

Research Paper Citation Project

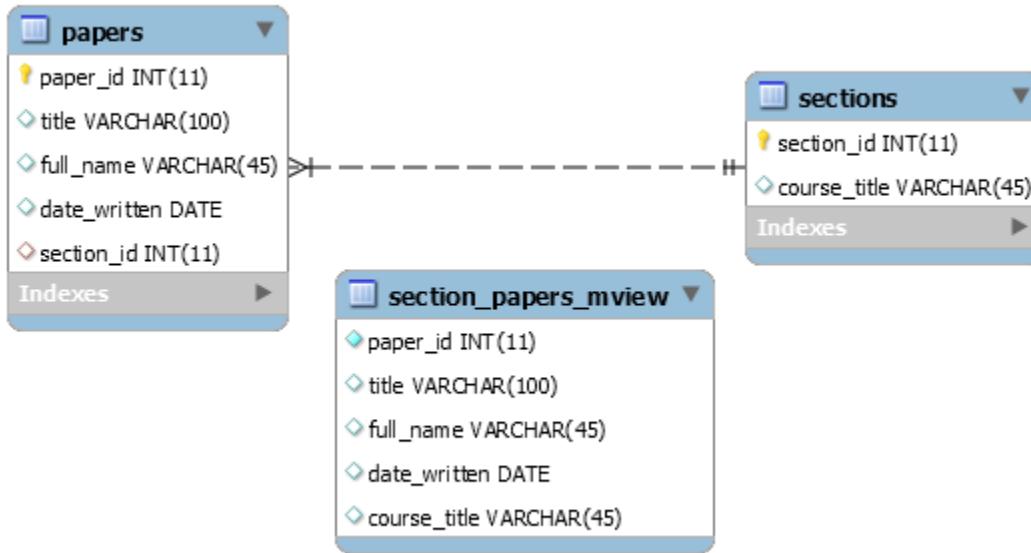
Views and Triggers

Instructions:

1. Create a view of your citation system called **citations_view** that looks like this. Remember the GROUP_CONCAT function.

paper_id	title	source	student	source_type	primary_author	secondary_authors
1	Should Social Security Remain a Government Program?	Privatizing Social Security: The Troubling Trade-off	Ploy Brown	website	Barry Bosworth	Gary Burtless
1	Should Social Security Remain a Government Program?	Vanguard	Ploy Brown	website	Consumer Affairs	NULL
1	Should Social Security Remain a Government Program?	The Real Deal: The History and Future of Social ...	Ploy Brown	book	Sylvester Schieber	John Shoven
1	Should Social Security Remain a Government Program?	Top Six Risks for Private Equity Firms	Ploy Brown	journal	Shruti Shah	NULL
2	Artificial wombs should be supported for mankind	Ectogenesis: Artificial Womb Technology and th...	Dylan Hodur	book	Scott Gelfand	Leslie Cannold, John Shook
2	Artificial wombs should be supported for mankind	The Graying of the Obstetric Population: Implica...	Dylan Hodur	journal	Mary Carolan	NULL
2	Artificial wombs should be supported for mankind	Fluid-Filled 'Blobbag' Allows Premature Lambs to ...	Dylan Hodur	journal	Jennifer Couzin-Frankel	NULL
2	Artificial wombs should be supported for mankind	Could We Be Marsupials? Very Premature Babie...	Dylan Hodur	website	Dena Davis	NULL
2	Artificial wombs should be supported for mankind	Why Not Artificial Wombs?	Dylan Hodur	journal	Christine Rosen	NULL
3	Advances in artificial intelligence	Can Chess Survive Artificial Intelligence?	Julian Moss	journal	Yoni Wilkenfeld	NULL

2. Create a new table for **sections** and modify **papers** to hold the primary key of sections as shown below. Add 1 or 2 sections and assign each paper to a section.



3. Then create a “materialized view” in MySQL (will have to be a physical table, as MySQL does not support materialized view) named **section_papers_mvview**. You can create the table using a statement like this:

```

create table section_papers_mvview as
select p.paper_id, p.title, p.full_name, p.date_written, s.course_title, s.section_id
from   papers p
       join sections s using (section_id);
  
```

paper_id	title	full_name	date_written	course_title	▲
1	Should Social Security Remain a Government Pr...	Ploy Brown	2019-03-10	College Composition II	
2	Artificial wombs should be supported for mankind	Dylan Hodur	2019-04-25	College Composition II	
3	Advances in artificial intelligence	Julian Moss	2019-06-01	Artificial Intelligence	

Note, if done correctly, the table will also have a section_id column.

4. The denormalized materialized view will be faster than joining **papers** and **sections**. (Naturally, for tables of this size and number of joins, the difference will be negligible, but this is to give you practice with managing a denormalized table.)

Of course, the problem is that – as a table and not a view – it will quickly get out of sync as the source tables are updated.

Create post-insert, post-update and post-delete triggers on **papers** that will also apply the corresponding changes to **section_papers_mvview**. (Assume that, once created, sections cannot be updated or deleted.)

Please submit:

1. Your CREATE VIEW statement for **citations_view**
2. Your CREATE TRIGGER statements for **papers**
3. A screen shot of the following transactions so we can see your triggers in action:
 - a. A SELECT * statement for **section_papers_mvview**, followed by an INSERT statement to **papers**, followed by another SELECT * statement;
 - b. A SELECT * statement for **section_papers_mvview**, followed by an UPDATE statement to **papers**, followed by another SELECT * statement;
 - c. A SELECT * statement for **section_papers_mvview**, followed by a DELETE statement to **papers**, followed by another SELECT * statement;