

EE477 HWO

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Task 1

(1) CREATE DATABASE coursys;

USE coursys;

(2) CREATE TABLE grades(

studentid INT REFERENCES students(id),

course CHAR(10),

mark DOUBLE PRECISION,

credit DOUBLE PRECISION,

PRIMARY KEY (studentid, course));

INSERT INTO grades(studentid, course, mark, credit) VALUES

(20210001, 'EE477', 90, 3.5), (20210001, 'EE412', 85, 4), (20210001, 'EE209', 79.5, 5),

(20210002, 'EE477', 95, 3.5), (20210002, 'EE209', 59, 5), (20210002, 'EE412', 70, 4);

```
mysql> SELECT *
-> FROM grades;
+-----+-----+-----+-----+
| studentid | course | mark | credit |
+-----+-----+-----+-----+
| 20210001 | EE209 | 79.5 | 5 |
| 20210001 | EE412 | 85 | 4 |
| 20210001 | EE477 | 90 | 3.5 |
| 20210002 | EE209 | 59 | 5 |
| 20210002 | EE412 | 70 | 4 |
| 20210002 | EE477 | 95 | 3.5 |
+-----+-----+-----+-----+
```

(3) CREATE TABLE students(id INT PRIMARY KEY,

name VARCHAR(30) DEFAULT '',

gender CHAR(6),

age INT);

INSERT INTO students(id, name, gender, age) VALUES

(20210001, 'Roh', 'Female', 26), (20210002, 'Tae', 'Male', 23);

```
mysql> SELECT *
-> FROM students;
+-----+-----+-----+-----+
| id      | name | gender | age |
+-----+-----+-----+-----+
| 20210001 | Roh  | Female | 26  |
| 20210002 | Tae  | Male   | 23  |
+-----+-----+-----+-----+
```

Task 2

(1) SELECT *

FROM grades;

```
mysql> SELECT *
-> FROM grades;
+-----+-----+-----+-----+
| studentid | course | mark | credit |
+-----+-----+-----+-----+
| 20210001 | EE209  | 79.5 | 5       |
| 20210001 | EE412  | 85   | 4       |
| 20210001 | EE477  | 90   | 3.5     |
| 20210002 | EE209  | 59   | 5       |
| 20210002 | EE412  | 70   | 4       |
| 20210002 | EE477  | 95   | 3.5     |
+-----+-----+-----+-----+
```

(2) SELECT *

FROM grades

WHERE course = 'EE477';

```
mysql> SELECT *
-> FROM grades
-> WHERE course = 'EE477';
+-----+-----+-----+-----+
| studentid | course | mark | credit |
+-----+-----+-----+-----+
| 20210001 | EE477 | 90 | 3.5 |
| 20210002 | EE477 | 95 | 3.5 |
+-----+-----+-----+-----+
```

(3) SELECT *

FROM grades

WHERE mark > 60 AND credit >= 4;

```
mysql> SELECT *
-> FROM grades
-> WHERE mark > 60 AND credit >= 4;
+-----+-----+-----+-----+
| studentid | course | mark | credit |
+-----+-----+-----+-----+
| 20210001 | EE209 | 79.5 | 5 |
| 20210001 | EE412 | 85 | 4 |
| 20210002 | EE412 | 70 | 4 |
+-----+-----+-----+-----+
```

(4) SELECT *

FROM grades

WHERE course LIKE 'EE4%';

```
mysql> SELECT *
-> FROM grades
-> WHERE course LIKE 'EE4%';
+-----+-----+-----+-----+
| studentid | course | mark | credit |
+-----+-----+-----+-----+
| 20210001 | EE412 | 85 | 4 |
| 20210001 | EE477 | 90 | 3.5 |
| 20210002 | EE412 | 70 | 4 |
| 20210002 | EE477 | 95 | 3.5 |
+-----+-----+-----+-----+
```

(5) SELECT studentid, course, mark

FROM grades;

```
mysql> SELECT studentid, course, mark
-> FROM grades;
+-----+-----+-----+
| studentid | course | mark |
+-----+-----+-----+
| 20210001 | EE209 | 79.5 |
| 20210001 | EE412 | 85 |
| 20210001 | EE477 | 90 |
| 20210002 | EE209 | 59 |
| 20210002 | EE412 | 70 |
| 20210002 | EE477 | 95 |
+-----+-----+-----+
```

(6) SELECT DISTINCT course

FROM grades;

```
mysql> SELECT DISTINCT course
-> FROM grades;
+-----+
| course |
+-----+
| EE209 |
| EE412 |
| EE477 |
+-----+
```

(7) SELECT studentid, course, mark * credit AS markpoint

FROM grades;

```
mysql> SELECT studentid, course, mark * credit AS markpoint
-> FROM grades;
+-----+-----+-----+
| studentid | course | markpoint |
+-----+-----+-----+
| 20210001 | EE209 | 397.5 |
| 20210001 | EE412 | 340 |
| 20210001 | EE477 | 315 |
| 20210002 | EE209 | 295 |
| 20210002 | EE412 | 280 |
| 20210002 | EE477 | 332.5 |
+-----+-----+-----+
```

(8) SELECT name, mark

FROM grades, students

WHERE course = 'EE477' AND studentid = id;

```
mysql> SELECT name, mark
-> FROM grades, students
-> WHERE course = 'EE477' AND studentid = id;
+-----+-----+
| name | mark |
+-----+-----+
| Roh  | 90   |
| Tae  | 95   |
+-----+-----+
```

(9) SELECT studentid, course,

CASE

WHEN mark >= 90 THEN 'A'

WHEN mark >= 80 AND mark < 90 THEN 'B'

WHEN mark >= 70 AND mark < 80 THEN 'C'

WHEN mark >= 60 AND mark < 70 THEN 'D'

WHEN mark < 60 THEN 'F'

END AS lettergrade

FROM grades;

```
mysql> SELECT studentid, course,
-> CASE
-> WHEN mark >= 90 THEN 'A'
-> WHEN mark >= 80 AND mark < 90 THEN 'B'
-> WHEN mark >= 70 AND mark < 80 THEN 'C'
-> WHEN mark >= 60 AND mark < 70 THEN 'D'
-> WHEN mark < 60 THEN 'F'
-> END AS lettergrade
-> FROM grades;
+-----+-----+-----+
| studentid | course | lettergrade |
+-----+-----+-----+
| 20210001 | EE209  | C           |
| 20210001 | EE412  | B           |
| 20210001 | EE477  | A           |
| 20210002 | EE209  | F           |
| 20210002 | EE412  | C           |
| 20210002 | EE477  | A           |
+-----+-----+-----+
```