Course: BINF_6211 - Lab 7
Name: Drashti Mehta, SID: 801262877

Step 1.

A) Add a temporary column temp_column
Ans: update literature_references add column temp_column;

B) Copy data from the column author into column temp_column.
Ans: update literature_references set temp_column = author

C) Create tables authors and literature_references_authors.
Ans:

```
CREATE TABLE literature_references_authors (
   auto_lit   REFERENCES literature_references (auto_lit),
   author_id  REFERENCES authors (author_id)
);

CREATE TABLE authors (
   auto_id   primary key autoincrement,
   name
);
```

Step 2 (15pts).

A) Select the first author from each string in temp_column and add it to table authors (replace "?" with appropriate functions):

Ans: INSERT INTO authors (name) SELECT DISTINCT SUBSTR (temp_column, 1,INSTR (temp_column, ',') -1) FROM literature_references;

B) Select the corresponding auto_lit and author_id and add them to table literature_references_authors (replace "…" with appropriate condition):

INSERT INTO literature_references_authors SELECT auto_lit, author_id FROM literature_references JOIN authors ON authors.name = substr(temp_column, 1,INSTR(temp_column,',') -1);

Step 3 (15pts).

Remove the first author from each string in temp_column (replace "…" with appropriate arguments):

UPDATE literature_references SET temp_column = SUBSTR(temp_column, instr(temp_column,',')+1)

Repeat actions from Step 2 to add the second authors. Because some of the second authors may already be contained in the table authors, you need to make sure that you add only new names when executing step 2.1. The command EXCEPT might help you.

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https://www.sqlitetutorial.net/sqlite-except/ (Links to an external site.)

Ans:
INSERT INTO authors (name) SELECT DISTINCT SUBSTR(temp_column,1, INSTR (temp_column,',') -1) FROM literature_references **except** select name from authors;

INSERT INTO literature_references_authors SELECT auto_lit, author_id FROM literature_references JOIN authors ON authors.name = substr(temp_column, 1,INSTR(temp_column,',')-1)

Step 4 (15pts).

Try to execute this statement:

```
SELECT author, author_id, name
FROM literature_references
NATURAL JOIN literature_references_authors
NATURAL JOIN authors
ORDER BY author;
```

Grid view | Form view

Total rows loaded: 1804

	author	author_id	name
1	Adai A, Johnson C, Mlotshwa S, Archer-Evans S, Manocha V, Vance V, Sundaresan V	76	Adai A
2	Adai A, Johnson C, Mlotshwa S, Archer-Evans S, Manocha V, Vance V, Sundaresan V	751	Johnson C
3	Afanasyeva EA, Hotz-Wagenblatt A, Glatting KH, Westermann F	24	Afanasyeva EA
4	Afanasyeva EA, Hotz-Wagenblatt A, Glatting KH, Westermann F	728	Hotz-Wagenblatt A
5	Aguilar AL, Piskol R, Beitzinger M, Zhu JY, Kruspe D, Aszodi A, Moser M, Englert C, Meister G	304	Aguilar AL
6	Aguilar AL, Piskol R, Beitzinger M, Zhu JY, Kruspe D, Aszodi A, Moser M, Englert C, Meister G	922	Piskol R
7	Ahmed R, Chang Z, Younis AE, Langnick C, Li N, Chen W, Brattig N, Dieterich C	460	Ahmed R
8	Ahmed R, Chang Z, Younis AE, Langnick C, Li N, Chen W, Brattig N, Dieterich C	620	Chang Z
9	Ahn HW, Morin RD, Zhao H, Harris RA, Coarfa C, Chen ZJ, Milosavljevic A, Marra MA, Rajkovic A	33	Ahn HW
10	Ahn HW, Morin RD, Zhao H, Harris RA, Coarfa C, Chen ZJ, Milosavljevic A, Marra MA, Rajkovic A	861	Morin RD
11	Allen E, Xie Z, Gustafson AM, Carrington JC	113	Allen E
12	Allen E, Xie Z, Gustafson AM, Carrington JC	1077	Xie Z

Result of this query

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Structure | Data | Constraints | Indexes | Triggers | DDL

Grid view | Form view

Filter data | Total rows loaded: 1124

	author_id	name
1	1	Lau NC
2	2	Lim LP
3	3	Ambros V
4	4	Grad Y
5	5	Ruby JG
6	6	Kato M
7	7	Zisoulis DG
8	8	Olsen PH
9	9	Lee RC
10	10	Lagos-Quintana M
11	11	Suh MR

Authors

Structure | Data | Constraints | Indexes | Triggers | DDL

Grid view | Form view

Filter data | Total rows loaded: 1804

	auto_lit	author_id
1	1599	1
2	1600	2
3	1601	3
4	1602	4
5	1603	5
6	1604	6
7	1605	7
8	1606	8
9	1607	9
10	1608	10
11	1609	5
12	1610	11

Literature_references_authors