

SQL

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4th Week

Agenda

- Retrieving tuples
- Cross Join
- Inner Join (Join)
- Subqueries
- Operators
 - ANY, ALL, IN, and EXISTS
 - <> ANY, <> ALL, <> IN, and NOT EXISTS

For exercises

Execute “creating_tables_for_week4.sql”

```
[oneq@oneq-2 ~/Desktop/SFWRENG 3DB3]$ scp creating_tables_for_week4.sql kimw30@se3db3.cas.mcmaster.ca:~
kimw30@se3db3.cas.mcmaster.ca's password:
creating_tables_for_week4.sql
100% 667 281.7KB/s 00:00
```

```
db2 => list tables
```

Table/View	Schema	Type	Creation time
CELLPHONE	KIMW30	T	2024-09-12-10.03.55.416486
FACULTY	KIMW30	T	2024-09-16-16.37.21.358667
PLAYLIST	KIMW30	T	2024-09-12-10.03.55.464233
STUDENT	KIMW30	T	2024-09-16-16.37.21.265697

```
4 record(s) selected.
```

```
db2 => select * from student;
```

STUDENTID	NAME	AGE	FACULTY
40045678	Luke	19	CAS
40045679	Sam	20	ECE
40045680	Hannah	19	CAS
40045681	Alex	19	CAS
40045682	Zoey	20	ECE

```
5 record(s) selected.
```

```
db2 => select * from faculty;
```

FACULTYID	NAME	HOD
1	CAS	Dr. Smith
2	ECE	Dr. Bishop

```
2 record(s) selected.
```

Retrieving Tuples – One Column

SELECT – FROM – WHERE Clause

Student

StudentID	Name	Age	Faculty
40045678	Luke	19	CAS
40045679	Sam	20	ECE
40045680	Hannah	19	CAS
40045681	Alex	19	CAS
40045682	Zoey	20	ECE

```
SELECT Name  
FROM Student  
WHERE Faculty = 'CAS'
```

Result -

Name
Luke
Hannah
Alex

Retrieving Tuples – Multiple Columns

Student

StudentID	Name	Age	Faculty
40045678	Luke	19	CAS
40045679	Sam	20	ECE
40045680	Hannah	19	CAS
40045681	Alex	19	CAS
40045682	Zoey	20	ECE

```
SELECT Name, Age  
FROM Student  
WHERE Faculty = 'CAS'
```

Result -

Name	Age
Luke	19
Hannah	19
Alex	19

Retrieving Tuples – All Columns

Student

StudentID	Name	Age	Faculty
40045678	Luke	19	CAS
40045679	Sam	20	ECE
40045680	Hannah	19	CAS
40045681	Alex	19	CAS
40045682	Zoey	20	ECE

```
SELECT *  
FROM Student  
WHERE Faculty = 'CAS'
```

Result -

StudentID	Name	Age	Faculty
40045678	Luke	19	CAS
40045680	Hannah	19	CAS
40045681	Alex	19	CAS

Retrieve Student Names and their corresponding Faculty Names for all Students aged 19.

Student

StudentID	Name	Age	FacultyID
40045678	Luke	19	1
40045679	Sam	20	2
40045680	Hannah	19	1
40045681	Alex	19	1
40045682	Zoey	20	2

HOW?

Faculty

FacultyID	Name	HOD
1	CAS	Dr. Smith
2	ECE	Dr. Bishop

StudentName	FacultyName

Retrieving Tuples – From Multiple Tables

Execute “modifying_column_for week4.sql”

Student

StudentID	Name	Age	FacultyID
40045678	Luke	19	1
40045679	Sam	20	2
40045680	Hannah	19	1
40045681	Alex	19	1
40045682	Zoey	20	2

FK

Faculty

FacultyID	Name	HOD
1	CAS	Dr. Smith
2	ECE	Dr. Bishop

How to join tables – Cross Join

- Produces cartesian product of two tables
- Total number of tuples in result
 - = # tuples in first table (n) * # tuples in second table (m)
 - = n * m

SELECT *
FROM Student
CROSS JOIN Faculty

OR
SELECT *
FROM Student, Faculty

Student

StudentID	Name	Age	FacultyID
40045678	Luke	19	1
40045679	Sam	20	2
40045680	Hannah	19	1
40045681	Alex	19	1
40045682	Zoey	20	2

Faculty

FacultyID	Name	HOD
1	CAS	Dr. Smith
2	ECE	Dr. Bishop

StudentID	Name	Age	FacultyID	FacultyID	Name	HOD
40045678	Luke	19	1	1	CAS	Dr. Smith
40045678	Luke	19	1	2	ECE	Dr. Bishop
40045679	Sam	20	2	1	CAS	Dr. Smith
40045679	Sam	20	2	2	ECE	Dr. Bishop
40045680	Hannah	19	1	1	CAS	Dr. Smith
40045680	Hannah	19	1	2	ECE	Dr. Bishop
40045681	Alex	19	1	1	CAS	Dr. Smith
40045681	Alex	19	1	2	ECE	Dr. Bishop
40045682	Zoey	20	2	1	CAS	Dr. Smith
40045682	Zoey	20	2	2	ECE	Dr. Bishop

Number of tuple = 5 * 2 = 10

How to join tables – Inner Join or Join

- Join the tables using a WHERE or ON clause

```
SELECT *  
FROM Student, Faculty  
WHERE Student.FacultyID = Faculty.FacultyID
```

OR

```
SELECT *  
FROM Student  
(INNER) JOIN Faculty  
ON Student.FacultyID = Faculty.FacultyID
```

StudentID	Name	Age	Student.FacultyID	Faculty.FacultyID	Name	HOD
40045678	Luke	19	1	1	CAS	Dr. Smith
40045679	Sam	20	2	2	ECE	Dr. Bishop
40045680	Hannah	19	1	1	CAS	Dr. Smith
40045681	Alex	19	1	1	CAS	Dr. Smith
40045682	Zoey	20	2	2	ECE	Dr. Bishop

```
SELECT S.StudentID, S.Name, F.Name
FROM Student S, Faculty F
WHERE S.FacultyID = F.FacultyID
```

Student

StudentID	Name	Age	FacultyID
40045678	Luke	19	1
40045679	Sam	20	2
40045680	Hannah	19	1
40045681	Alex	19	1
40045682	Zoey	20	2

Faculty

FacultyID	Name	HOD
1	CAS	Dr. Smith
2	ECE	Dr. Bishop

OR

```
SELECT S.StudentID, S.Name, F.Name
FROM Student S
JOIN Faculty F
ON S.FacultyID = F.FacultyID
```

S.StudentID	S.Name	F.Name

```
SELECT S.StudentID, S.Name, F.Name
FROM Student S, Faculty F
WHERE S.FacultyID = F.FacultyID
```

OR

```
SELECT S.StudentID, S.Name, F.Name
FROM Student S
JOIN Faculty F
ON S.FacultyID = F.FacultyID
```

Student

StudentID	Name	Age	FacultyID
40045678	Luke	19	1
40045679	Sam	20	2
40045680	Hannah	19	1
40045681	Alex	19	1
40045682	Zoey	20	2

Faculty

FacultyID	Name	HOD
1	CAS	Dr. Smith
2	ECE	Dr. Bishop

Compare S.FacultyID with F.FacultyID

S.StudentID	S.Name	F.Name

```
SELECT S.StudentID, S.Name, F.Name
FROM Student S, Faculty F
WHERE S.FacultyID = F.FacultyID
```

OR

```
SELECT S.StudentID, S.Name, F.Name
FROM Student S
JOIN Faculty F
ON S.FacultyID = F.FacultyID
```

Student

StudentID	Name	Age	FacultyID
40045678	Luke	19	1
40045679	Sam	20	2
40045680	Hannah	19	1
40045681	Alex	19	1
40045682	Zoey	20	2

Faculty

FacultyID	Name	HOD
1	CAS	Dr. Smith
2	ECE	Dr. Bishop

Compare S.FacultyID with F.FacultyID

S.StudentID	S.Name	F.Name
40045678	Luke	CAS

```
SELECT S.StudentID, S.Name, F.Name
FROM Student S, Faculty F
WHERE S.FacultyID = F.FacultyID
```

Student

StudentID	Name	Age	FacultyID
40045678	Luke	19	1
40045679	Sam	20	2
40045680	Hannah	19	1
40045681	Alex	19	1
40045682	Zoey	20	2

Faculty

FacultyID	Name	HOD
1	CAS	Dr. Smith
2	ECE	Dr. Bishop

Compare S.FacultyID
with F.FacultyID

OR

```
SELECT S.StudentID, S.Name, F.Name
FROM Student S
JOIN Faculty F
ON S.FacultyID = F.FacultyID
```

S.StudentID	S.Name	F.Name
40045678	Luke	CAS

```
SELECT S.StudentID, S.Name, F.Name
FROM Student S, Faculty F
WHERE S.FacultyID = F.FacultyID
```

OR

```
SELECT S.StudentID, S.Name, F.Name
FROM Student S
JOIN Faculty F
ON S.FacultyID = F.FacultyID
```

Student

StudentID	Name	Age	FacultyID
40045678	Luke	19	1
40045679	Sam	20	2
40045680	Hannah	19	1
40045681	Alex	19	1
40045682	Zoey	20	2

Faculty

FacultyID	Name	HOD
1	CAS	Dr. Smith
2	ECE	Dr. Bishop

Compare S.FacultyID
with F.FacultyID

S.StudentID	S.Name	F.Name
40045678	Luke	CAS


```
SELECT S.StudentID, S.Name, F.Name
FROM Student S, Faculty F
WHERE S.FacultyID = F.FacultyID
```

OR

```
SELECT S.StudentID, S.Name, F.Name
FROM Student S
JOIN Faculty F
ON S.FacultyID = F.FacultyID
```

Student

StudentID	Name	Age	FacultyID
40045678	Luke	19	1
40045679	Sam	20	2
40045680	Hannah	19	1
40045681	Alex	19	1
40045682	Zoey	20	2

Faculty

FacultyID	Name	HOD
1	CAS	Dr. Smith
2	ECE	Dr. Bishop

Compare S.FacultyID with F.FacultyID

S.StudentID	S.Name	F.Name
40045678	Luke	CAS

```
SELECT S.StudentID, S.Name, F.Name
FROM Student S, Faculty F
WHERE S.FacultyID = F.FacultyID
```

OR

```
SELECT S.StudentID, S.Name, F.Name
FROM Student S
JOIN Faculty F
ON S.FacultyID = F.FacultyID
```

Student

StudentID	Name	Age	FacultyID
40045678	Luke	19	1
40045679	Sam	20	2
40045680	Hannah	19	1
40045681	Alex	19	1
40045682	Zoey	20	2

Faculty

FacultyID	Name	HOD
1	CAS	Dr. Smith
2	ECE	Dr. Bishop

Compare S.FacultyID with F.FacultyID

S.StudentID	S.Name	F.Name
40045678	Luke	CAS
40045679	Sam	ECE

```
SELECT S.StudentID, S.Name, F.Name
FROM Student S, Faculty F
WHERE S.FacultyID = F.FacultyID
```

OR

```
SELECT S.StudentID, S.Name, F.Name
FROM Student S
JOIN Faculty F
ON S.FacultyID = F.FacultyID
```

Student

StudentID	Name	Age	FacultyID
40045678	Luke	19	1
40045679	Sam	20	2
40045680	Hannah	19	1
40045681	Alex	19	1
40045682	Zoey	20	2

Faculty

FacultyID	Name	HOD
1	CAS	Dr. Smith
2	ECE	Dr. Bishop

Compare S.FacultyID with F.FacultyID

S.StudentID	S.Name	F.Name
40045678	Luke	CAS
40045679	Sam	ECE

```
SELECT S.StudentID, S.Name, F.Name
FROM Student S, Faculty F
WHERE S.FacultyID = F.FacultyID
```

OR

```
SELECT S.StudentID, S.Name, F.Name
FROM Student S
JOIN Faculty F
ON S.FacultyID = F.FacultyID
```

Student

StudentID	Name	Age	FacultyID
40045678	Luke	19	1
40045679	Sam	20	2
40045680	Hannah	19	1
40045681	Alex	19	1
40045682	Zoey	20	2

Faculty

FacultyID	Name	HOD
1	CAS	Dr. Smith
2	ECE	Dr. Bishop

Compare S.FacultyID
with F.FacultyID

S.StudentID	S.Name	F.Name
40045678	Luke	CAS
40045679	Sam	ECE
40045680	Hannah	CAS

```
SELECT S.StudentID, S.Name, F.Name
FROM Student S, Faculty F
WHERE S.FacultyID = F.FacultyID
```

OR

```
SELECT S.StudentID, S.Name, F.Name
FROM Student S
JOIN Faculty F
ON S.FacultyID = F.FacultyID
```

Student

StudentID	Name	Age	FacultyID
40045678	Luke	19	1
40045679	Sam	20	2
40045680	Hannah	19	1
40045681	Alex	19	1
40045682	Zoey	20	2

Faculty

FacultyID	Name	HOD
1	CAS	Dr. Smith
2	ECE	Dr. Bishop

Compare S.FacultyID with F.FacultyID

S.StudentID	S.Name	F.Name
40045678	Luke	CAS
40045679	Sam	ECE
40045680	Hannah	CAS

```
SELECT S.StudentID, S.Name, F.Name
FROM Student S, Faculty F
WHERE S.FacultyID = F.FacultyID
```

OR

```
SELECT S.StudentID, S.Name, F.Name
FROM Student S
JOIN Faculty F
ON S.FacultyID = F.FacultyID
```

Student

StudentID	Name	Age	FacultyID
40045678	Luke	19	1
40045679	Sam	20	2
40045680	Hannah	19	1
40045681	Alex	19	1
40045682	Zoey	20	2

Faculty

FacultyID	Name	HOD
1	CAS	Dr. Smith
2	ECE	Dr. Bishop

Compare S.FacultyID
with F.FacultyID

S.StudentID	S.Name	F.Name
40045678	Luke	CAS
40045679	Sam	ECE
40045680	Hannah	CAS

```
SELECT S.StudentID, S.Name, F.Name
FROM Student S, Faculty F
WHERE S.FacultyID = F.FacultyID
```

OR

```
SELECT S.StudentID, S.Name, F.Name
FROM Student S
JOIN Faculty F
ON S.FacultyID = F.FacultyID
```

Student

StudentID	Name	Age	FacultyID
40045678	Luke	19	1
40045679	Sam	20	2
40045680	Hannah	19	1
40045681	Alex	19	1
40045682	Zoey	20	2

Faculty

FacultyID	Name	HOD
1	CAS	Dr. Smith
2	ECE	Dr. Bishop

Compare S.FacultyID
with F.FacultyID

S.StudentID	S.Name	F.Name
40045678	Luke	CAS
40045679	Sam	ECE
40045680	Hannah	CAS
40045681	Alex	CAS

```
SELECT S.StudentID, S.Name, F.Name
FROM Student S, Faculty F
WHERE S.FacultyID = F.FacultyID
```

Student

StudentID	Name	Age	FacultyID
40045678	Luke	19	1
40045679	Sam	20	2
40045680	Hannah	19	1
40045681	Alex	19	1
40045682	Zoey	20	2

Faculty

FacultyID	Name	HOD
1	CAS	Dr. Smith
2	ECE	Dr. Bishop

Compare S.FacultyID
with F.FacultyID

OR

```
SELECT S.StudentID, S.Name, F.Name
FROM Student S
JOIN Faculty F
ON S.FacultyID = F.FacultyID
```

S.StudentID	S.Name	F.Name
40045678	Luke	CAS
40045679	Sam	ECE
40045680	Hannah	CAS
40045681	Alex	CAS


```
SELECT S.StudentID, S.Name, F.Name
FROM Student S, Faculty F
WHERE S.FacultyID = F.FacultyID
```

OR

```
SELECT S.StudentID, S.Name, F.Name
FROM Student S
JOIN Faculty F
ON S.FacultyID = F.FacultyID
```

Student

StudentID	Name	Age	FacultyID
40045678	Luke	19	1
40045679	Sam	20	2
40045680	Hannah	19	1
40045681	Alex	19	1
40045682	Zoey	20	2

Faculty

FacultyID	Name	HOD
1	CAS	Dr. Smith
2	ECE	Dr. Bishop

Compare S.FacultyID
with F.FacultyID

S.StudentID	S.Name	F.Name
40045678	Luke	CAS
40045679	Sam	ECE
40045680	Hannah	CAS
40045681	Alex	CAS

```
SELECT S.StudentID, S.Name, F.Name
FROM Student S, Faculty F
WHERE S.FacultyID = F.FacultyID
```

OR

```
SELECT S.StudentID, S.Name, F.Name
FROM Student S
JOIN Faculty F
ON S.FacultyID = F.FacultyID
```

Student

StudentID	Name	Age	FacultyID
40045678	Luke	19	1
40045679	Sam	20	2
40045680	Hannah	19	1
40045681	Alex	19	1
40045682	Zoey	20	2

Faculty

FacultyID	Name	HOD
1	CAS	Dr. Smith
2	ECE	Dr. Bishop

Compare S.FacultyID
with F.FacultyID

S.StudentID	S.Name	F.Name
40045678	Luke	CAS
40045679	Sam	ECE
40045680	Hannah	CAS
40045681	Alex	CAS

```
SELECT S.StudentID, S.Name, F.Name
FROM Student S, Faculty F
WHERE S.FacultyID = F.FacultyID
```

OR

```
SELECT S.StudentID, S.Name, F.Name
FROM Student S
JOIN Faculty F
ON S.FacultyID = F.FacultyID
```

Student

StudentID	Name	Age	FacultyID
40045678	Luke	19	1
40045679	Sam	20	2
40045680	Hannah	19	1
40045681	Alex	19	1
40045682	Zoey	20	2

Faculty

FacultyID	Name	HOD
1	CAS	Dr. Smith
2	ECE	Dr. Bishop

Compare S.FacultyID
with F.FacultyID

S.StudentID	S.Name	F.Name
40045678	Luke	CAS
40045679	Sam	ECE
40045680	Hannah	CAS
40045681	Alex	CAS
40045682	Zoey	ECE

Subqueries

Use the output of other queries.

e.g.) Find the names of all the students in FacultyID 1 who have the same age as the student with name 'Hannah.'

Student

StudentID	Name	Age	FacultyID
40045678	Luke	19	1
40045679	Sam	20	2
40045680	Hannah	19	1
40045681	Alex	19	1
40045682	Zoey	20	2

```
SELECT Name
FROM Student
WHERE FacultyID = 1
AND Age = (
  SELECT Age
  FROM Student
  WHERE Name = 'Hannah'
)
```

This must be a single value because "="

Name
Luke
Hannah
Alex

Operator - ANY

Find values that any of the results are held.

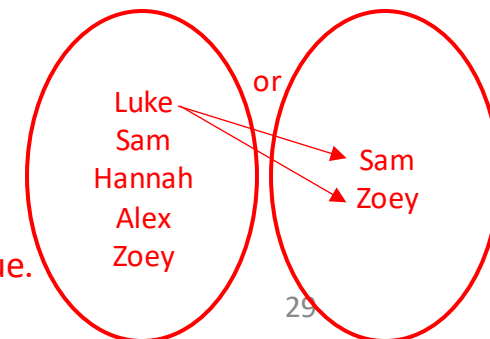
e.g.) Retrieve the name of any student whose name is smaller than **at least one** student with a facultyID of 2.

Student

StudentID	Name	Age	FacultyID
40045678	Luke	19	1
40045679	Sam	20	2
40045680	Hannah	19	1
40045681	Alex	19	1
40045682	Zoey	20	2

```
SELECT Name
FROM Student
WHERE Name < ANY (
  SELECT Name
  FROM Student
  WHERE FacultyID = 2
)
```

Name
Luke
Sam
Hannah
Alex



If at least one is bigger than the value, then true.
Otherwise, false

Operator - <> ANY

Find values that any of the results are not held.

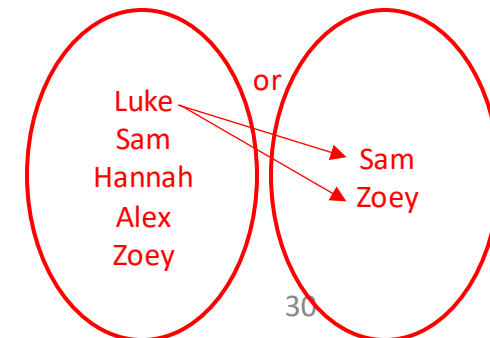
e.g.) Retrieve the name of any student whose name is **not equal to at least one** student with a facultyID of 2.

Student

StudentID	Name	Age	FacultyID
40045678	Luke	19	1
40045679	Sam	20	2
40045680	Hannah	19	1
40045681	Alex	19	1
40045682	Zoey	20	2

```
SELECT Name
FROM Student
WHERE Name <> ANY (
  SELECT Name
  FROM Student
  WHERE FacultyID = 2
)
```

Name
Luke
Sam
Hannah
Alex
Zoey



If at least one is not equal to the value, then true.
Otherwise, false

Operator - ALL

Find values that all the results are held.

e.g.) Retrieve the name of any student whose name is smaller than **all** students with a facultyID of 2.

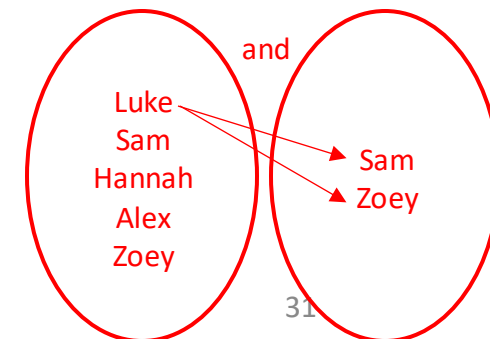
Student

StudentID	Name	Age	FacultyID
40045678	Luke	19	1
40045679	Sam	20	2
40045680	Hannah	19	1
40045681	Alex	19	1
40045682	Zoey	20	2

```
SELECT Name
FROM Student
WHERE Name < ALL (
  SELECT Name
  FROM Student
  WHERE FacultyID = 2
)
```

Name
Luke
Hannah
Alex

If all results are held, then true.
Otherwise, false



Operator - <> ALL

Find values that all the results are not held.

e.g.) Retrieve the name of any student whose name is **not equal to all** students with a facultyID of 2.

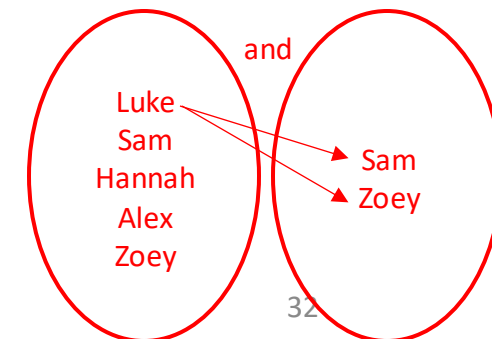
Student

StudentID	Name	Age	FacultyID
40045678	Luke	19	1
40045679	Sam	20	2
40045680	Hannah	19	1
40045681	Alex	19	1
40045682	Zoey	20	2

```
SELECT Name
FROM Student
WHERE Name <> ALL (
  SELECT Name
  FROM Student
  WHERE FacultyID = 2
)
```

Name
Luke
Hannah
Alex

If all results aren't held, then true.
Otherwise, false



Operator - IN

Find values any the results are equal to the value of an attribute. (=ANY)

e.g.) Find the Faculty names of all the faculties that have students with age > 18

Student

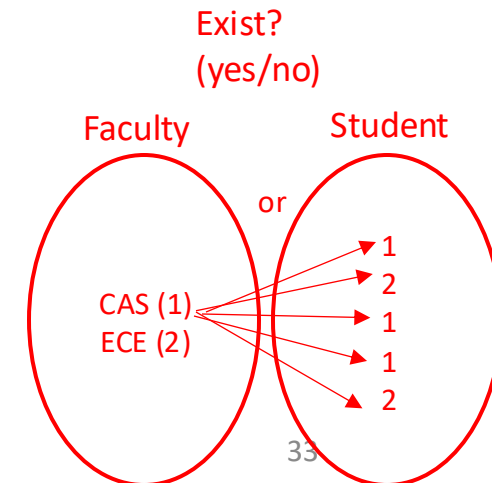
StudentID	Name	Age	FacultyID
40045678	Luke	19	1
40045679	Sam	20	2
40045680	Hannah	19	1
40045681	Alex	19	1
40045682	Zoey	20	2

Faculty

FacultyID	Name	HOD
1	CAS	Dr. Smith
2	ECE	Dr. Bishop

```
SELECT Name
FROM Faculty
WHERE FacultyID IN (
    SELECT FacultyID
    FROM Student
    WHERE age > 18
)
```

Name
CAS
ECE



If at least one of the results is equal to the value, then true.
Otherwise, false

Operator – NOT IN

Find values all the results are not equal to the value of an attribute. (~~↔ ANY~~)
 e.g.) Find the Faculty names of all the faculties not having students with age > 18

Student

StudentID	Name	Age	FacultyID
40045678	Luke	19	1
40045679	Sam	20	2
40045680	Hannah	19	1
40045681	Alex	19	1
40045682	Zoey	20	2

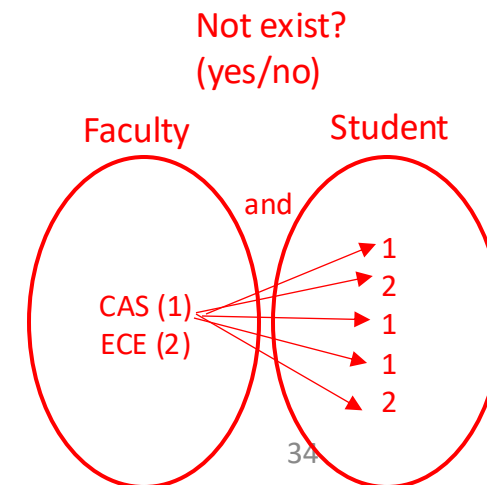
Faculty

FacultyID	Name	HOD
1	CAS	Dr. Smith
2	ECE	Dr. Bishop

```
SELECT Name
FROM Faculty
WHERE FacultyID NOT IN (
    SELECT FacultyID
    FROM Student
    WHERE age > 18
)
```

Name

If all results are not equal to the value, then true.
 Otherwise, false



Operator - EXISTS

Find values if there are any results in the WHERE clauses.

e.g.) If there are any students older than 19, print the names of all the faculties.

Student

StudentID	Name	Age	FacultyID
40045678	Luke	19	1
40045679	Sam	20	2
40045680	Hannah	19	1
40045681	Alex	19	1
40045682	Zoey	20	2

Faculty

FacultyID	Name	HOD
1	CAS	Dr. Smith
2	ECE	Dr. Bishop

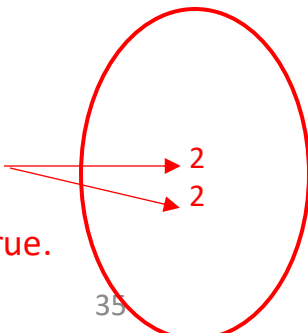
```
SELECT Name  
FROM Faculty
```

```
WHERE EXISTS (  
    SELECT FacultyID  
    FROM Student  
    WHERE age > 19  
) True
```

Name
CAS
ECE

Student

Exist?
(yes/no)



If there is at least one, then true.
Otherwise, false

Operator – NOT EXISTS

Find values if there are not any results in the WHERE clauses.

e.g.) If there aren't any students older than 19, print the names of all the faculties.

Student

StudentID	Name	Age	FacultyID
40045678	Luke	19	1
40045679	Sam	20	2
40045680	Hannah	19	1
40045681	Alex	19	1
40045682	Zoey	20	2

Faculty

FacultyID	Name	HOD
1	CAS	Dr. Smith
2	ECE	Dr. Bishop

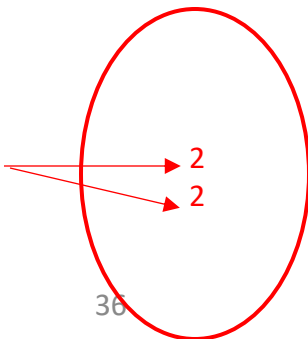
```
SELECT Name  
FROM Faculty
```

```
WHERE NOT EXISTS (  
    SELECT FacultyID  
    FROM Student  
    WHERE age > 19  
) False
```

Name

Student

Not exist?
(yes/no)



If there are no results, then true.
Otherwise, false

Practice

Write an SQL query to display each employee along with their respective manager from the employee table below.

EmployeeID	Name	ManagerID
1	Alice	1
2	Bob	1
3	Charlie	1
4	Dave	2

Employee



Result

EmployeeNm	ManagerNm
Alice	Alice
Bob	Alice
Charlie	Alice
Dave	Bob

Practice

Write an SQL query to display each employee along with their respective manager from the employee table below. (Self Join)

EmployeeID	Name	ManagerID
1	Alice	1
2	Bob	1
3	Charlie	1
4	Dave	2

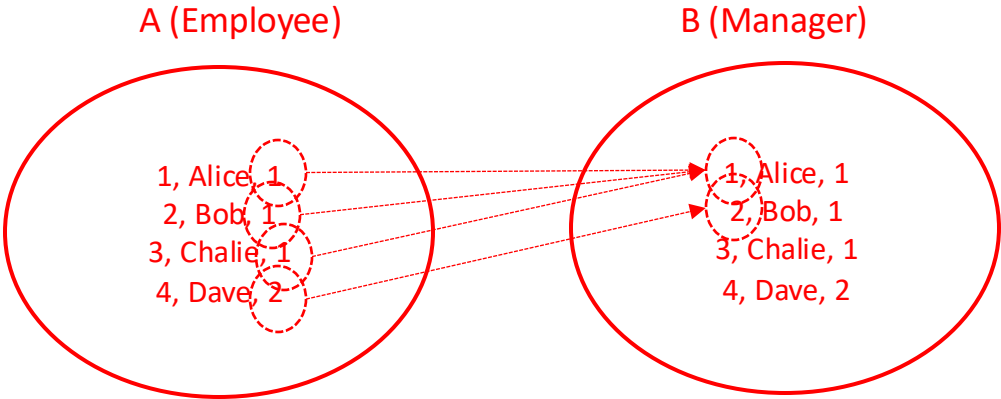
Employees



Result

EmployeeNm	ManagerNm
Alice	Alice
Bob	Alice
Charlie	Alice
Dave	Bob

```
SELECT A.Name AS EmployeeNm,  
       B.Name AS ManagerNm  
FROM Employees A, Employees B  
WHERE A.ManagerID = B.EmployeeID;
```



Practice

Write an SQL query to display each employee along with their respective manager from the employee table below. (Subquery)

EmployeeID	Name	ManagerID
1	Alice	1
2	Bob	1
3	Charlie	1
4	Dave	2

Employees



EmployeeNm	ManagerNm
Alice	Alice
Bob	Alice
Charlie	Alice
Dave	Bob

```
SELECT A.Name AS EmployeeNm,  
       (SELECT B.Name  
        FROM Employees B  
        WHERE B.EmployeeID = A.ManagerID) AS ManagerNm  
FROM Employees A;
```

