Command Example

CREATE TABLE create table student ( ID char(9) primary key, name

varchar (20) not null, deptName varchar( 20),

foreign key (deptName) references department));

DROP TABLE drop table table-name;

ALTER TABLE alter table r add A D; alter table r drop A;

INSERT insert into insert into student values (’3003’, ’Green’,

’Finance’, null);

DELETE delete from delete from instructor where dept\_name=

’Finance’;

UPDATE update instructor set salary = salary\* 1.03 where

salary > 100000;

CASE update instructor set salary = case when salary <=

100000 then salary \* 1.05 else salary \* 1.03 end;

SELECT FROM WHERE select name from instructor where dept\_name=‘Comp.

Sci.' and salary > 80000;

select ∗ from instructor, teaches; (Cartesian product)

select \* from instructor natural join teaches; (natural

join)

NESTED SUB QUERIES select distinct course\_id from section where semester

= ’Fall’ and year= 2009 and course\_id in (select courseId

from section where semester = ’Spring’ and year=

2010);

AS select ID, name, salary/12 as monthly salary from

instructor;

STRING OPERATIONS select name from instructor where name like '%dar%';

LOGICAL OPERATIONS and, or, not Be careful with comparisons with “null”.

SET OPERATIONS union intersect except select … from … where … union

select … from … where …

You can only perform set operations when the two relations have the same attributes. Duplicates can be kept if you choose to use the parameter “all” after set operation.

AGGREGATION FUNCTIONS avg, min, max, sum, count

All aggregate operations except count (\*) ignore null values.

select avg(salary) from instructor where dept\_name= ’Comp. Sci.’;

You can only perform one aggregate function at a time.

GROUPBY select dept\_name, avg(salary) from instructor group by

dept\_name;

HAVING VS WHERE Predicates in the having clause are applied after the formation

of groups whereas predicates in the where clause are applied

before forming groups.

select dept\_name, avg(salary) from instructor group by

dept\_name having avg(salary) > 42000;

SET COMPARITION >, <, =, some, all.

select name from instructor where salary > some (select salary

from instructor where dept name = ’Biology’);