

08/11/25

4013

Consulta 1

SELECT A.CPF, A.Nome, B.Nome

FROM Funcionarios A, Clientes B, Aluguel C, Funcionarios D

Where A.CPF = B.CPF

AND B.CPF = C.CPF_Cliente

AND B.Sexo = 'M'

AND C.ValorPagat > 50

AND A.CPF = D.CPF - Supervisor

MA.CPF, A.Nome, B.Nome

1. Arvore Normal

MA.CPF = D.CPF - SUPERVISOR

σ C.ValorPagat > 50

σ B.Sexo = 'M'

\bowtie B.CPF = C.CPF_Cliente

\bowtie A.CPF = B.CPF

A

B

C

D

2. Arvore Reverso

MA.CPF, A.Nome, B.Nome

\bowtie A.CPF = B.CPF

\bowtie B.CPF = C.CPF_Cliente

\bowtie A.CPF = D.CPF - Supervisor

σ C.ValorPagat > 50

σ B.Sexo = 'M'

A

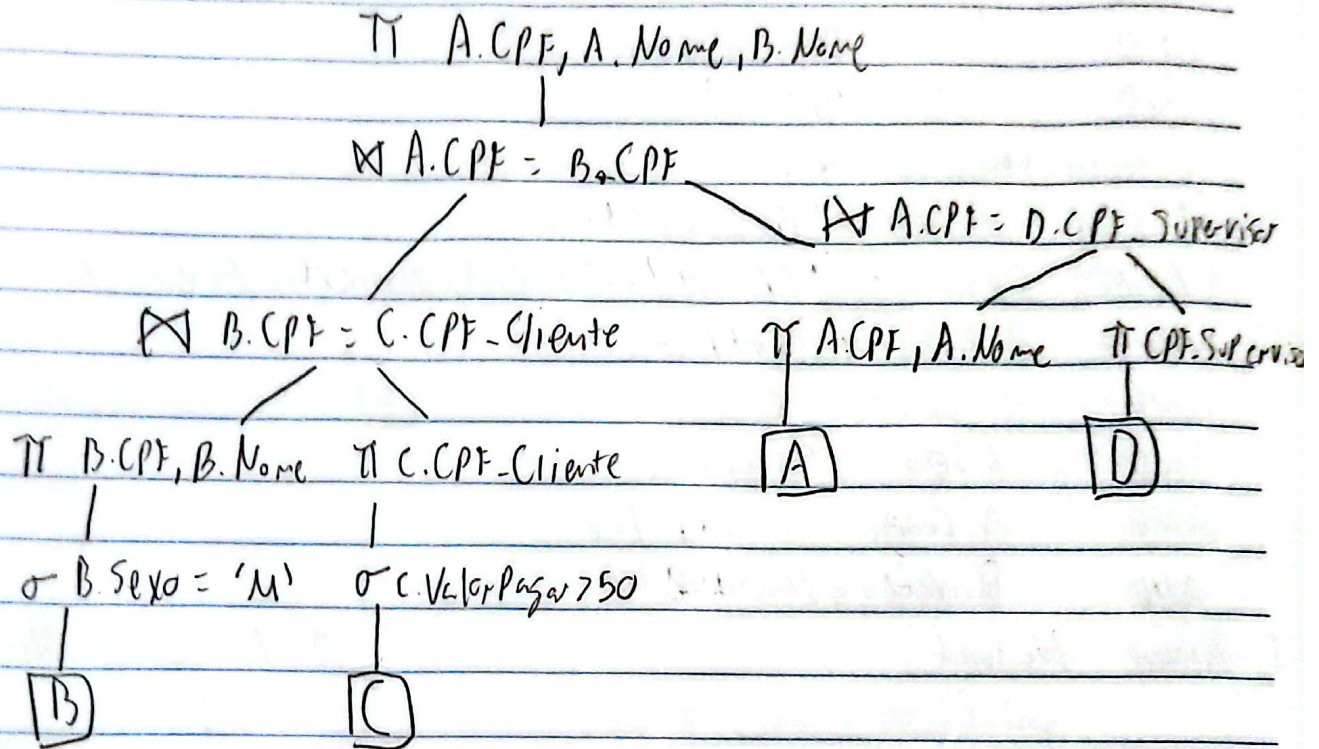
D

C

B

tilibra

3. Natural Optimized



4. Reescrita ordem natural

```

SELECT A.CPF, A.Nome, B.Nome
FROM Clientes B, Aluguel C, Funcionarios A, Funcionarios
WHERE B.Sexo = 'M'
AND C.ValorPagor > 50
AND B.CPF = C.CPF - Cliente
AND A.CPF = D.CPF - Supervisor
AND A.CPF = B.CPF
  
```


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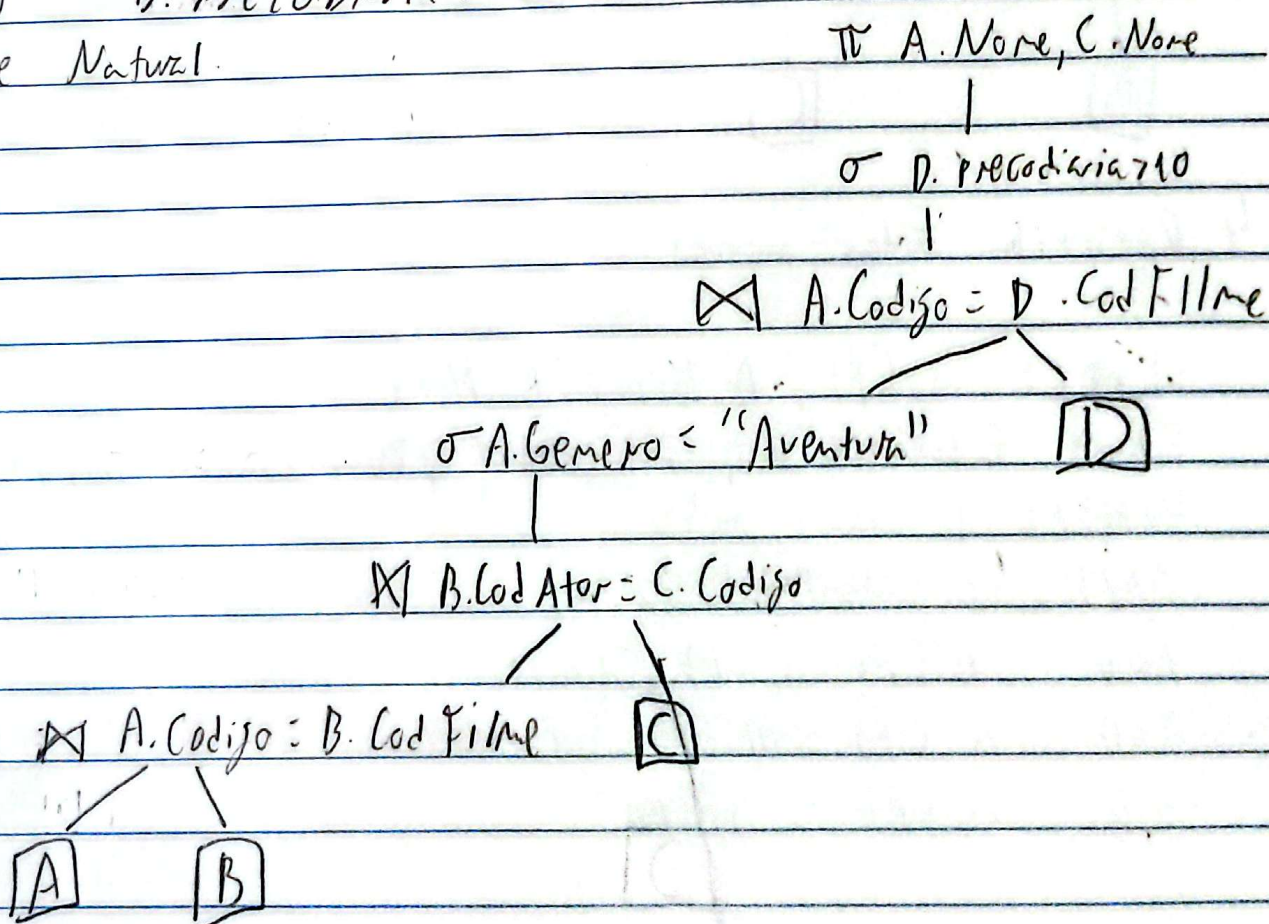
5. Reescreva a mesma consulta

```
SELECT A.CPF, A.Nome, B.Nome  
FROM FUNCIONARIOS D, FUNCIONARIOS A, ALUGUEL C, CLIENTES B  
WHERE A.CPF = B.CPF  
AND A.CPF = D.CPF - Supervisor  
AND B.CPF = C.CPF - Cliente  
AND C.Valor Pagar > 50  
AND B.Sexo = 'M'
```

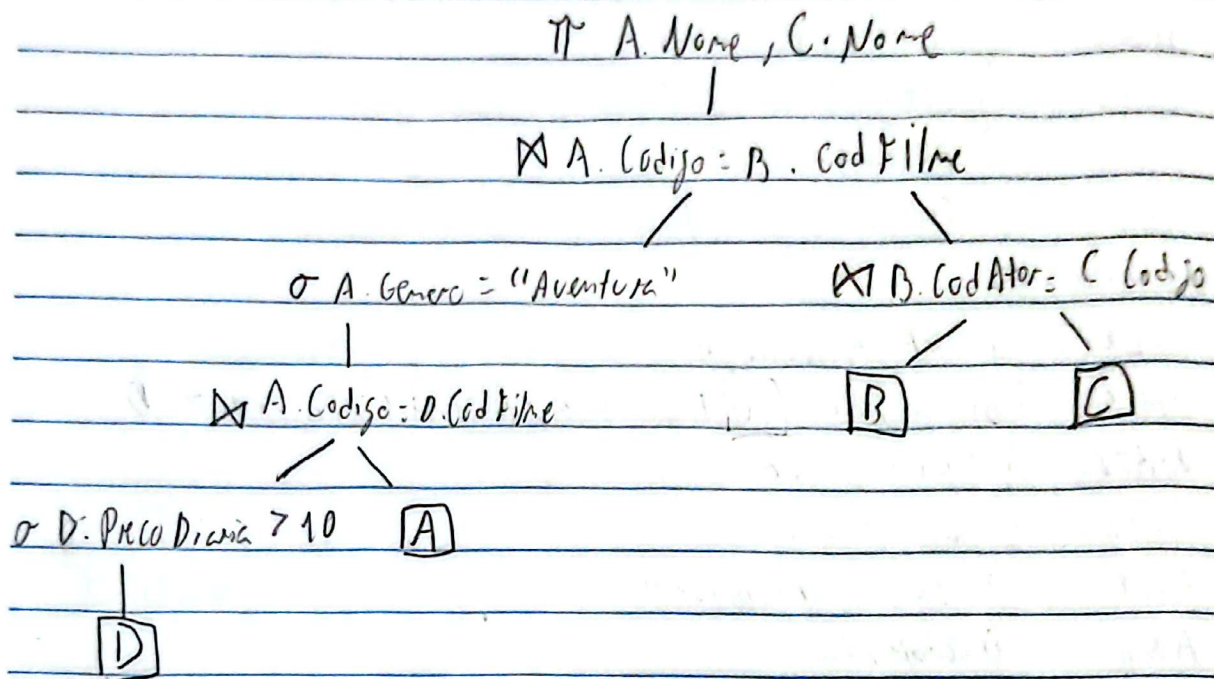
Consulta 2

```
SELECT A.Nome, C.Nome  
FROM FILMES A, Atores Em Filmes B, Atores C, Midias D  
WHERE A.Codigo = B.Cod Filme  
AND B.Cod Ater = C.Codigo  
AND A.Genero = 'Aventura'  
AND A.Codigo = D.Cod Filme  
AND D.Preco Divida > 10
```

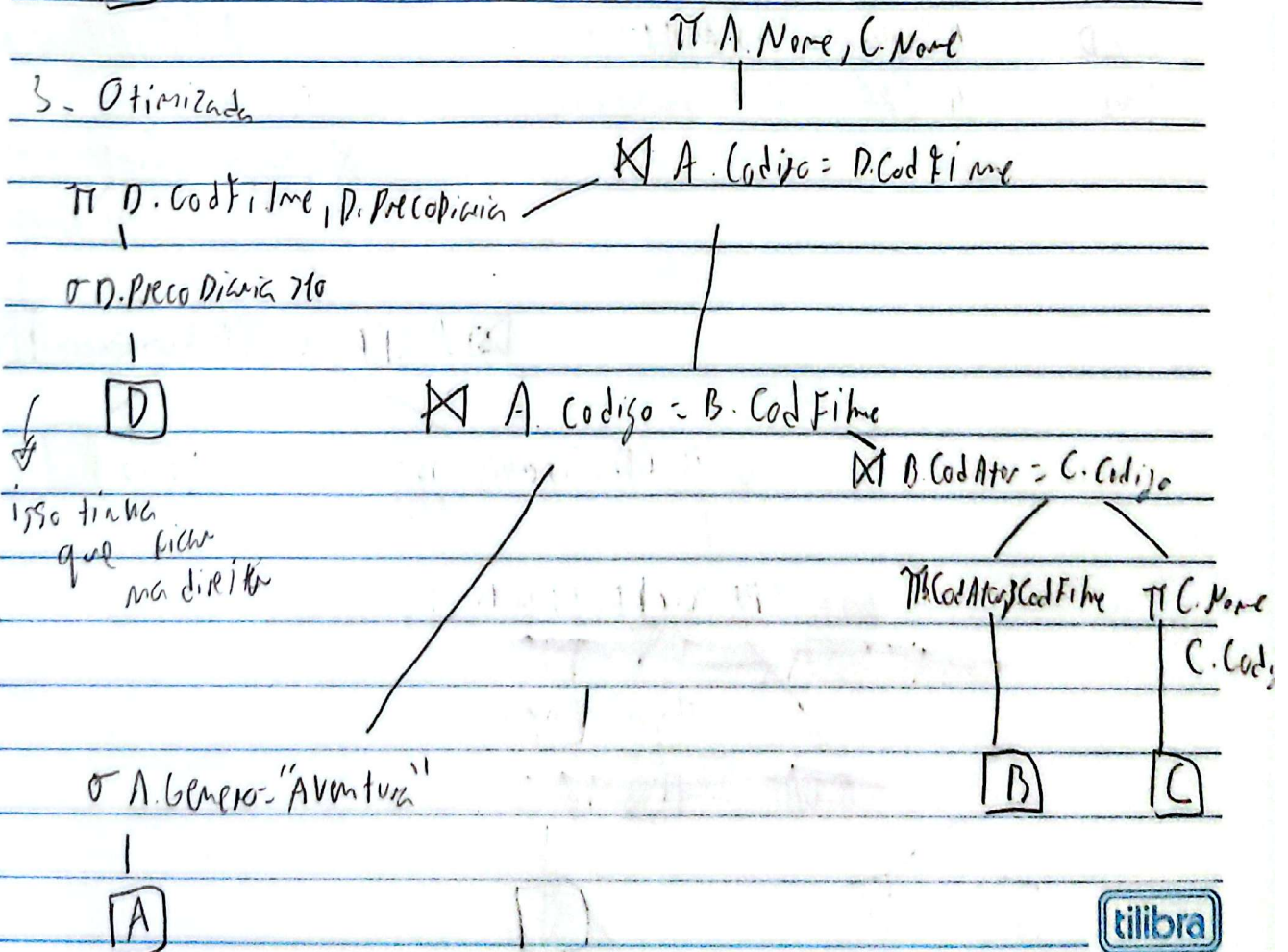
1. Atore Natural



2. Ator principal



3. Otimizada



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4- Consulta Natural

```
SELECT A.Nome, C.Nome  
FROM Filmes A, Atores B, Filmes B, Atores C, Midias D  
WHERE A.Gênero = "Aventura"  
AND B.CodAtoz = C.Codigo  
AND A.Codigo = B.Cod Filme  
AND D.Preco > 10  
AND A.Codigo = D.Cod Filme
```

Consulta 3

```
SELECT A.CPF, A.Nome, B.Nome  
FROM Funcionarios A, Clientes B, Aluguel C, Pagamentos D  
WHERE A.CPF = B.CPF  
AND C.Valor Pagar > 100  
AND D.CPF = C.CPF-Cliente  
AND D.Valor > 50  
AND A.Supervisor IS NULL & Teleco  
AND A.CPF = C.CPF-Funcionario
```

π A.CPF, A.Nome, B.Nome

X / produto (cartesiano)

σ D.Valor > 50

\boxtimes A.CPF = C.CPF-Funcionario [D]

σ A.CPF.Superervisor is NULL

[C]

\boxtimes B.CPF = C.CPF-Cliente

σ C.Valor Pagar > 100

\boxtimes A.CPF = B.CPF

[C]

[A]

[B]

tilibra

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21 Inversa

Π ACPE, A None, B None

|

σ C Valo Page > 100

|

Π D CPF = C CPF - Cliente

|

σ D. Valo > 50

[B]

|

σ A Supervisor is Null

|

Π A. CPF = C CPF - Funcionario

|

[A]

[C]

|

X (produto Cartesio)

|

[D]



08/11/25

310 times each

41 records with 0 times each

SELECT A.CPF, A.Nome, B.Nome

FROM Funcionarios A, Clientes B, Aluguel C, Supervisor D

WHERE A.CPF.SUPERVISOR IS NULL

AND A.CPF = B.CPF

AND C.Valor > 100

AND A.CPF = C.CPF.Funcionario

AND D.CPF = C.CPF-Cliente

AND D.Valor > 50

M A.CPF, A.Nome, B.Nome

X Produto Cartesiano

$\sigma D.Valor < 50$

[D]

~~M~~ A.CPF = C.CPF.Funcionario AND B.CPF = C.CPF-Cliente

~~M~~ C.CPF-Cliente < C.CPF-Funcionario

~~M~~ A.CPF = B.CPF

$\sigma C.Valor > 100$

~~TT~~ A.CPF, A.Nome

B.CPF, B.Nome

[C]

$\sigma A.CPF-SUPERVISOR \text{ is NULL}$

[B]

[A]