

Prep 2 - Part 3 of 3

Finally, you'll get some practice by writing three simple relational algebra queries. The PCRS uses a syntax emulating the greek letters and subscripts used in RA. You can find the documentation for it on the Lectures page on Quercus. You don't need to read about any operators other than the three you've learned: select, project, and Cartesian product.

Note: the PCRS is picky about attribute names. Do no rename any attributes for these exercises (you don't know how to yet, anyway). Follow the default names and you'll be fine.

These queries again use the Movies schema.
You must answer them using only select, project, and Cartesian product.

Titles ✓

roles(mid, aid, character)
movies(mid, title, director, year, length)
artists(aid, aname, nationality)

Write a query to report all the movie titles in the database. We have started writing this query for you. Finish it by replacing each "xxx" with something appropriate.

1

`␣project_{title} movies;`

History

Submit

✓ Your submission is correct!

Submitted after the deadline!

✓ Test Case Passed

Expected Result is Hidden

Actual
title
The Godfather
2001: A Space Odyssey
Star Wars IV
The Player
Chinatown
The Shining
American Graffiti
Full Metal Jacket

Characters ✓

roles(mid, aid, character)
movies(mid, title, director, year, length)
artists(aid, aname, nationality)

Write a query to report all the characters in the database.

```
1 | \project_{character} roles;
```

History

Submit

✓ Your submission is correct!

Submitted after the deadline!

✓ Test Case Passed

Expected Result is Hidden

Actual

character

Delbert Grady

Bob Falfa

Jake J.J. Gittes

Han Solo

Jack Torrance

Princess Leia Organa

Long movies



roles(mid, aid, character)
movies(mid, title, director, year, length)
artists(aid, aname, nationality)

Write a query to report the title of all movies longer than 145 minutes.

```
1 | \project_{title} \select_{length>145} movies;
```

History

Submit

✓ Your submission is correct!

Submitted after the deadline!

✓ Test Case Passed

Expected Result is Hidden

Actual

title

The Godfather

2001: A Space Odyssey

The Shining

Full Metal Jacket

The Player

Kubrick Characters



roles(mid, aid, character)
movies(mid, title, director, year, length)
artists(aid, aname, nationality)

Write a query to find all the characters in movies directed by Kubrick. Report the characters and corresponding movie titles, in that order.

```
1 | \project_{character, title} \select_{director="Kubrick" and roles.mid=movies.mid} (movies  
  | \product roles);
```

History Submit

✔ Your submission is correct!

Submitted after the deadline!

✔ Test Case Passed

Expected Result is Hidden

Actual

character	title
Delbert Grady	The Shining
Jack Torrance	The Shining

