

Assignment 7

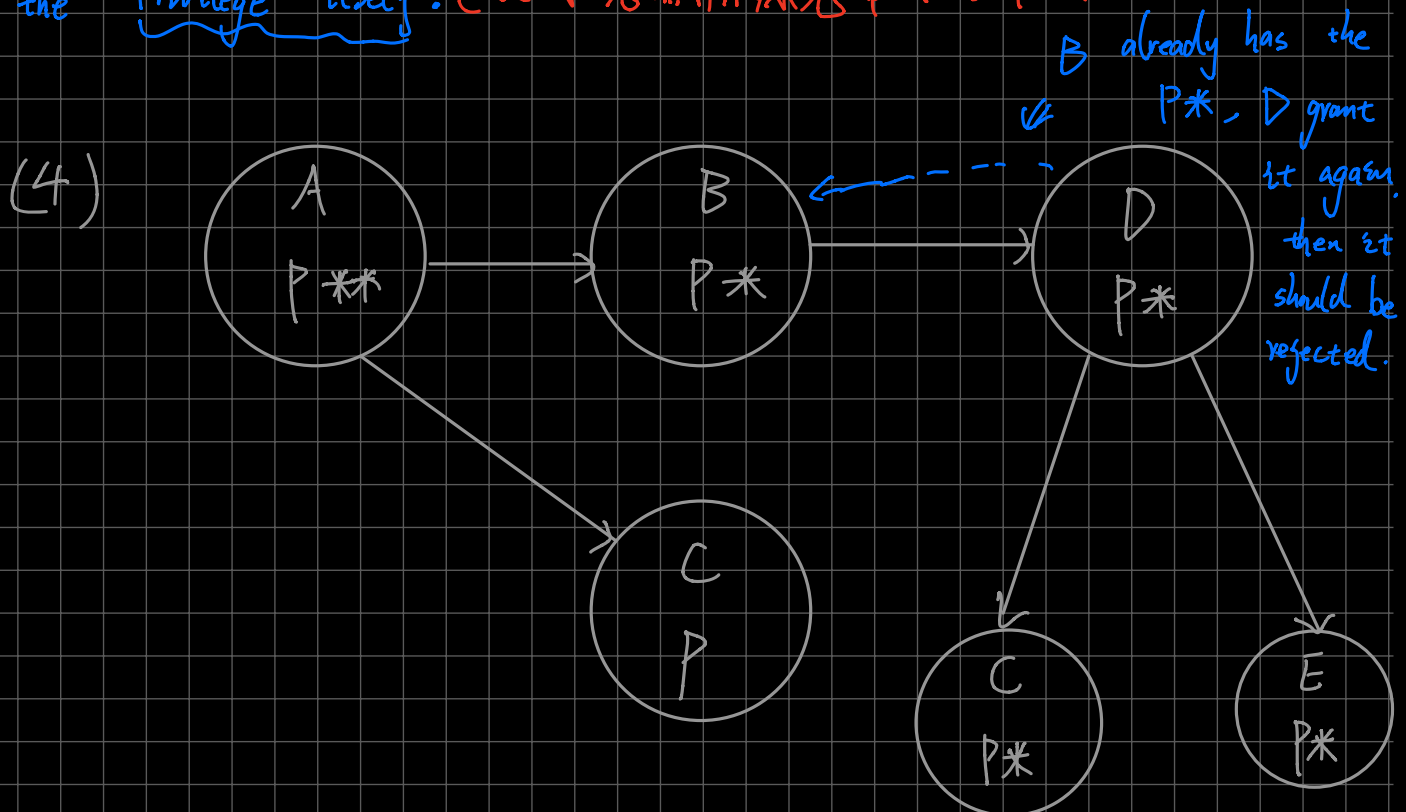
10.1.2 给出图 10-6 中操作序列步骤 (4) 至 (6) 每一步执行以后的授权图。假设 A 是权限 P 所涉关系的属主

一般要 P on Relationships / Triggers, ...
即权限是针对数据库元素而言的

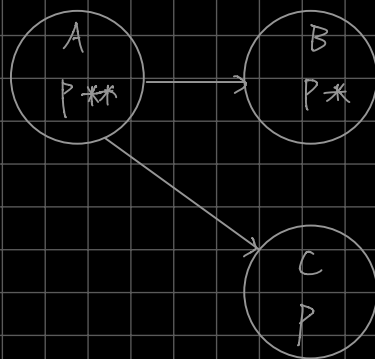
| Steps | 经由 | 操作 |
|-------|----|--------------------------------------|
| 1 | A | GRANT P TO B WITH GRANT OPTION |
| 2 | A | GRANT P TO C |
| 3 | B | GRANT P TO D WITH GRANT OPTION |
| 4 | D | GRANT P TO B, C, E WITH GRANT OPTION |
| 5 | B | REVOKE P FROM D CASCADE |
| 6 | A | REVOKE P FROM C CASCADE |

△ REVOKE GRANT OPTION FOR P FROM USER-U ⇒

only Revoke the granted option of some privilege for some users, but keep the Privilege itself. (此时先删除原先带 Grant Option



(5)



(6)



10.2.3 关系 $\text{SequelOf}(\text{movie}, \text{sequel})$ 给出了一个电影的直接续集，它有可能多于1个。定义一个递归关系 FollowOn ，其酉对 (x, y) 表示电影 y 为 x 续集，续集的续集-----

(a) 以递归 Datalog 规则写出 FollowOn 定义

(b) 以 SQL 递归形式写出 FollowOn 定义

(a) $\text{SequelOf}(\text{movie}, \text{sequel}) \leftarrow \text{Movies}(\text{movie}, \text{star_name}, \text{year}, \text{sequel})$

$\text{SequelOf}(\text{movie}, \text{sequel}) \leftarrow \text{SequelOf}(\text{movie}, S) \text{ AND } \text{SequelOf}(S, \text{sequel})$

(b) WITH Recursive $\text{SequelOf}(\text{movie}, \text{sequel})$ AS
 (SELECT movie, sequel FROM Movies)
 UNION

(SELECT $S_1.\text{movie}$, $S_2.\text{sequel}$ FROM $\text{SequelOf } S_1, \text{SequelOf } S_2$
 WHERE $S_1.\text{sequel} = S_2.\text{movie}$)

SELECT * FROM SequelOf ;