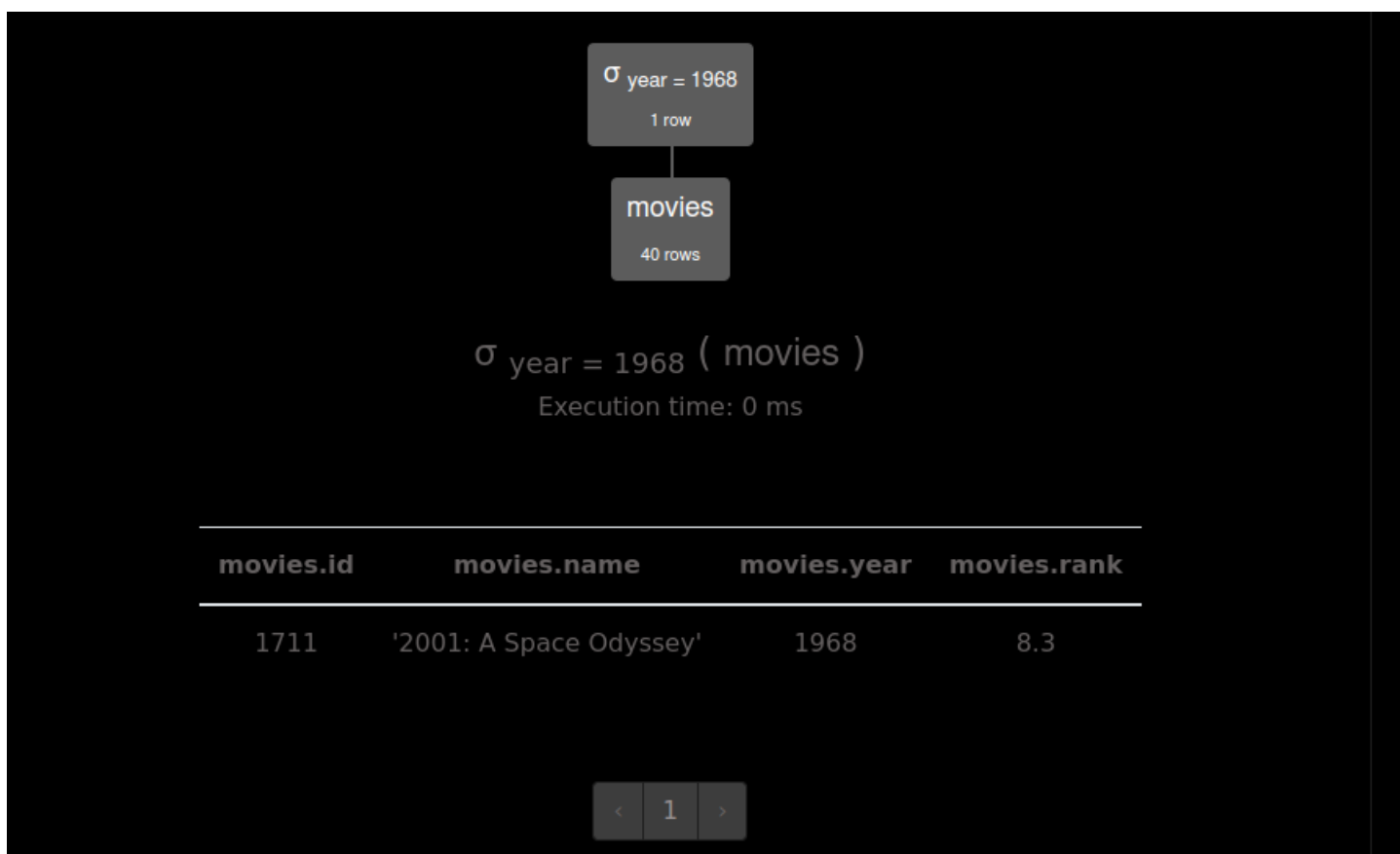


ÁLGEBRA RELACIONAL

DANILLO ARAÚJO DE PAIVA

* Filmes do Ano de 1968: $\sigma_{\text{year} = 1968}(\text{movies})$



The screenshot displays a database query execution interface. At the top, a query plan diagram shows a selection operation $\sigma_{\text{year} = 1968}$ (1 row) applied to a table named 'movies' (40 rows). Below the diagram, the executed query is shown as $\sigma_{\text{year} = 1968}(\text{movies})$ with an execution time of 0 ms. A table of results is displayed below, containing one row of data. At the bottom, there is a pagination control showing the current page is 1.

movies.id	movies.name	movies.year	movies.rank
1711	'2001: A Space Odyssey'	1968	8.3

* Filmes de Rank menor que 5: σ rank < 5 (movies)

σ rank < 5
3 rows

movies
40 rows

σ rank < 5 (movies)
Execution time: 1 ms

movies.id	movies.name	movies.year	movies.rank
256530	'Piranha Part Two: The Spawning'	1981	2.8
369522	'Xenogenesis'	1978	3.9
223710	'My Best Friend's Birthday'	1987	3.9

<

1

>

* Diretores com o nome Stanley: σ first_name = 'Stanley' (directors)

σ first_name = 'Stanley'
1 row

directors
3 rows

σ first_name = 'Stanley' (directors)
Execution time: 1 ms

directors.id	directors.first_name	directors.last_name
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43095	'Stanley'	'Kubrick'
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< 1 >

* Atores do Gênero Feminino: σ gender = 'F' (actors)

σ gender = 'F'
289 rows

actors
1091 rows

σ gender = 'F' (actors)
Execution time: 0 ms

actors.id	actors.first_name	actors.last_name	actors.gender
589318	'Paula'	'Cross'	'F'
636502	'Wendy'	'Gordon'	'F'
712889	'Mary Elizabeth'	'Mastrantonio'	'F'
785706	'Kimberly (I)'	'Scott'	'F'
840493	'Emily'	'Yancy'	'F'
583693	'Barbara'	'Coles'	'F'
583735	'Valerie'	'Colgan'	'F'
596318	'Holly'	'De Jong'	'F'
635153	'Jenette'	'Goldstein'	'F'
651551	'Carrie'	'Henn'	'F'

* Atores do Gênero Feminino e nome Anne: σ gender = 'F' and first_name = 'Anne' (actors)

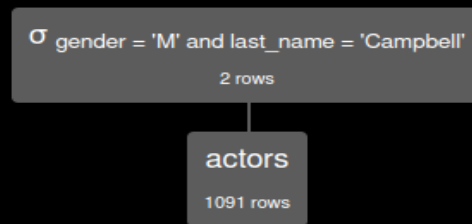
σ gender = 'F' and first_name = 'Anne'
3 rows

actors
1091 rows

σ gender = 'F' and first_name = 'Anne' (actors)
Execution time: 1 ms

actors.id	actors.first_name	actors.last_name	actors.gender
756625	'Anne'	'Pollack'	'F'
621016	'Anne'	'Fletcher'	'F'
662905	'Anne'	'Jackson'	'F'

*** Atores do Gênero Masculino e sobrenome Campbell: σ gender = 'M' and last_name = 'Campbell' (actors)**



actors.id	actors.first_name	actors.last_name	actors.gender
70419	'J. Kenneth'	'Campbell'	'M'
70489	'Lindsay (I)'	'Campbell'	'M'

* Nome e Sobrenome dos Diretores: π first_name, last_name (directors)

π first_name, last_name
3 rows

directors
3 rows

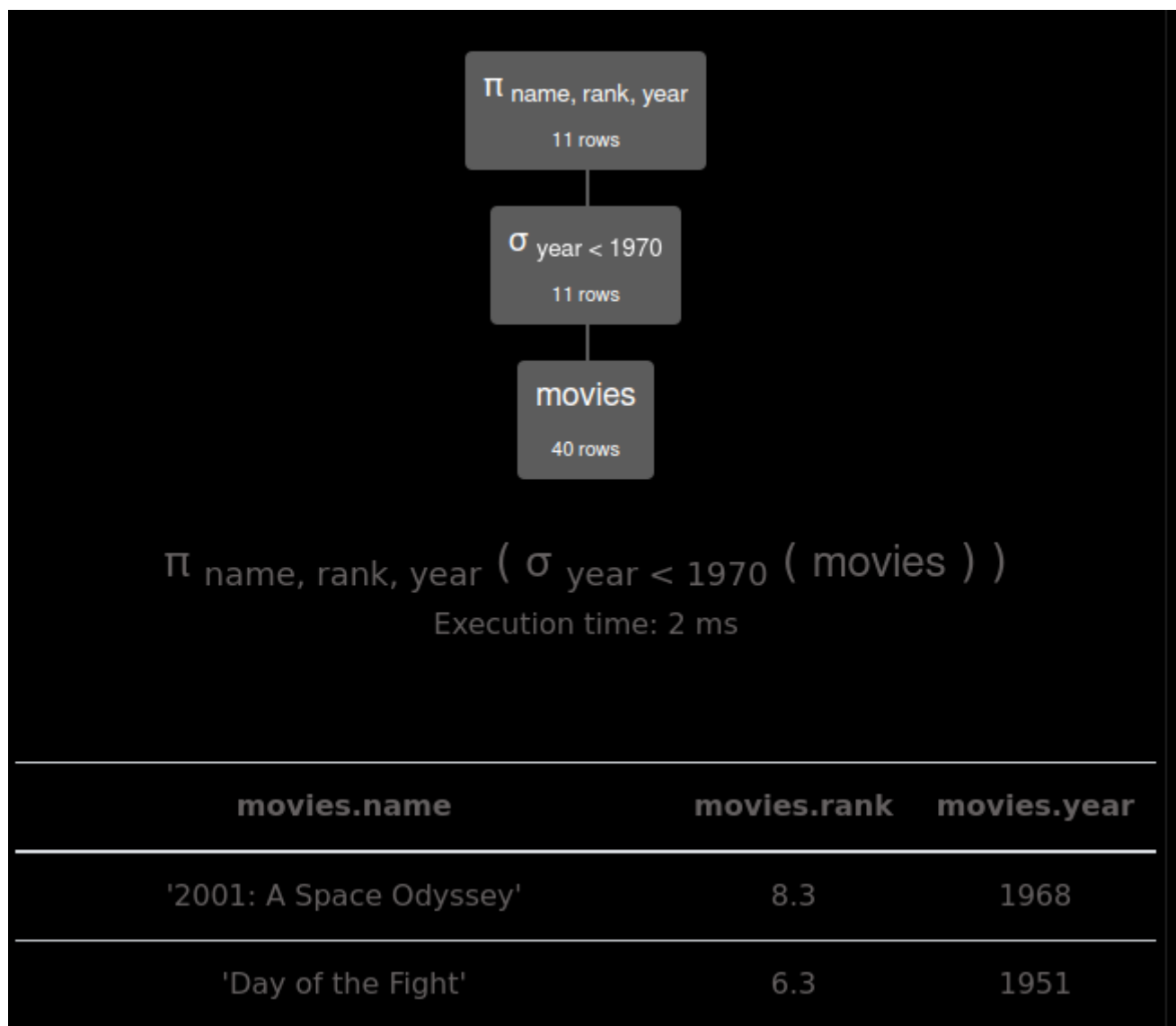
π first_name, last_name (directors)
Execution time: 3 ms

directors.first_name	directors.last_name
'James (I)'	'Cameron'
'Stanley'	'Kubrick'
'Quentin'	'Tarantino'

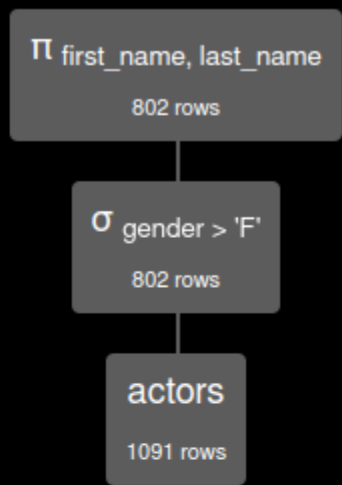
* Nome e Sobrenome e Gênero dos Atores: π first_name, last_name, gender (actors)



* Nome, Rank e Ano dos Filmes cujo o ano é menor que 1970: π name, rank, year (σ year < 1970 (movies))



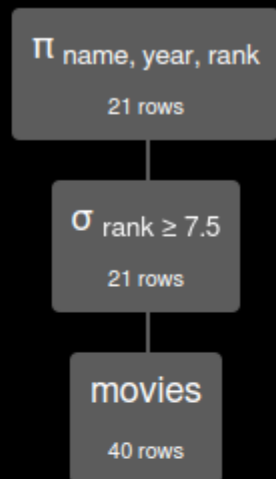
* Nome e Sobrenome dos Atores cujo o gênero é feminino: π first_name, last_name (σ gender > 'F' (actors))



π first_name, last_name (σ gender > 'F' (actors))
Execution time: 3 ms

actors.first_name actors.last_name	
'Chris'	'Anastasio'
'Michael'	'Beach'

* Nome, Ano e Rank dos Filmes cujo o rank é maior que 7,5: π name, year, rank (σ rank ≥ 7.5 (movies))



π name, year, rank (σ rank ≥ 7.5 (movies))
Execution time: 1 ms

movies.name	movies.year	movies.rank
'Aliens'	1986	8.2
'Expedition: Bismarck'	2002	7.5