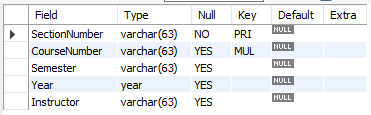
CREATE TABLE COURSE



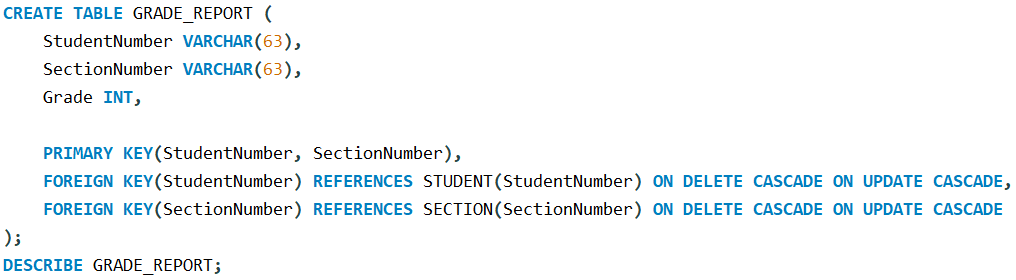


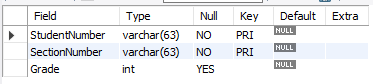
CREATE TABLE SECTION

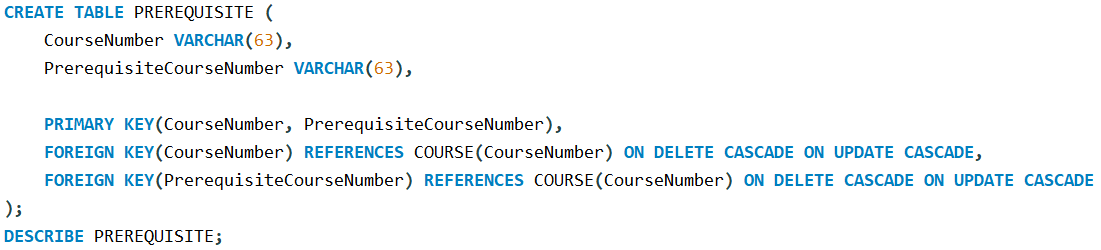


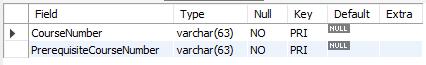


CREATE TABLE GRADE\_REPORT





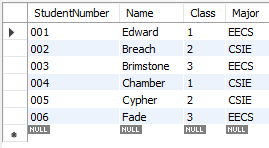
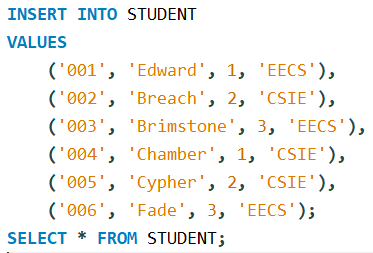
CREATE TABLE PREREQUISITE



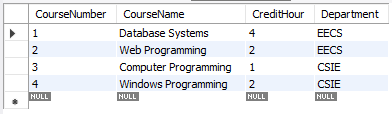
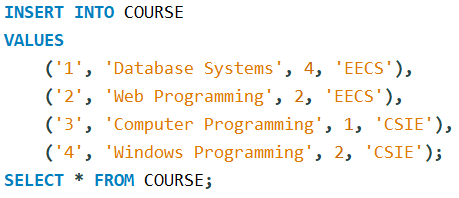
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Q2(b).

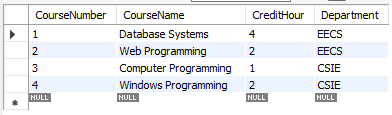
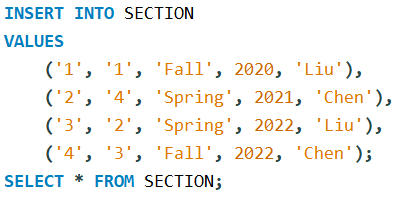
INSERT INTO STUDENT



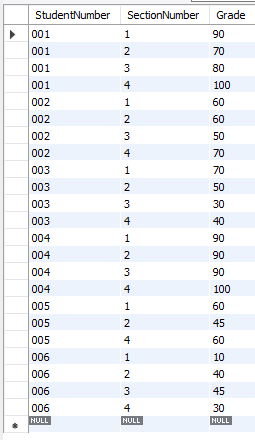
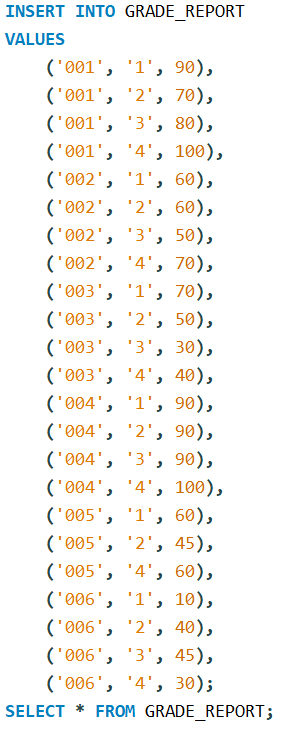
INSERT INTO COURSE



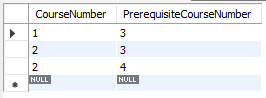
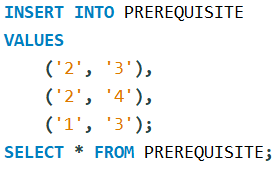
INSERT INTO SECTION



INSERT INTO GRADE\_REPORT



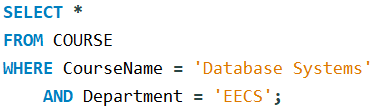
INSERT INTO PREREQUISITE



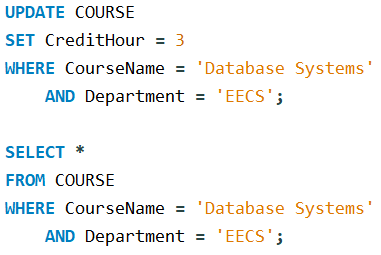
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Q2(c).

1(a)



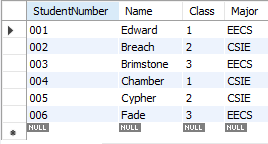


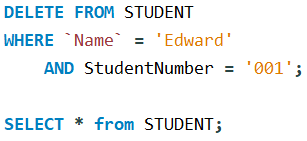


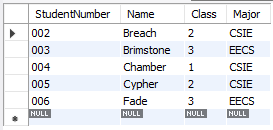


1(b)

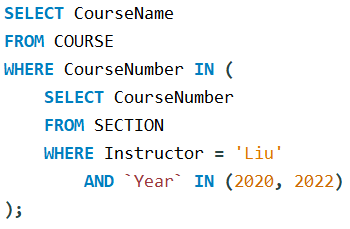


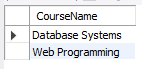




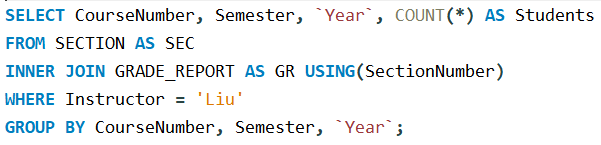


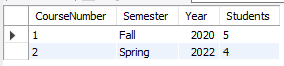
1(c)



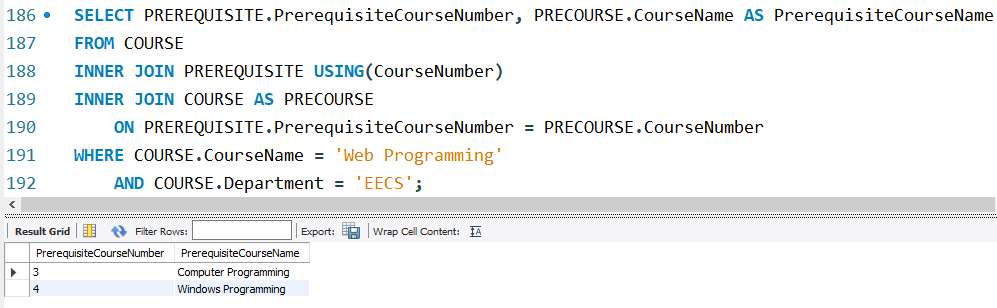


1(d)

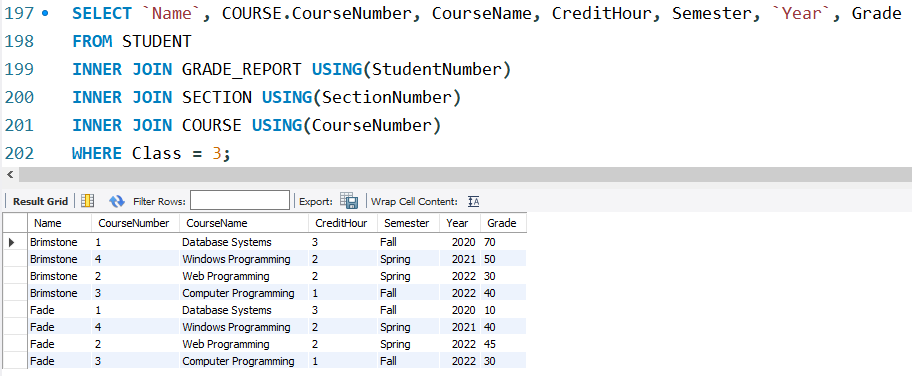




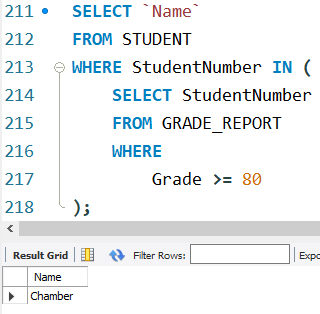
1(e)



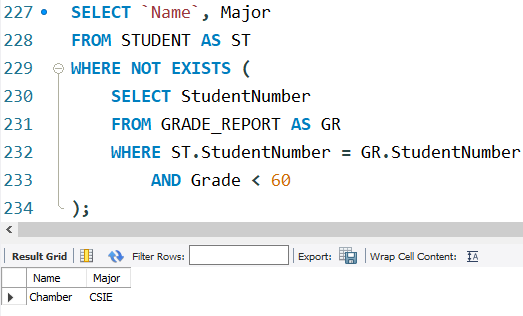
1(f)



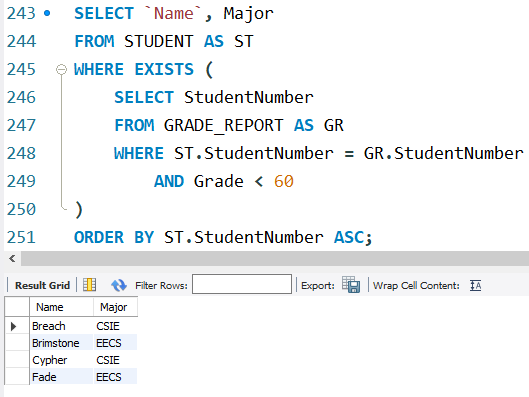
1(g)



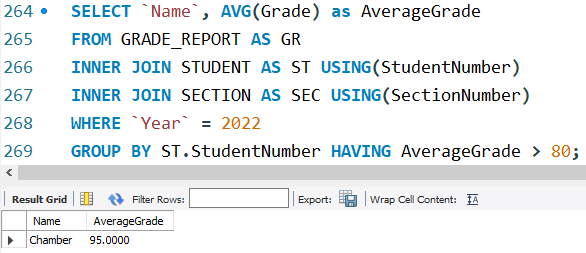
1(h)



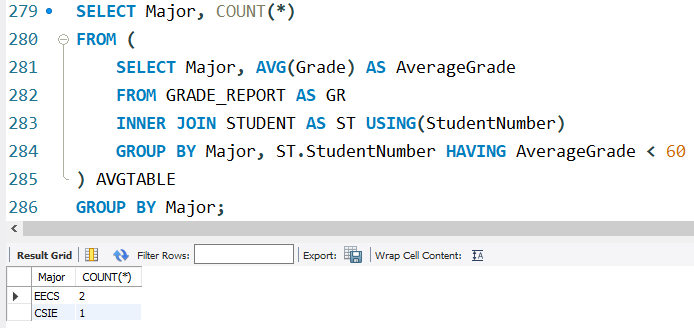
1(i)



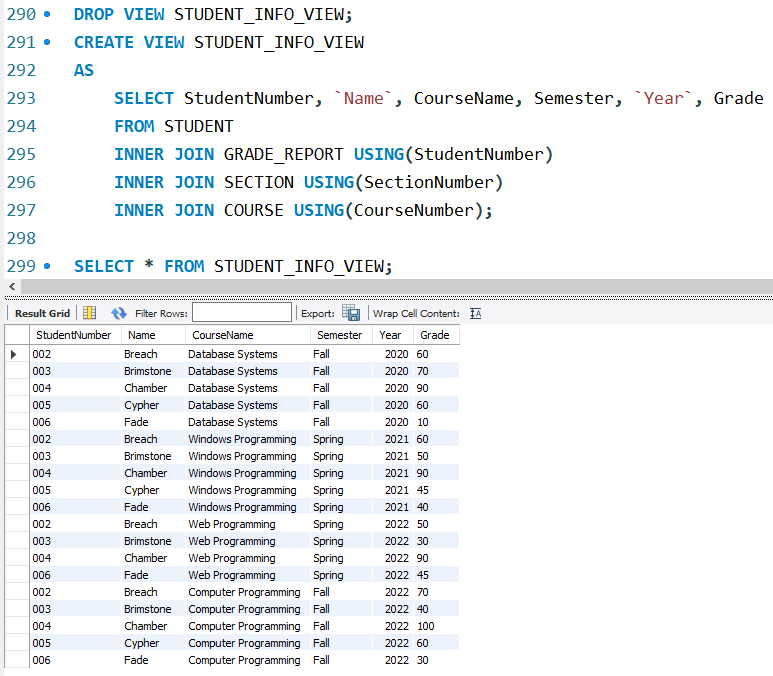
1(j)



1(k)



1(l)



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Q2(d).

