

Database Management Systems

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University Schema

Find the names of all the students whose total credits are greater than 100 .

Find the course id and grades of all courses taken by any student named 'Tanaka'.

```
MariaDB [University] > select * from takes where ID=(select ID from student where name="Tanaka");
        | course_id | sec_id | semester | year | grade |
  98988 |
          BIO-101
                                          2009
                               Summer
  98988
         BIO-301
                                          2010 | NULL
                              Summer
2 rows in set (0.001 sec)
MariaDB [University]> select takes.* from takes inner join student on takes.Id=student.Id where student.name='Tanaka';
          course_id | sec_id | semester | year | grade
 ID
  98988 I
          BIO-101
                               Summer
                                          2009
                     1
 98988 | BIO-301
                                          2010 | NULL
                               Summer
2 rows in set (0.001 sec)
MariaDB [University]>
```

Find the courses which are offered in both 'Fall' and 'Spring' semester (not necessarily in the same year).

Find the names of all the instructors from Comp. Sci. department.

Find the course id and titles of all courses taught by an instructor named 'Srinivasan

MariaDB [University]> select c.course_id, c.title from instructor as i inner join teaches as t on i.ID = t.ID inner join course as c on t.course_id = c.course_id where i.name = 'Srinivasan'

title
Intro. to Computer Science Robotics Database System Concepts

3 rows in set (0.001 sec)

MariaDB [University]>

Find the names of instructors who have taught at least one course in Spring 2009.

PRINCE PRINCE

MariaDB [University]> select distinct i.name

→ from instructor i

→ inner join teaches t on i.ID = t.ID

→ inner join section s on t.course_id = s.course_id

COEP Tech

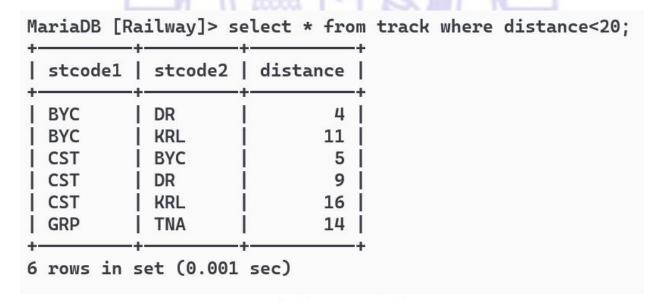
→ WHERE s.semester = 'Spring' and s.year = 2009;



2 rows in set (0.001 sec)

Railway Schema

Find pairs of stations (station codes) that have a track (direct connection) with distance less than 20Kms between them.



Find the IDs of all the trains which have a stop at THANE

Find the names of all trains that start at MUMBAI.

List all the stations in order of visit by the train 'CST-AMR_LOCAL'.

MariaDB [Railway]> select * from trainhalts where id=(select id from train where name='CST-AMR_LOCAL') order by seqno;

id	seqno	stcode	timein	timeout
A65	0	CST	NULL	20.52
A65	1	BYC	21.00	21.01
A65	2	DR	21.10	21.11
A65	3	KRL	21.22	21.23
A65	4	GPR	21.28	21.29
A65	5	TNA	21.49	21.50
A65	6	DL	22.13	22.14
A65	7	KYN	22.22	22.23
A65	8	AMR	22.36	NULL

9 rows in set (0.001 sec)

MariaDB [Railway]> select s.name

- → from trainhalts as t
- \rightarrow join station as s ON t.stcode = s.stcode
- ightarrow where t.id = (select id from train where name="CST-AMR_LOCAL")
- \rightarrow order by t.seqno;

