

WGBD et BD01

*SQL comme langage d'interrogation :
Equi-jointures*

EPFC-ULB

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Une **jointure** permet de combiner les colonnes de plusieurs tables.

Une **équi-jointure** lie deux tables sur base de l'égalité des valeurs d'une colonne commune (*souvent une clé primaire/étrangère*).

Employee

<u>SSN</u>	FName	LName	BDate	Address	DNum
123	John	Doe	19801212	...	1
456	John	Smith	19760302	...	1
789	Paul	Smith	19820201	...	2

Department

<u>DNum</u>	DName
1	Research
2	Logistics



Noms des employés du département recherche

```
SELECT e.FName
FROM Employee e, Department d
WHERE e.DNum = d.DNum AND d.DName='Research'
```

Etape I : FROM

Employee

SSN	FName	LName	BDate	Address	DNum
123	John	Doe	19801212	...	1
456	John	Smith	19760302	...	1
789	Paul	Smith	19820201	...	2

Produit cartésien (X)

Department

DNum	DName
1	Research
2	Logistics

Noms des employés du département recherche

SELECT e.FName

FROM Employee e, Department d

WHERE e.DNum = d.DNum AND d.DName='Research'

Employee X Department

Employee. SSN	Employee. FName	Employee. LName	Employee .BDate	Employee. Address	Employee. DNum	Department. DNum	Department. DName
123	John	Doe	19801212	...	1	1	Research
123	John	Doe	19801212	...	1	2	Logistics
456	John	Smith	19760302	...	1	1	Research
456	John	Smith	19760302	...	1	2	Logistics
789	Paul	Smith	19820201	...	2	1	Research
789	Paul	Smith	19820201	...	2	2	Logistics

Etape 2 : WHERE

Employee

<u>SSN</u>	FName	LName	BDate	Address	DNum
123	John	Doe	19801212	...	1
456	John	Smith	19760302	...	1
789	Paul	Smith	19820201	...	2

Department

<u>DNum</u>	DName
1	Research
2	Logistics

Noms des employés du département recherche

SELECT e.FName

FROM Employee e, Department d

WHERE e.DNum = d.DNum AND d.DName='Research'

Employee X Department

Employee. SSN	Employee .FName	Employee .LName	Employee .BDate	Employee. Address	Employee. DNum	Department. DNum	Department. DName
123	John	Doe	19801212	...	1	1	Research
123	John	Doe	19801212	...	1	2	Logistics
456	John	Smith	19760302	...	1	1	Research
456	John	Smith	19760302	...	1	2	Logistics
789	Paul	Smith	19820201	...	2	1	Research
789	Paul	Smith	19820201	...	2	2	Logistics



Etape 3 : SELECT

Employee X Department	Employee. SSN	Employee .FName	Employee .LName	Employee .BDate	Employee. Address	Employee. DNum	Department. DNum	Department. DName	
	123	John	Doe	19801212	...	1	1	Research	✓
	123	John	Doe	19801212	...	1	2	Logistics	✗
	456	John	Smith	19760302	...	1	1	Research	✓
	456	John	Smith	19760302	...	1	2	Logistics	✗
	789	Paul	Smith	19820201	...	2	1	Research	✗
	789	Paul	Smith	19820201	...	2	2	Logistics	✗

Noms des employés du département recherche

SELECT e.FName

FROM Employee e, Department d

WHERE e.DNum = d.DNum AND d.DName='Research'

FName

John

John

SQL de base : jointure avec JOIN

Employee

<u>SSN</u>	FName	LName	BDate	Address	DNum
123	John	Doe	19801212	...	1
456	John	Smith	19760302	...	1
789	Paul	Smith	19820201	...	2

Department

<u>DNum</u>	DName
1	Research
2	Logistics

Noms des employés du département recherche

```
SELECT e.FName
FROM Employee e, Department d
WHERE e.DNum = d.DNum AND d.DName='Research'
```

```
SELECT e.FName
FROM Employee e JOIN Department d ON e.DNum = d.DNum
WHERE d.DName='Research'
```