Relational Algebra Part 2

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1. How many tuples will be returned by the following relational algebra query?

πbooktitle(book)

7 tuples will be returned

1. What question does the following expression answer?

|πauthorid(author)−πeditor(book)|

This query answers the question of the number which authors are not editors since you are taking the set of all noneditors and taking the cardinality

1. Write a relational algebra expression that returns the names of all authors who are book editors.

πfirst\_name,last\_name(author ⋈ author\_id = editor(book))

1. Write a relational algebra expression that returns the names of all authors who are not book editors.

πfirst\_name,last\_name((πauthorid(author)−πeditor(book)) \* author)

1. Write a relational algebra expression that returns the names of all authors who have at least one publication in the database.

πfirst\_name,last\_name(author ∗ author\_pub)

1. How many tuples are returned by the following relational algebra expression?

author ⋈ authorid=editor book?

11 tuples are returned by the algebra expression

1. What question does the following relational algebra expression answer?

author∗(author\_pub∗(σmonth=′July′(book)∗pub))

It answers the question of what authors authored a pub that published a book in the month of July