## 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>
</film>
</property>

## 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

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### 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

In-degree



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

Indegree: the indegree for node 3 is $\qquad$ , which we obtain by summing the number of nonzero entries in the 3 rd column

