

## 1.- Relational model operations

## 1.- What operations do we need to do to get the Names of the employees with a salary bigger than 20

table 1

| primarykey | name     | age | group | title    |
|------------|----------|-----|-------|----------|
| 1          | maria    | 7   | a1    | admon    |
| 2          | candela  | 9   | b4    | director |
| 3          | fernando | 11  | c3    | eng      |

table 2

| primary key | date       | salaries |
|-------------|------------|----------|
| 1           | 01/10/2018 | 10       |
| 2           | 01/10/2017 | 45       |
| 3           | 01/11/2018 | 30       |

2.- What is the hierarchy tree in this html code

## <property>

<document>

<author> paper database </author>

</document>

<film>

<author> paper database </author>

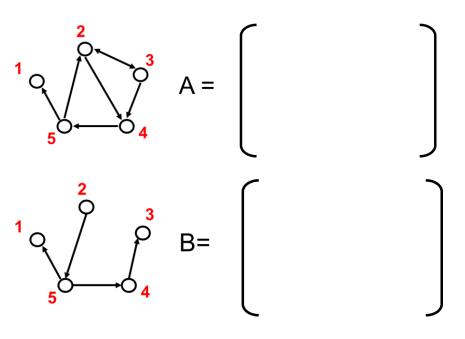
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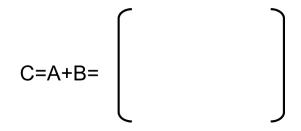


## 3.- Networks and matrices

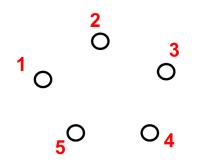
**3.1.- Define the adjacency matrix of the following network.** The **adjacency matrix** represents a network, calculate the matrix of the following network



3.2 Sum A+B

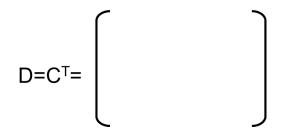


3.3 Draw the corresponding network C

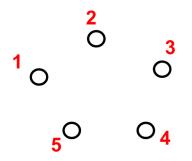




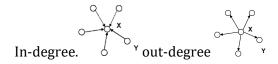
3.4 Calculate matrix D= transposed of C



3.5 Draw the corresponding network D. What is the effect of the operation in the graph?



**3.5** We define the **in-degree** as the number of arrows aiming a node and **out-degree** the outcome links



**Outdegree**: outdegree for node 3 is \_\_\_\_\_, which we obtain by summing the number of non-zero entries in the 3rd row.

**Indegree:** the indegree for node 3 is \_\_\_\_\_, which we obtain by summing the number of non-zero entries in the 3rd column