

DML : Data Manipulation Lang.

- Select: Retrieve Data
- Insert: To add new rows (Tuples)
- Update: To update the values of existing rows
- delete: To del. rows of a Table

Select [distinct] <Columns exp>

→ Columns of output

From <Tables / Subqueries>

→ The Tables to select from

Where <Constraint1  
and  
Constraint2  
and  
... >

Group By <Columns>

Having <Group By Conditions>

Order by <Columns>  
[Direction]

Limit [n]

Offset [m]

<Column exp> :

- The name of a Column  
and address

• e.g., The name of the Departments

Select DeptName, Address  
From Department

- To remove duplicate values  
of the output: DISTINCT

• e.g., The Buildings of the Departments  
addresses

Select DISTINCT address  
from Department

- '\*' : To select ALL Columns

• e.g., To see all information of  
Departments:

Select \*  
From Department

- Inject math. Operations

• e.g., what the Professor Salaries  
would be after a 10% raise

Select name, 1.1 \* Salary  
From Professor

- Aggregation Operations  
↳ later

- Rename the Columns (Alias): AS

• e.g., Select Distinct Address AS Building  
From Department

From <Tables>  
where <Conditions>

- e.g., The Professors with  
Salary at least \$5000

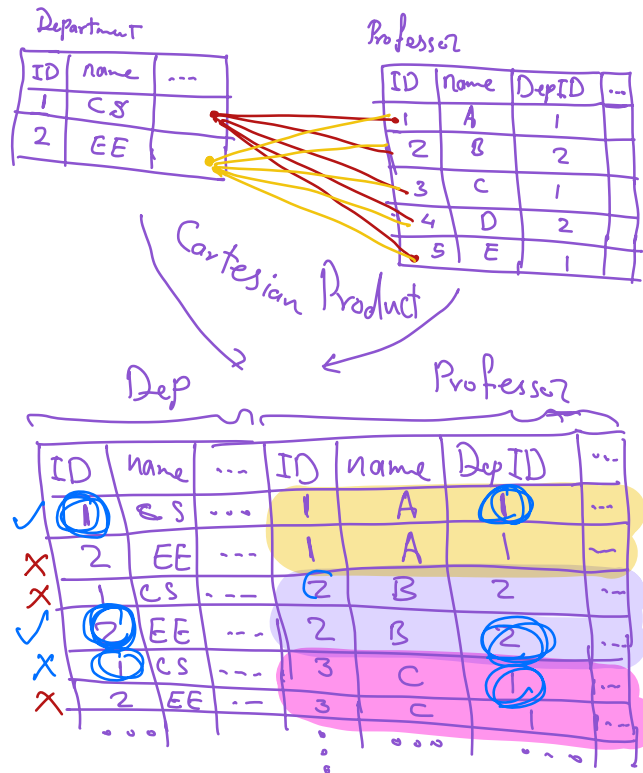
Select \*  
from Professor  
where Salary  $\geq$  5000

- e.g., The Professors of  
the 'CS' Department

Select Professor.name  
from Department, Professor  
where  
Department.ID = DepID  
and  
Department.name = 'CS'

output

| name |
|------|
| A    |
| C    |
| E    |



- Observation:  
The Size of Cartesian  
Product is  $n \times m$

Select P.name, P.Id  
from Course, Course AS P  
where  
Course.PreReqID = P.Id  
and  
Course.name = 'DB'