Playing at the database level
mysql> show databases;

mysql> create database IMS;

mysql> use IMS;

After entering a specific database IMS
mysql> show tables;

mysql> create table department (dept_name varchar (20), building varchar (15), budget numeric (12,2), primary key (dept_name));

mysql> show tables;

mysql> select * from department;

mysql> create table instructor (ID varchar (5), name varchar (20) not null, dept_name varchar (20), salary numeric (8,2), primary key (ID), foreign key (dept_name) references department (dept_name));

mysql> select * from instructor;

Inserting rows in a table
mysql> insert into instructor values (10211, 'Smith', 'Biology', 66000);

Throws an error: Foreign key constraint.

mysql> insert into department values ('Biology', 'Genes', 8987689);

mysql> insert into instructor values (10211, 'Smith', 'Biology', 66000);

mysql> insert into department values ('CSE', 'Charles', 987689);

mysql> insert into department values ('Physics', 'Newton', 7657899);

mysql> insert into instructor values (10212, 'Mayank', 'CSE', 56000);

mysql> insert into instructor values (10213, 'Soumya', 'Physics', 56700);

mysql> select * from instructor;

mysql> select name from instructor;

mysql> insert into instructor values (10214, 'Smith', 'CSE', 786700);

mysql> select name from instructor;

mysql> select distinct name from instructor;

mysql> select ID, name, dept_name, salary *1.1 from instructor;

Selecting specific rows
mysql> select name from instructor where salary > 70000;

mysql> select name from instructor where salary > 70000 and dept_name='CSE';

Delete specific rows
mysql> delete from instructor where name='Smith';

Drop the table content as well as the schema
mysql> drop table instructor;

mysql> select * from instructor;

Drop the database
mysql> drop database IMS;

Updating a given column value
mysql> update instructor set name = "Mayank Singh" where name = "Mayank";

Cartesian product and Joins
mysql> select * from instructor, department;

mysql> select * from instructor, department where instructor.dept_name = department.dept_name;

mysql> select name, instructor.dept_name, building from instructor, department where instructor.dept_name = department.dept_name;

mysql>select * from instructor natural join department;

Renaming
mysql> select name as instructor_name, instructor.dept_name as department_name, building as department_building_name from instructor, department where instructor.dept_name = department.dept_name;

mysql> select name as instructor_name, I.dept_name as department_name, building as department_building_name from instructor as I, department as D where I.dept_name = D.dept_name;

Task: Find the names of all instructors whose salary is greater than at least one instructor in the Biology department.

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mysql> select distinct T.name from instructor as T, instructor as S where T.salary > S.salary and
S.dept_name = 'Biology';
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