

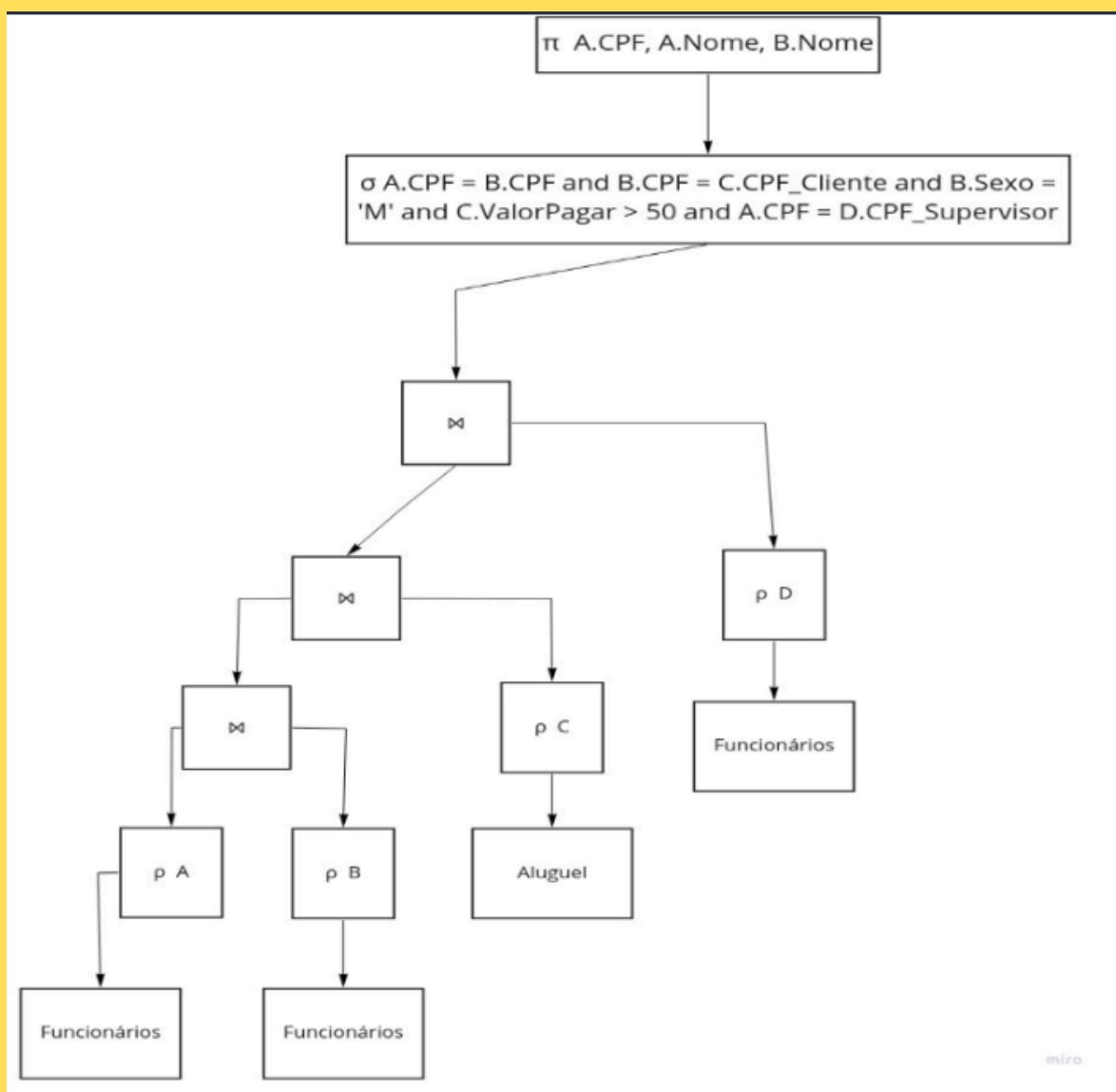
HO12: Processamento e Otimização de Consulta

Query 1

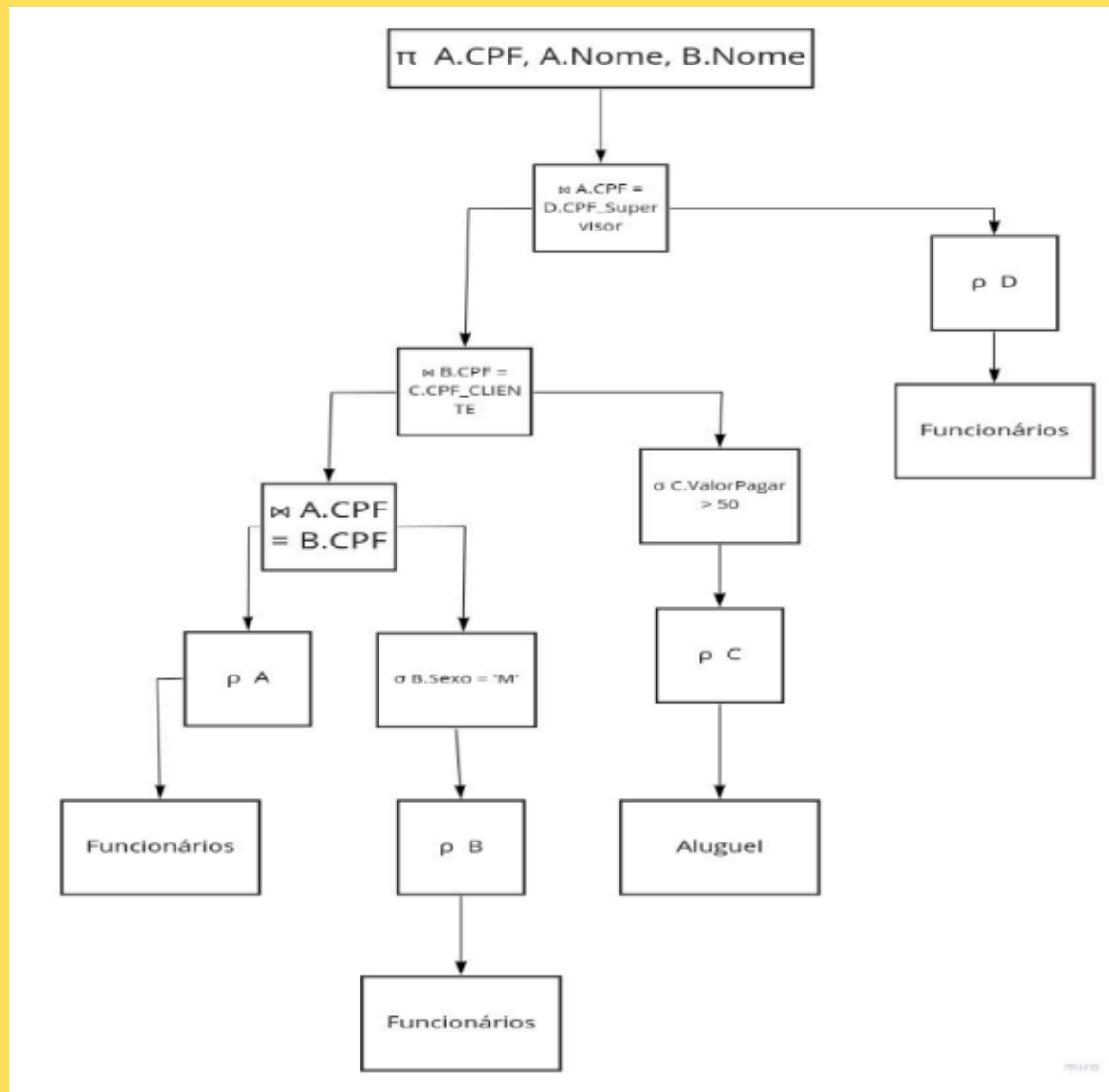
```
SELECT A.CPF, A.Nome, B.Nome
FROM Funcionarios as A, Clientes as B, Aluguel as C, Funcionarios as D
WHERE A.CPF=B.CPF
AND B.CPF=C.CPF_Cliente
AND B.Sexo='M'
AND C.ValorPagar>50
AND A.CPF=D.CPF_Supervisor
```

π A.Nome, C.Nome σ A.Codigo = B.CodFilme and B.CodAtor = C.Codigo and A.Genero = 'Aventura' and A.Codigo = D.CodFilme and D.PrecoDiaria > 10 ((ρ A Filmes ρ B AtoresEmFilmes) ρ C Atores) ρ D Midias)

Query 1 Arvore Não Otimizada



Query 1 Arvore Otimizada



Query 2

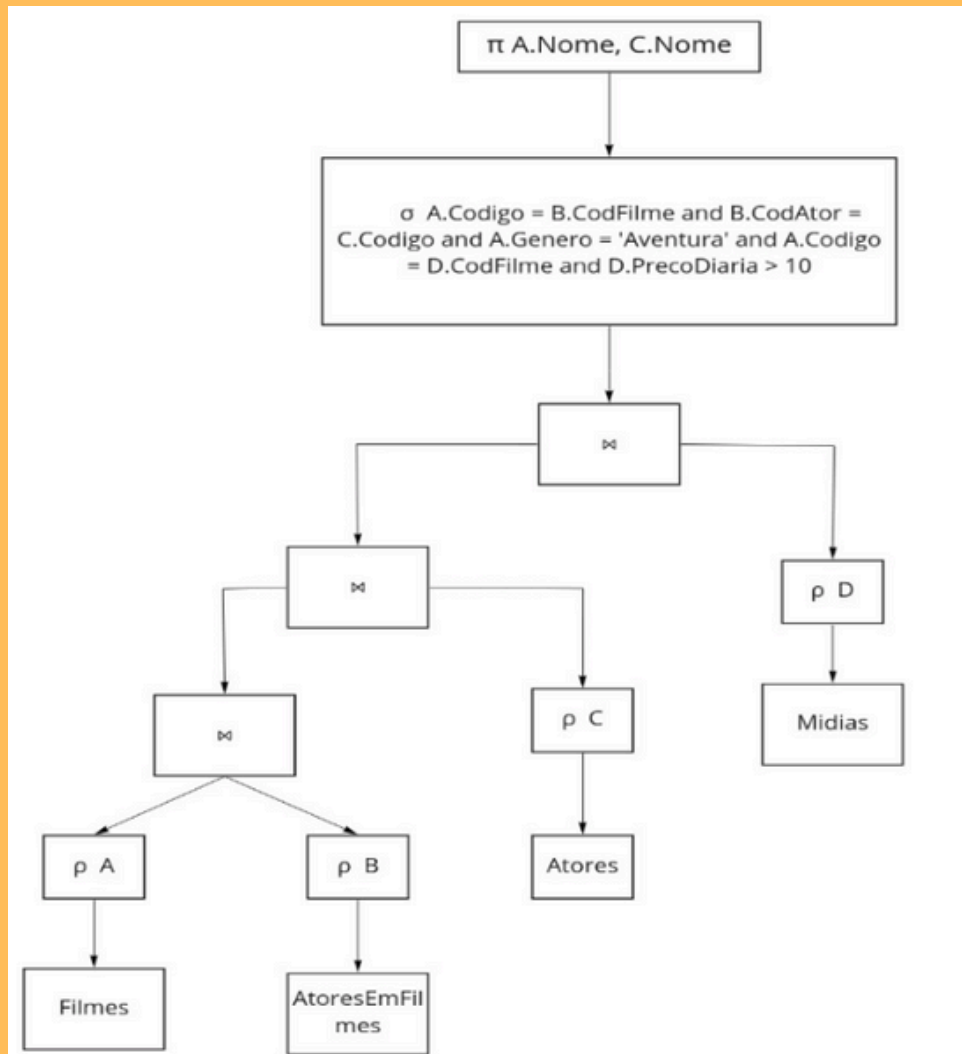
```

SELECT A.Nome, C.Nome
FROM Filmes as A, AtoresEmFilmes as B, Atores as C, Midias as D
WHERE A.Codigo=B.CodFilme
AND B.CodAtor=C.Codigo
AND A.Genero='Aventura'
AND A.Codigo=D.CodFilme
AND D.PrecoDiaria>10
  
```

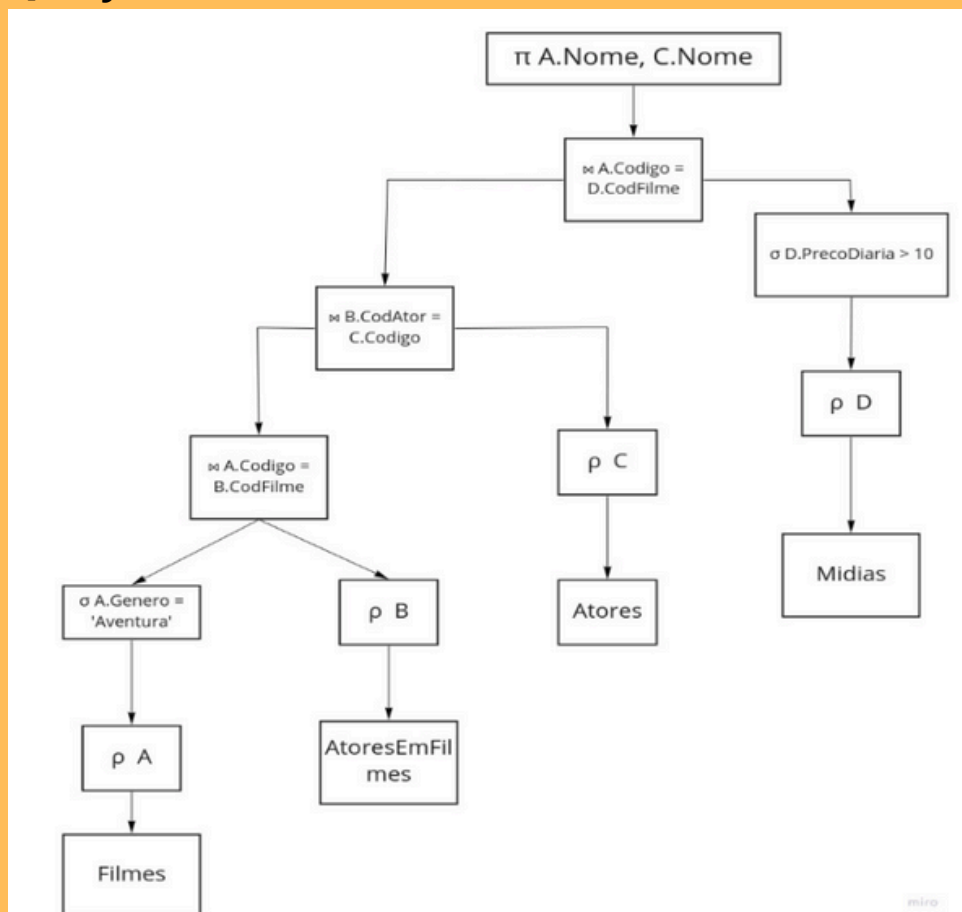
```

π A.Nome, C.Nome σ A.Codigo = B.CodFilme and B.CodAtor = C.Codigo and
A.Genero = 'Aventura' and A.Codigo = D.CodFilme and D.PrecoDiaria > 10 ( (
ρ A Filmes ρ B AtoresEmFilmes ) ρ C Atores ) ρ D Midias )
  
```

Query 2 Arvore Não Otimizada



Query 2 Arvore Otimizada

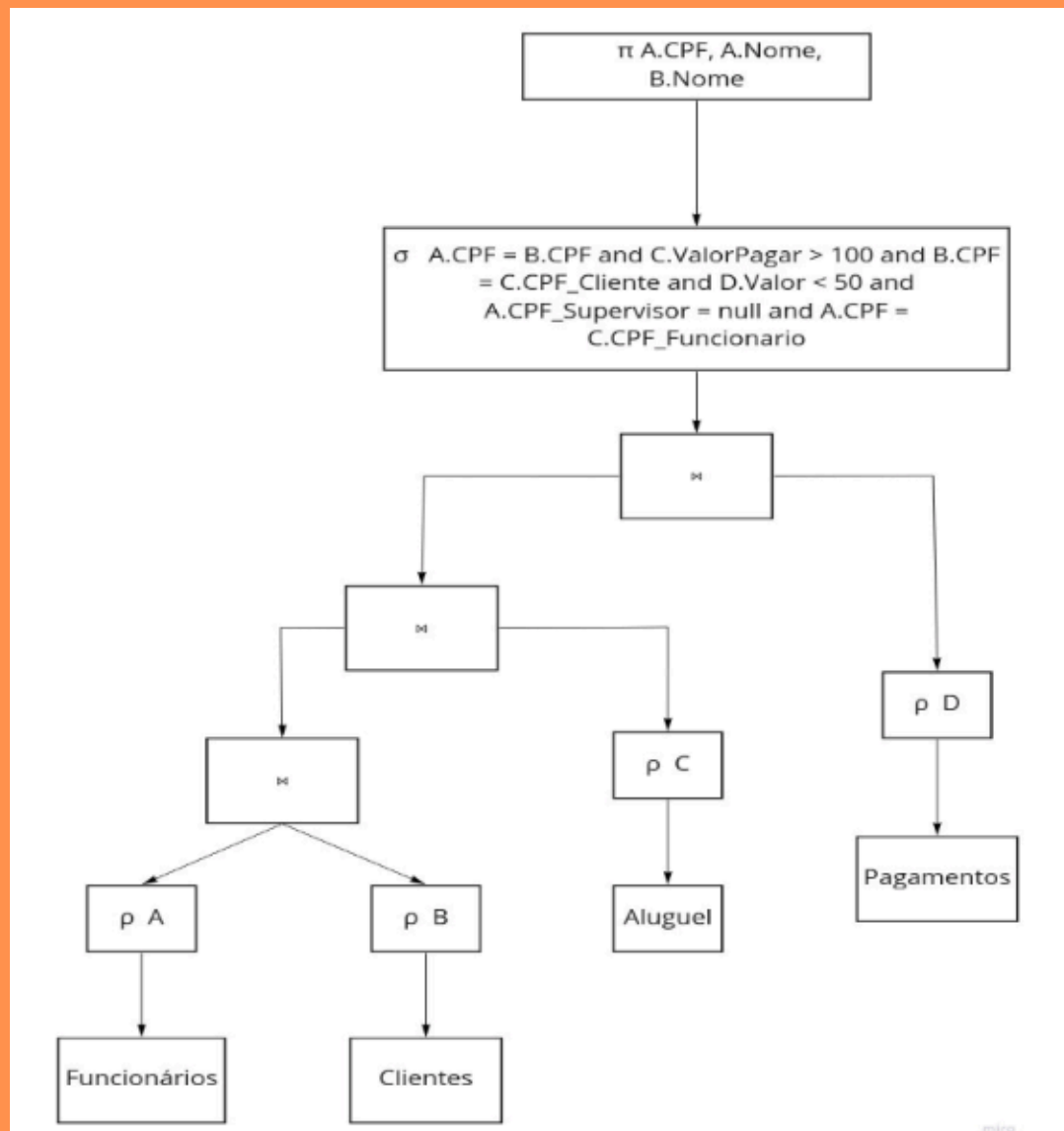


Query 3

```
SELECT A.CPF, A.Nome, B.Nome
FROM Funcionarios as A, Clientes as B, Aluguel as C, Pagamentos as D
WHERE A.CPF=B.CPF
AND C.ValorPagar>100
AND B.CPF=C.CPF_Cliente
AND D.Valor<50
AND A.CPF_Supervisor IS NULL
AND A.CPF=C.CPF_Funcionario
```

```
 $\pi$  A.CPF, A.Nome, B.Nome  $\sigma$  A.CPF = B.CPF and C.ValorPagar > 100 and
B.CPF = C.CPF_Cliente and D.Valor < 50 and A.CPF_Supervisor = null and
A.CPF = C.CPF_Funcionario ( (  $\rho$  A Funcionarios  $\rho$  B Clientes )  $\rho$  C
Aluguel )  $\rho$  D Pagamentos )
```

Query 3 Arvore Não Otimizada



Query 3 Arvore Otimizada

