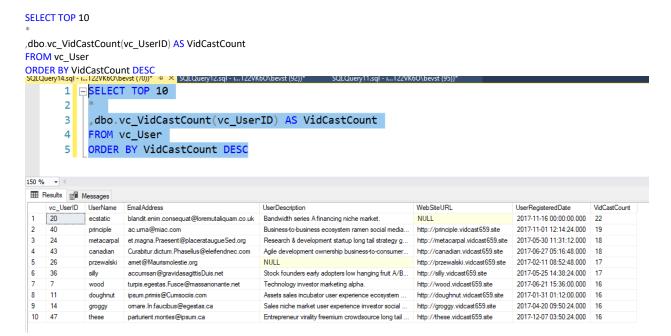
Beverlyn Tucker IST659_M406 Week8_Lab 08 Lab08 Database Programming

```
-- Declare a variable (we'll talk about variables in a minute)
declare @isThisNull varchar(30) -- Starts out as NULL
SELECT @isThisNull, ISNULL(@isThisNull, 'Yep, it is null') -- See?
-- Set the variable to something other than NULL
SET @isThisNull = 'Nope. It is not NULL'
SELECT @isThisNull, ISNULL(@isThisNull, 'Yep, it is null') -- How about now?
 Results Resages
        (No column name)
                              (No column name)
 1
        NULL
                              Yep, it is null
        (No column name)
                                (No column name)
        Nope. It is not NULL
 1
                                Nope. It is not NULL
CREATE FUNCTION dbo.addTwoInts (@firstNumber int, @secondNumber int)
RETURNS int
AS
BEGIN
DECLARE @returnValue int
SET @returnValue = @firstNumber + @secondNumber
RETURN @returnValue
End
         CREATE FUNCTION dbo.addTwoInts (@firstNumber int, @secondNumber int)
         RETURNS int
         DECLARE @returnValue int
         SET @returnValue = @firstNumber + @secondNumber
         RETURN @returnValue
      8
   Command(s) completed successfully.
       AS
       BEGIN
       DECLARE @returnValue int
       SET @returnValue = @firstNumber + @secondNumber
       RETURN @returnValue
    10 SELECT dbo.AddTwoInts(5, 10)
CREATE FUNCTION [dbo].[vc_VidcastCount](@userID int)
RETURNS int AS
BEGIN
DECLARE @returnValue int
SELECT @returnValue = COUNT (vc_UserID) FROM vc_VidCast
WHERE vc VidCast.vc UserID = @UserID
RETURN @returnValue
END
GO
```



In your own words, in your answers document, describe what lines 1 through 5 above actually do. Also, how is it that this code knows that the vc_User record with vc_UserID = 20 has 22 vc VidCast records?

Answer: Line 1 through 5 does pulling top 10 userID that has the most VidCastCount and by using DESC given us the most to the fewest VidCastCount.

UserID 20 has a total of 22 VidCast how does the code know. Every time the user enters the new video it login the title of the video, and it counts every one of them.

```
CREATE FUNCTION dbo.vc_TAGIDLookup(@tagtext varchar(20))
RETURNS int AS
BEGIN
          DECLARE @returnValue int
         SELECT @returnValue = vc_TagID FROM vc_Tag
         WHERE TagText = @tagText
         RETURN @returnValue
END
GO
SELECT dbo.vc_TagIDlookup('Music')
SELECT dbo.vc_TagIDlookup('Tunes')
      12 SELECT dbo.vc_TagIDlookup('Music')
      13 SELECT dbo.vc_TagIDlookup('Tunes')
 150 % - 4
 Results Messages
    (No column name)
    4
    NULL
```

In your own words, in your answers document, describe what lines 12 and 13 above actually do. Also, when line 13 executed, we received a NULL from SQL Server. How come?

Answer: What is this means is when we are looking on the TagID lookup there are a total of 4 Music tag, and there was no Tunes tag.

| | vc_UserID | UserName | EmailAddress | UserDescription | WebSiteURL | UserRegisteredDate | VidCastCount |
|----|-----------|------------|---|--|-----------------------------------|-------------------------|--------------|
| 1 | 20 | ecstatic | blandit.enim.consequat@loremutaliquam.co.uk | Bandwidth series A financing niche market. | NULL | 2017-11-16 00:00:00.000 | 22 |
| 2 | 40 | principle | ac.uma@miac.com | Business to-business ecosystem ramen social media | http://principle.vidcast659.site | 2017-11-01 12:14:24.000 | 19 |
| 3 | 24 | metacarpal | et.magna.Praesent@placerataugueSed.org | Research & development startup long tail strategy g | http://metacarpal.vidcast659.site | 2017-05-30 11:31:12.000 | 18 |
| 4 | 43 | canadian | Curabitur.dictum.Phasellus@eleifendnec.com | Agile development ownership business to-consumer | http://canadian.vidcast659.site | 2017-06-27 05:16:48.000 | 18 |
| 5 | 26 | przewalski | amet@Maurismolestie.org | NULL | http://przewalski.vidcast659.site | 2017-02-11 08:52:48.000 | 17 |
| 6 | 36 | silly | accumsan@gravidasagittisDuis.net | Stock founders early adopters low hanging fruit A/B | http://silly.vidcast659.site | 2017-05-25 14:38:24.000 | 17 |
| 7 | 7 | wood | turpis.egestas.Fusce@massanonante.net | Technology investor marketing alpha. | http://wood.vidcast659.site | 2017-06-21 15:36:00.000 | 16 |
| 8 | 11 | doughnut | ipsum.primis@Cumsociis.com | Assets sales incubator user experience ecosystem | http://doughnut.vidcast659.site | 2017-01-31 01:12:00.000 | 16 |
| 9 | 14 | groggy | omare.ln.faucibus@egestas.ca | Sales niche market user experience investor social | http://groggy.vidcast659.site | 2017-04-20 09:50:24.000 | 16 |
| 10 | 47 | these | parturient.montes@ipsum.ca | Entrepreneur virality freemium crowdsource long tail | http://these.vidcast659.site | 2017-12-07 03:50:24.000 | 16 |

In your own words, in your answers document, describe what lines 79 through 87 above are doing.

Answer: A view function is a mirror image of the real table in the database that contains the same information in the rows and column and adding Order by DESC it provides us information the most VidCastCount.

```
\label{lem:create_procedure_vc_change} \textbf{CREATE PROCEDURE vc\_changeUserEmail} ( @username \ varchar(20), \ @newEmail \ varchar(50)) \\
AS
BEGIN
          UPDATE vc_User SET EmailAddress = @newEmail
          WHERE UserName = @userName
END
GO
22 -- Create a procedure to update a vc_User's email address
23
       -- The First parameter is the user name for the user to change
       --The second is the new email address
24
       CREATE PROCEDURE vc_changeUserEmail(@username varchar(20), @newEmail varchar(50))
  25
  26
  27
28
       BEGIN
           UPDATE vc_User SET EmailAddress = @newEmail
  29
           WHERE UserName = @userName
       END
  30
  31
       GO
lessages Commands completed successfully.
```

EXEC vc_changeUserEmail 'tardy', 'kmstudent@syr.edu'

```
25 CREATE PROCEDURE vc_changeUserEmail(@username varchar(20), @newEmail varchar(50))
 26 AS
 27 BEGIN
 28
      UPDATE vc_User SET EmailAddress = @newEmail
 29
     WHERE UserName = @userName
 30 END
 31 GO
 32
 33 EXEC vc_changeUserEmail 'tardy','kmstudent@syr.edu'
(1 row(s) affected)
SELECT * FROM vc_User
WHERE UserName = 'tardy'
            SELECT * FROM vc_User
      35
      36
            WHERE UserName = 'tardy'
150 %
```

In your own words, in your answers document, describe what lines 91 through 104 above are doing (From Attachment.

Mine is Line 22 to 36 all the way down to Select Where statement

Email Address

INSERT INTO vc_Tag (TagText) VALUES ('cat Videos')

Results Messages

vc UserID

UserName

tardy

Answer: The green font is instruction on how to create a procedure and how to update.

UserDescription

kmstudent@syr.edu Startup leverage growth hacking bootstrapping sc...

The rest is the steps on how to code the procedure, and update User table under column name EmailAddress to the new email. Line 104, on mine, is line 35 & 36 this is a result after the updates it shows that the procedure creation and the update are successful.

WebSiteURL

UserRegisteredDate

http://tardy.vidcast659.site 2017-03-12 15:36:00.000

```
SELECT * FROM vc_Tag
WHERE vc_TagID = @@identity
             INSERT INTO vc_Tag (TagText) VALUES ('cat Videos')
       38
             SELECT * FROM vc_Tag
       39
             WHERE vc_TagID =
       40
       41
 150 %
  Results Messages
     vc_TagID TagText
                    TagDescription
           cat Videos NULL
CREATE PROCEDURE vc_addUserLogin(@userName varchar(20), @loginFrom varchar(50))
AS
BEGIN
DECLARE @userID int
SELECT @userID = vc_UserID
FROM vc User
WHERE UserName = @userName
INSERT INTO vc_UserLogin (vc_UserID,LoginLocation)
VALUES (@userID = @userName)
RETURN @@IDENTITY
END
GO
```

```
QLQuery1.sql - ist...(AD\bitucker (106))* ×
        1 CREATE PROCEDURE vc_addUserLogin(@userName varchar(20), @loginFrom varchar(50))
          AS
          BEGIN
          DECLARE @userID int
          SELECT @userID = vc_UserID
        6 FROM vc User
          WHERE UserName = @userName
       9 ÷INSERT INTO vc_UserLogin (vc_UserID,LoginLocation)
10 VALUES (@userID , @userName)
       11 RETURN @@IDENTITY
       12 END
       13 GO
    Command(s) completed successfully.
DECLARE @addedValue int
EXEC @addedValue = vc_addUserLogin 'tardy', 'localhost'
SELECT
           vc_User.vc_UserID
           ,vc_User.UserName
           ,vc_UserLogin.UserLoginTimestamp
          ,vc_UserLogin.LoginLocation
FROM vc_User
JOIN vc_UserLogin on vc_User.vc_UserID = vc_UserLogin.vc_UserID
WHERE vc_UserLoginID = @addedValue
  100 % ▼ <

    Results t₃ Messages

        vc_UserID UserName UserLoginTimestamp
                          2019-03-04 21:48:07.397 tardy
               tardy
```

Your UserLoginTimestamp value will be different than the one shown. On your answers doc, explain why this is.

Answer: The UserLoginTimestamp is different from the attachment because it is based on the course when was created. Mine is base one time that I run the report/inserted the information.

On your answers doc, also identify one way we could simplify the code in the stored procedure above. (Hint: Look back at how we did a lookup with the vc_Tag table)

Answer: another way to get the same time is to hard code/declaring the return value. The UserLoginTimestamp. Means Insert the callout time.

Part 2 – Putting All Together

GO

```
CREATE FUNCTION dbo.vc_UserIDLookup(@userName varchar(20))
RETURNS int AS
BEGIN

DECLARE @returnValue int
SELECT @returnValue = vc_userID FROM vc_User
WHERE userName = @userName

RETURN @returnValue
END
```

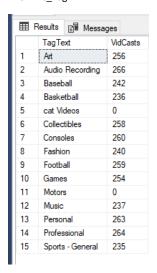
```
24 CREATE FUNCTION dbo.vc_UserIDLookup(@userName varchar(20))
  25
       RETURNS int AS
  26
       BEGIN
  27
           DECLARE @returnValue int
           SELECT @returnValue = vc_userID FROM vc_User
  28
  29
           WHERE userName = @userName
  30
  32
           RETURN @returnValue
  33
  34
35
Commands completed successfully.
```

SELECT 'Trying the vc_UserIDLookup function.', dbo.vc_UserIDLookup('tardy')

```
36 SELECT 'Trying the vc_UserIDLookup function.', dbo.vc_UserIDLookup('tardy')
37
150 % - \( \) Messages
(No column name)
1 Trying the vc_UserIDLookup function. 6
```

```
CREATE FUNCTION dbo.vc_TagVidCastCount(@TagID int)
RETURNS int AS
BEGIN
DECLARE @returnValue int
SELECT @returnValue = COUNT (vc_TagID) FROM vc_VidCastTagList
WHERE vc_VidCastTagList.vc_TagID = @TagID
RETURN @returnValue
END
GO
SELECT
vc_tag.TagText
```

 $\label{eq:continuous} $$vc_tag.TagText$, $dbo.vc_TagVidCastCount(vc_Tag.vc_TagID)$ AS VidCasts $$FROM vc_Tag$$



```
CREATE FUNCTION vc_VidCastDuration(@UserID int)
RETURNS int AS
BEGIN
DECLARE @returnValue int
SELECT @returnValue = SUM(DATEDIFF(n, startDateTime, EndDateTime)) FROM vc_VidCast
Join vc_User on vc_User.vc_UserID = vc_VidCast.vc_UserID
```

WHERE vc_User.vc_UserID = @UserID

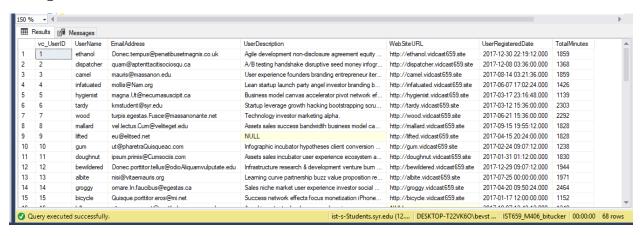
RETURN @returnValue END

GO

Select

, dbo.vc_VidCastDuration(vc_UserId) AS TotalMinutes

FROM vc_User



SELECT

 $\label{eq:continuous} vc_Tag.TagText \\ , dbo.vc_TagVidCastCount(vc_Tag.vc_TagID) \ AS \ VidCasts \\ FROM \ vc_Tag \\ ORDER \ BY \ VidCasts \ DESC$

| ⊞ | Results 🗐 Messa | ges |
|----|------------------|----------|
| | TagText | VidCasts |
| 1 | Audio Recording | 266 |
| 2 | Professional | 264 |
| 3 | Personal | 263 |
| 4 | Consoles | 260 |
| 5 | Football | 259 |
| 6 | Collectibles | 258 |
| 7 | Art | 256 |
| 8 | Games | 254 |
| 9 | Baseball | 242 |
| 10 | Fashion | 240 |
| 11 | Music | 237 |
| 12 | Basketball | 236 |
| 13 | Sports - General | 235 |
| 14 | Motors | 0 |
| 15 | cat Videos | 0 |

```
ALTER VIEW dbo.vc_MostProlificUsers AS
SELECT TOP 10

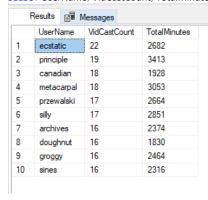
*
, dbo.vc_VidCastCount(vc_UserID) AS VidCastCount
, dbo.vc_VidCastDuration(vc_UserId) AS TotalMinutes
FROM vc_User
```

ORDER BY VidCastCount DESC

GO

GO

 ${\color{red} \textbf{SELECT UserName, VidCastCount, Total Minutes FROM vc_MostProlificUsers} \\$



```
Create PROCEDURE vc_addTagText(@TagText varchar(20), @description varchar(100)=NULL)
AS
BEGIN
DECLARE @TagID int
SELECT @TagID = vc_TagID
FROM vc_Tag
WHERE TagText = @TagText
INSERT INTO vc_Tag (TagText, Tagdescription)
VALUES (@TagText, @description)
RETURN @@IDENTITY
END
```

```
3 ☐ Create PROCEDURE vc_addTagText(@TagText varchar(20), @description varchar(100)=NULL)
     4
        AS
     5 BEGIN
        DECLARE @TagID int
     6
     7
       FROM vc_Tag
     8
     9
        WHERE TagText = @TagText
    10
       INSERT INTO vc_Tag (TagText, Tagdescription)
    11
    12
        VALUES (@TagText, @description)
    13
        RETURN @@IDENTITY
    14
        END
    15
        GO
50 % + 4
Messages
```

Commands completed successfully.

```
Create PROCEDURE vc_addTag(@TagText varchar(20), @description varchar(100)=NULL)
AS
BEGIN
DECLARE @TagID int
SELECT @TagID = vc_TagID
FROM vc_Tag
WHERE TagText = @TagText
INSERT INTO vc_Tag (TagText, Tagdescription)
VALUES (@TagText, @description)
RETURN @@IDENTITY
END
GO
DECLARE @newTagID int
EXEC @newTagID = vc_addTag 'SQL', 'Finally, a SQL Tag'
SELECT * FROM vc_Tag
WHERE vc_TagID = @newTagID

    ⊞ Results

                  Messages
           vc_TagID
                        TagText
                                   TagDescription
           17
                        SQL
                                    Finally, a SQL Tag
```

Create PROCEDURE vc_FinishVidCast(@vc_VidCastID int)
AS
BEGIN
DECLARE @VidCastID int
SELECT @vc_VidCastID = vc_VidCastID
FROM vc_VidCast
WHERE @vc_VidCastID = vc_VidCastID

```
END
GO
DECLARE @newVC int
INSERT INTO vc_VidCast
           (Vid \hbox{\it CastTitle}, Start \hbox{\it DateTime}, Schedule \hbox{\it DurationMinutes}, vc\_User ID,
           vc StatusID)
VALUES (
           'Finally done with sprocs'
          , DATEADD(n, -45, GETDATE())
          , 45
          , (SELECT vc_UserID FROM vc_User WHERE UserName = 'tardy')
          , (SELECT vc_StatusID FROM vc_Status WHERE StatusText='Started')
SET @newVC = @@identity
SELECT * FROM vc_VidCast WHERE vc_VidCastID = @newVC
EXEC vc_FinishVidCast @newVC
SELECT * FROM vc_VidCast WHERE vc_VidCastID = @newVC
```

| | vc_VidCastID | VidCast Title | StartDateTime | EndDateTime | Schedule Duration Minutes | RecordingURL | vc_UserID | vc_StatusID |
|---|--------------|--------------------------|-------------------------|-------------|---------------------------|--------------|-----------|-------------|
| 1 | 860 | Finally done with sprocs | 2019-03-08 15:22:45.453 | NULL | 45 | NULL | 6 | 2 |
| | vc_VidCastID | VidCast Title | StartDateTime | EndDateTime | Schedule Duration Minutes | RecordingURL | vc_UserID | vc_StatusID |
| 1 | 860 | Finally done with sprocs | 2019-03-08 15:22:45.453 | NULL | 45 | NULL | 6 | 2 |

SQL Code

```
CREATE FUNCTION dbo.vc_UserIDLookup(@userName varchar(20))
RETURNS int AS
BEGIN
          DECLARE @returnValue int
          SELECT @returnValue = vc_userID FROM vc_User
          WHERE userName = @userName
          RETURN @returnValue
END
GO
SELECT 'Trying the vc_UserIDLookup function.', dbo.vc_UserIDLookup('tardy')
CREATE FUNCTION dbo.vc_TagVidCastCount(@TagID int)
RETURNS int AS
BEGIN
DECLARE @returnValue int
SELECT @returnValue = COUNT (vc_TagID) FROM vc_VidCastTagList
WHERE vc_VidCastTagList.vc_TagID = @TagID
RETURN @returnValue
END
GO
SELECT
          vc_tag.TagText
          , dbo.vc_TagVidCastCount(vc_Tag.vc_TagID) AS VidCasts
FROM vc_Tag
CREATE FUNCTION vc_VidCastDuration(@UserID int)
RETURNS int AS
```

```
BEGIN
DECLARE @returnValue int
SELECT @returnValue = SUM(DATEDIFF(n, startDateTime, EndDateTime)) FROM vc_VidCast
Join vc User on vc User.vc UserID = vc VidCast.vc UserID
WHERE vc_User.vc_UserID = @UserID
RETURN @returnValue
END
GO
Select
           , dbo.vc\_VidCastDuration(vc\_UserId) \ \ AS \ TotalMinutes
FROM vc_User
SELECT
           vc\_Tag.TagText
           , \\ dbo.vc\_TagVidCastCount(vc\_Tag.vc\_TagID) \\ \\ AS \\ VidCasts
FROM vc Tag
ORDER BY VidCasts DESC
ALTER VIEW dbo.vc_MostProlificUsers AS
           SELECT TOP 10
           , dbo.vc_VidCastCount(vc_UserID) AS VidCastCount
           , dbo.vc_VidCastDuration(vc_UserId) AS TotalMinutes
FROM vc User
ORDER BY VidCastCount DESC
GO
SELECT UserName, VidCastCount, TotalMinutes FROM vc_MostProlificUsers
\label{lem:create_procedure} \textbf{Create} \ \textbf{PROCEDURE} \ \textbf{vc}\_ \textbf{addTagText} ( \textbf{@TagText} \ \textbf{varchar} (20), \ \textbf{@description} \ \textbf{varchar} (100) = \textbf{NULL} )
BEGIN
DECLARE @TagID int
SELECT @TagID = vc_TagID
FROM vc_Tag
WHERE TagText = @TagText
INSERT INTO vc_Tag (TagText, Tagdescription)
VALUES (@TagText, @description)
RETURN @@IDENTITY
END
GO
Create PROCEDURE vc_addTag(@TagText varchar(20), @description varchar(100)=NULL)
AS
BEGIN
DECLARE @TagID int
SELECT @TagID = vc_TagID
FROM vc_Tag
WHERE TagText = @TagText
INSERT INTO vc_Tag (TagText, Tagdescription)
VALUES (@TagText, @description)
RETURN @@IDENTITY
END
GO
```

```
DECLARE @newTagID int
EXEC @newTagID = vc_addTag 'SQL', 'Finally, a SQL Tag'
SELECT * FROM vc_Tag
WHERE vc_TagID = @newTagID
Create PROCEDURE vc_FinishVidCast(@vc_VidCastID int)
AS
BEGIN
DECLARE @VidCastID int
SELECT @vc_VidCastID = vc_VidCastID
FROM vc_VidCast
WHERE @vc_VidCastID = vc_VidCastID
END
GO
DECLARE @newVC int
INSERT INTO vc VidCast
                                    (Vid Cast Title, Start Date Time, Schedule Duration Minutes, vc\_User ID, and the property of the property of
                                    vc_StatusID)
VALUES (
                                    'Finally done with sprocs'
                                  , DATEADD(n, -45, GETDATE())
                                  , (SELECT vc_UserID FROM vc_User WHERE UserName = 'tardy')
                                  , (SELECT vc_StatusID FROM vc_Status WHERE StatusText='Started')
SET @newVC = @@identity
SELECT * FROM vc_VidCast WHERE vc_VidCastID = @newVC
EXEC vc_FinishVidCast @newVC
SELECT * FROM vc_VidCast WHERE vc_VidCastID = @newVC
```