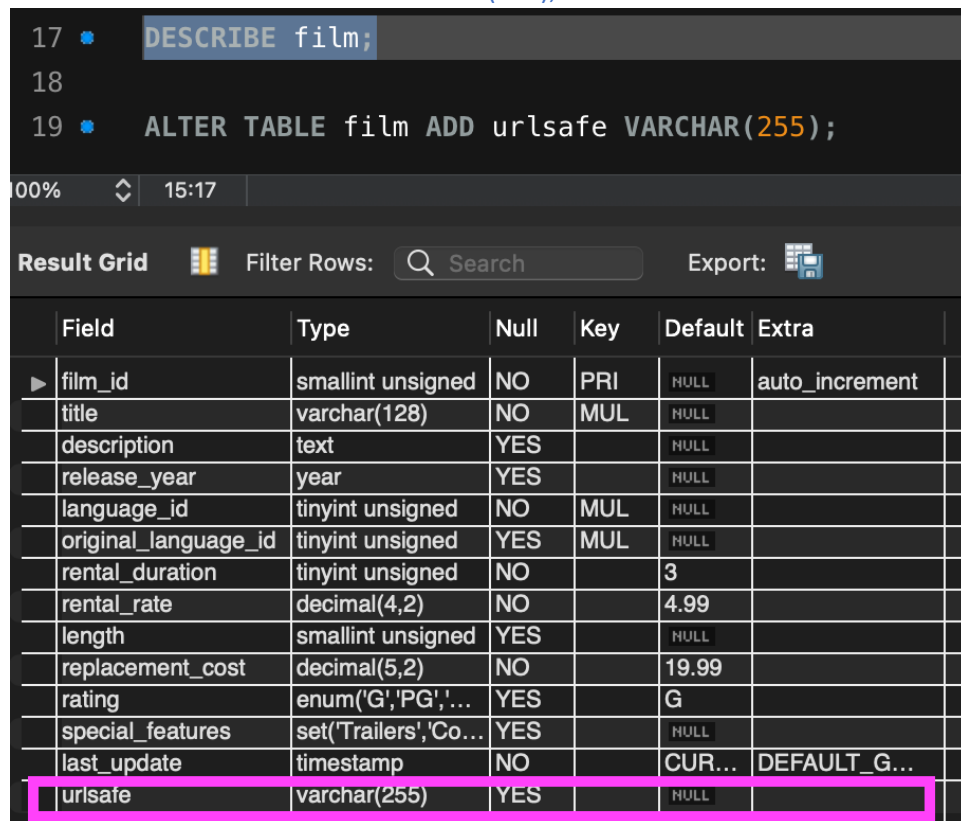# Lab 9- Stored Programs: User Defined Functions

Task 2

Create a function to clean up and make the film descriptions URL safe. For example, URLs cannot contain spaces and certain special characters.

1. Alter the table film by adding the following column and write the query to do so as your answer: urlsafe VARCHAR(255) (1 mark)

   ALTER TABLE film ADD urlsafe VARCHAR(255);

2. Create a user defined function, named clean_string, to strip out spaces. The user defined function will accept a string(varchar) as an argument. (4 marks)

```
23    DELIMITER :
24
25 ●  CREATE FUNCTION clean_string (oldString varchar(255))
26    RETURNS varchar(255)
27    DETERMINISTIC
28 ⊖ BEGIN
29       RETURN REPLACE(oldString, ' ', '');
30 └  END:
```

3. Test your function by running and copy the result of running this as your answer: select clean_string(" this is a test"); (1 mark)

```
34 ●     SELECT clean_string(" this is a test");
100%   ⬍  1:33

Result Grid    ▦  ↻  Filter Rows:  Q Search              Export

        clean_string(" this is a te...

  ▶  thisisatest
```

4. Test your function by running a string through that has other characters present such as a period or a semi colon. (1 mark)

```
36 ●    SELECT clean_string(" this is a test for step4 ;`*^-!#$%)('&%$");
100%   ⬍  66:36

Result Grid   ▦  ↻  Filter Rows:  Q Search           Export: ▦

      clean_string(" this is a test for step4 ;`*^-!#...

  ▶ thisisatestforstep4;`*^-!#$%)('&%$
```

5. Alter your function to strip out the following characters in addition to spaces: .;!@#$%* (2 marks)

```
39 •    DROP FUNCTION IF EXISTS clean_string;
40
41      DELIMITER :
42
43 •    CREATE FUNCTION clean_string (oldString varchar(255))
44      RETURNS varchar(255)
45      DETERMINISTIC |
46   ⊝  BEGIN
47           declare newString01 varchar(255);
48           set newString01 =  REGEXP_REPLACE(oldString,'[: .;!@#$%* ]', '');
49           RETURN REPLACE(newString01, ' ', '');
50       └ END:
51
52      DELIMITER ;
```

6. Now run your function against the description field of the film table for the first 5 rows and copy the result as your answer. (1 mark)
the result (below)
'AEpicDramaofaFeministAndaMadScientistwhomustBattleaTeacherinTheCanadianRockies'
'AAstoundingEpistleofaDatabaseAdministratorAndaExplorerwhomustFindaCarinAncientChina'
' AAstoundingReflectionofaLumberjackAndaCarwhomustSinkaLumberjackinABaloonFactory'
' AFancifulDocumentaryofaFrisbeeAndaLumberjackwhomustChasea\n\nMonkeyinASharkTank'
'AFast-PacedDocumentaryofaPastryChefAndaDentistwhomustPursueaForensicPsychologistinTheGulfof Mexico'

```
54 •    SELECT film_id, title, description, clean_string(description) AS NewDescription
55      FROM film LIMIT 5;
56
100%    ◇  12:52
```

film_id	title	description	NewDescription
1	ACADEMY DINOSAUR	A Epic @Drama of a Feminist And a Mad Scient...	AEpicDramaofaFeministAndaMadScientistwho...
2	ACE GOLDFINGER	A Astounding Epistle of a Database Administrat...	AAstoundingEpistleofaDatabaseAdministratorA...
3	ADAPTATION HOLES	A Astounding Reflection of a Lumberjack And a...	AAstoundingReflectionofaLumberjackAndaCarw...
4	AFFAIR PREJUDICE	A Fanciful Documentary of a Frisbee And a Lum...	AFancifulDocumentaryofaFrisbeeAndaLumberja...
5	AFRICAN EGG	A Fast-Paced! Documentary of a Pastry Chef A...	AFast-PacedDocumentaryofaPastryChefAndaD...

• Last Name, first name – Lab 9.sql

Include delimiter statements when submitting the lab.