ITWS-4250/6250 Database Applications and Systems

Lab 8

**Instructions:**

* Create a lab8 folder in your repos.
* All answers should be in either word or text files.
* Include a readme file in your lab7 folder
* When done commit.
* Include a link to your repo in your readme
* Zip up the lab8 folder and submit to LMS

**Questions:**

1. Show the grant diagrams after steps (5) and (6) of the sequence of actions listed below. Assume A is the owner of the relation to which privilege p refers.

Text

Description automatically generated

After

Step 1 : A->B:p, A->E: p

Step 2: A->B:p-> C:p, A->E:p

Step 3: A->B:p-> C:p->D:p, A->E:p

Step 4: A->B:p-> C:p->D:p, A->E:p->C:p

Step 5: A->B:p-> C:p->D:p, A->E:p->C:p, A->E:p->D:p

Step 6: A->B:p-> C:p->D:p, A->E:p->C:p, A->E:p->D:p

After those steps, B, C and D lose access p and E and D have access p.

1. I have created a server at [itwsdbas.eastus.cloudapp.azure.com](http://itwsdbas.eastus.cloudapp.azure.com/)
   1. Ssh to the server, logon with your rcsid and pw=rcsid
      1. #1 change your password
2. Log in to MySQL server with from the command line or

Go to <https://itwsdbas.eastus.cloudapp.azure.com/phpmyadmin>

Log in with root/root

* 1. Create a user and pw for yourself – use your rcsid as your id
  2. Create database named [yourRCDid]-lab8
  3. Grant access to PLOTKR2, MANDAS and yourself
  4. Exclude others
  5. Log out and back in as your own user and continue

GRANT select on yuy12-lab8 TO PLOTKR2

GRANT select on yuy12-lab8 TO MANDAS

1. Create the appropriate tables in your databases for the below relations

Sailors(sid, sname, rating, age)

Boats(bid, bname, color)

Reserves(sid, bid, day)

Graphical user interface, application

Description automatically generated

Reserves

Graphical user interface, text, application

Description automatically generated

Boats

Graphical user interface, text, application

Description automatically generated

Sailors

Graphical user interface, application

Description automatically generated

Perform DCL operations on the relations assuming you are the owner of the database

1. Grant access to ***Yuppy*** to insert or delete Reserves rows and authorize someone else to do the same.

GRANT insert, delete ON Reserves TO Yuppy

1. Grant select access to ***Michael*** on Sailors and Reserves relations and also provide authorization to give access to others on Sailor relation

GRANT select ON Sailor, Reserves TO Michael

GRANT select ON Sailor TO (SELECT sname FROM Sailor)

1. ***Michael*** creates a view using the Sailors and Reserves. Can he provide access to other users? How can he provide access to another user? If he can’t provide access why can’t he provide access?

He can because He is the owner of the tables. There are two ways to provide access to others, one is to make the tables public and the other is to grant access to other users.

1. Assuming ***Michael*** creates another view on Sailor and provides access to ***Erik*** and ***Guppy***. Can he provide access to the view? If yes how?

Does ***Erik*** and ***Guppy*** has select access to Sailor as well?

Yes, because Michael is the owner of the view, he can not provide access to others for the view. However, he can not provide access to Erik and Guppy for the tables. Both of them do not have select access.

1. Grant access to ***Leah*** for updating **Rating** column in Sailor relation.

GRANT update(Rating) ON Sailor TO Leah

1. Grant access to ***Bill*** to reference column **BID** in relation **Reserves.**

GRANT reference(bid) ON Reserves TO Bill

1. Joe executes: Select access to ***Art*** on **Sailors**

Joe executes: Select access to ***Bob*** on **Sailors**

Art executes: Select access to ***Bob*** on **Sailors**

Joe executes: Revoke access to ***Art*** on Sailors

**Explain what happens to *Art* and *Bob* access.**

1. Joe provided assess to Art and Bob on Sailer
2. Art provided select access to Bob on Sailer
3. Joe revoke access to Art on Sailer
4. Finally, because Art’s access on Sailer is revoked by Joe, Art lost his access to Sailer as well as Bob whose access was provided by Art.