New submission for: Lecture 3 Exercise

Due: 09/10/2020 @ 04:20 PM EDT

You are given the following datamodel to be used in all the following questions.
Books may have no authors, single or multiple authors. Not all books are edited but edited books may have single or multiple editors.
Person relation includes all authors and editors, no one else. :
Person(personid, name, dateofbirth) (key: id)
Books(bookisbn, title, publisher, year) (key: bookisbn)
BookAuthors(personid, bookisbn) (key: personid, bookisbn)
BookEditors(personid, bookisbn) (key: personid, bookisbn)

Which relational algebra expressions find name of people who have authored a book in year 2020?
Be careful, some answers may contain wrong SQL syntax or logic below. Don't fall for it.

- [x] project_{name} (Person * BookAuthors * (select_{year=2020} (Books)))
- [ ] T1(personid1, bookisbn1) = BookAuthors
  project_{name} (Person intersect T1 intersect (select_{year=2020} (Books))
- [ ] (project_{name} (Person)) * BookAuthors * (select_{year=2020} (Books))
- [ ] T1(personid1, bookisbn1) = BookAuthors
  project_{name} (select_{personid=personid1 and bookisbn=bookisbn1 and year=2020} (Person x T1 x Books))
- [ ] None of the other choices
- [x] project_{name} (Person join_{personid=personid} T1 join_{bookisbn=bookisbn} (select_{year=2020} (Books)))
- [ ] T1(personid1, bookisbn1) = BookAuthors
  project_{name} (Person join_{personid=personid1} T1 join_{bookisbn1=bookisbn} (select_{year=2020} (Books)))

Clear | Use Most Recent Submission

Which relational algebra expressions find title of books with an author and an editor?
Be careful, some answers may contain wrong SQL syntax or logic below. Don't fall for it.

- [ ] T1(bookisbn1) = project_{bookisbn} (BookAuthors union BookEditors)
  project_{title} select_{bookisbn1=bookisbn) (Books x T1)
- [ ] project_{title} (Books * BookAuthors * BookEditors)
- [ ] None of the other choices
- [ ] T1(bookisbn1) = project_{bookisbn} (BookAuthors) intersect project_{bookisbn} (BookEditors)
  project_{title} (Books join_{bookisbn1=bookisbn} T1)
- [ ] T1 = project_{bookisbn} (BookAuthors intersect BookEditors)
  project_{title} (Books * T1)
- [ ] T1(personid1,bookisbn1) = BookAuthors intersect BookEditors
  project_{title} (select_{bookisbn1=bookisbn} (T1 x Books))

Clear | Use Most Recent Submission

Which relational algebra expressions find title of books that have no editors?
Be careful, some answers may contain wrong SQL syntax or logic below. Don't fall for it.

- [ ] T1 = project_{bookisbn, title, publisher, year} (Books * BookEditor)
  Books - T1
- [ ] project_{title} (Books join_{bookisbn<>bookisbn} BookEditors)
- [ ] project_{title} (Books - BookEditors)
- [ ] T1 = (project_{bookisbn} (Books)) - (project_{bookisbn} (BookEditors))
  project_{title} (Books * T1)
- [ ] T1(bookisbn1) = project_{bookisbn} (BookEditors)
  project_{title} (Books join_{bookisbn<>bookisbn1} T1)
- [ ] T1(personid,bookisbn1) = BookEditors
  project_{title} (Books join_{bookisbn<>bookisbn1} T1)
- [ ] None of the other choices
- [ ] project_{title} (Books intersect BookEditors)
- [ ] T1 = project_{bookisbn, title, publisher, year} (Books * BookAuthor)
  Books - T1

Clear | Use Most Recent Submission

You are given the following set F of functional dependencies:
F = {AB -> C, B->D, CD -> E, BE-> A}
Which of the following set of functional dependencies are implied by F, i.e. can be obtained from F using any combination of the inference rules?

- [x] ABC -> AE
- [ ] CD -> CEA
- [x] AC -> E
- [x] AB -> ABCDE
- [ ] None of the other choices
- [x] BC -> E
- [x] BC -> BC

Clear | Use Most Recent Submission

You are given the following set F of functional dependencies for relation R(A,B,C,D,E,F):
F = {AB -> CD, D->E, CA->B}
What are the keys of R?

- [ ] BCF
- [ ] ABC
- [ ] AC
- [ ] None of the other choices
- [ ] AB
- [ ] BC
- [x] ABF
- [x] ACF

Clear | Use Most Recent Submission

By clicking "Submit" you are confirming that you have read, understand, and agree to follow the Academic Integrity Policy.

Submit

Select Submission Version: Version #2 Score: 43 / 50 GRADE THIS VERSION | Do Not Grade This Assignment

Note: This version of your assignment will be graded by the instructor/TAs and the score recorded in the gradebook.

Submitted Files

l3ex_1.txt (0.33kb)	Download
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First access timestamp:	12/20/2020 @ 04:42:47 PM EST
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Number of re-autogrades:	7
Last re-autograde finished:	09/13/2020 @ 04:09:51 PM EDT

48 / 50 Total

43 / 50 Autograding Total

6 / 10 Test 1 l3ex_1 — Hide Details

Visualize whitespace characters

Student l3ex_1.txt
ERROR: 1 incorrect line(s), ERROR: 2 missing line(s)
Incorrect Answer

```
1 project\_{name} (Person \* BookAuthors \* (select\_{year=2020} (Books)))
2 project\_{name} (Person join\_{personid=personid} T1 join\_{bookisbn=bookisbn} (select\_{year=2020} (Books)))
3
4 T1(personid1, bookisbn1) = BookAuthors
5  project\_{name} (Person join\_{personid=personid1} T1 join\_{bookisbn1=bookisbn} (select\_{year=2020} (Books)))
6
```

Expected l3ex_1.txt
ERROR: 1 incorrect line(s), ERROR: 2 missing line(s)
Incorrect Answer

```
1 project\_{name} (Person \* BookAuthors \* (select\_{year=2020} (Books)))
2
3 T1(personid1, bookisbn1) = BookAuthors
4  project\_{name} (Person join\_{personid=personid1} T1 join\_{bookisbn1=bookisbn} (select\_{year=2020} (Books)))
5 T1(personid1, bookisbn1) = BookAuthors
6  project\_{name} (select\_{personid=personid1 and bookisbn=bookisbn1 and year=2020} (Person x T1 x Books))
7
```

10 / 10 Test 2 l3ex_2 — Show Details

10 / 10 Test 3 l3ex_3 — Show Details

7 / 10 Test 4 l3ex_4 — Hide Details

Visualize whitespace characters

Student l3ex_4.txt
ERROR: 1 incorrect line(s)
Incorrect Answer

```
1 ABC -> AE
2 AC -> E
3 AB -> ABCDE
4 BC -> E
5 BC -> BC
6
```

Expected l3ex_4.txt
ERROR: 1 incorrect line(s)
Incorrect Answer

```
1 ABC -> AE
2 BC -> E
3 BC -> BC
4 AB -> ABCDE
5
```

10 / 10 Test 5 l3ex_5 — Show Details