Course: IST-659
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Homework #9
Date Submitted: 6/14/2020
Topic: Lab08 – Database Security

Part 1 – Securing Data Objects

Setup

Not applicable since this is the SQL server setup via the remote lab.

Creating a database user

```
-- Lab 9 - Security --

CREATE USER guestuser FOR LOGIN guestuser
```

Creating queries from the guestuser's tab

In guestuser's tab, code and execute the EXEC statement to add a user login for the user with UserName 'TheDoctor' with a login from 'Gallifrey'.

The statement:

```
-- Create a user 'TheDoctor' for login 'Gallifery'

CREATE USER TheDoctor FOR LOGIN Gallifrey
```

Failed with error:

```
Msg 15247, Level 16, State 1, Line 7

User does not have permission to perform this action.
```

Also, in guestuser's tab, code and execute the EXEC statement to finish the VidCast titled 'Rock Your Way To Success'. You may have to do some SQL in your tab to find what you need for this.

In your tab, code and execute a SELECT statement to retrieve all rows from the vc_UserLogin table. Paste a screenshot of the results in your answers doc.

In your tab, code and execute a SELECT statement to retrieve ONLY the vc_VidCast record that should have been modified by guestuser's stored procedure call. Paste a screenshot of the results in your answers doc.

Copy and paste the code from both your tab and guestuser's tab to your answers doc.

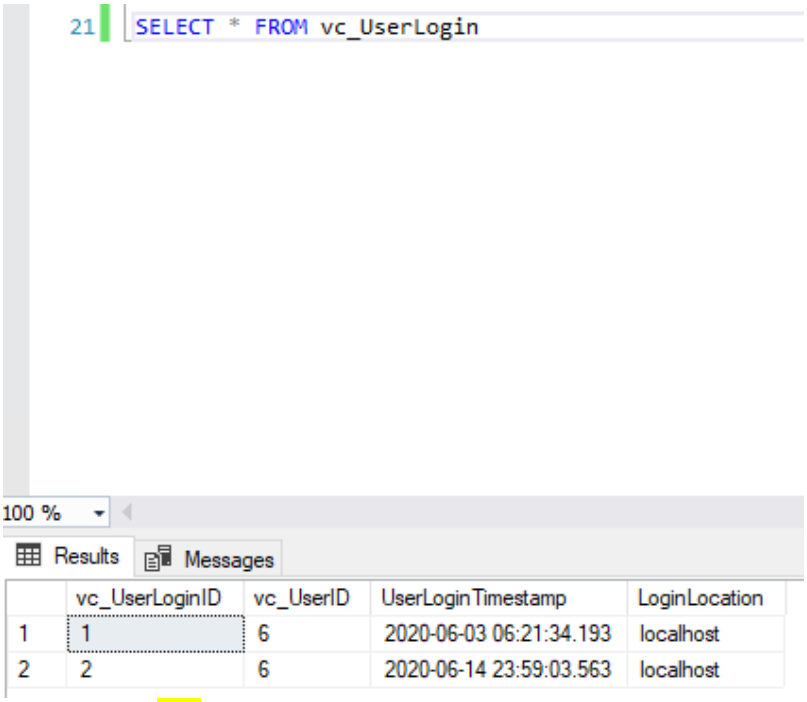
```
-- Grant permissions for guestuser to access vc_VidCastID table
DECLARE @vidcastid int
SELECT @vidcastid=vc_VidCastID
FROM vc_VidCast
WHERE VidCastTitle = 'Rock Your Way To Success'

-- Grant permission to guestuser to EXEC stored procedure
EXEC vc_FinishVidCast @vidcastid


-- Add an entry using the stored procedure vc_AddUserLogin
DECLARE @user varchar(10)
SET @user = 'tardy'


DECLARE @loc varchar(20)
SET @loc = 'localhost'

EXEC vc_AddUserLogin @user, @loc
```



	vc_UserLoginID	vc_UserID	UserLoginTimestamp	LoginLocation
1	1	6	2020-06-03 06:21:34.193	localhost
2	2	6	2020-06-14 23:59:03.563	localhost

Fig: vc_UserLogin after insert from guestuser

```
SELECT * FROM vc_VidCast
WHERE VidCastTitle = 'Rock Your Way To Success'
```

Results | Messages

	vc_VidCastID	VidCastTitle	StartDateTime	EndDateTime	ScheduleDurationMinutes	RecordingURL	vc_UserID	vc_StatusID
1	838	Rock Your Way To Success	2018-03-01 13:12:00.000	2020-06-14 23:22:48.643	63	NULL	62	3

Fig: vc_VidCast is update from guestuser

Part-2: Data Integrity Through Transactions

100 %

Results | Messages

	(No column name)
1	Yay! It worked!

	lab_LogID	lab_logInt
1	1	1
2	3	2
3	2	3
4	4	5

	lab_TestID	lab_testText
1	1	One
2	5	Sripada
3	3	Three
4	2	Two

Fig: Inserting data to demonstrate ACID

Also, in your own words, explain the reason the first execution failed, but the second did not. Was there anything that happened that you didn't expect?

Since we had already inserted values (One, Two and Three) and had a unique constraint on column lab_testText insert of values 'One' had failed.

On changing this to a unique value 'Sripada' the insert was successful. However, noticed that lab_TestID got a value 5 (lab_TestID is int identity) which means we burnt a lab_TestID without really adding a row to table lab_Test. Ideally, we should be rolling back that too.