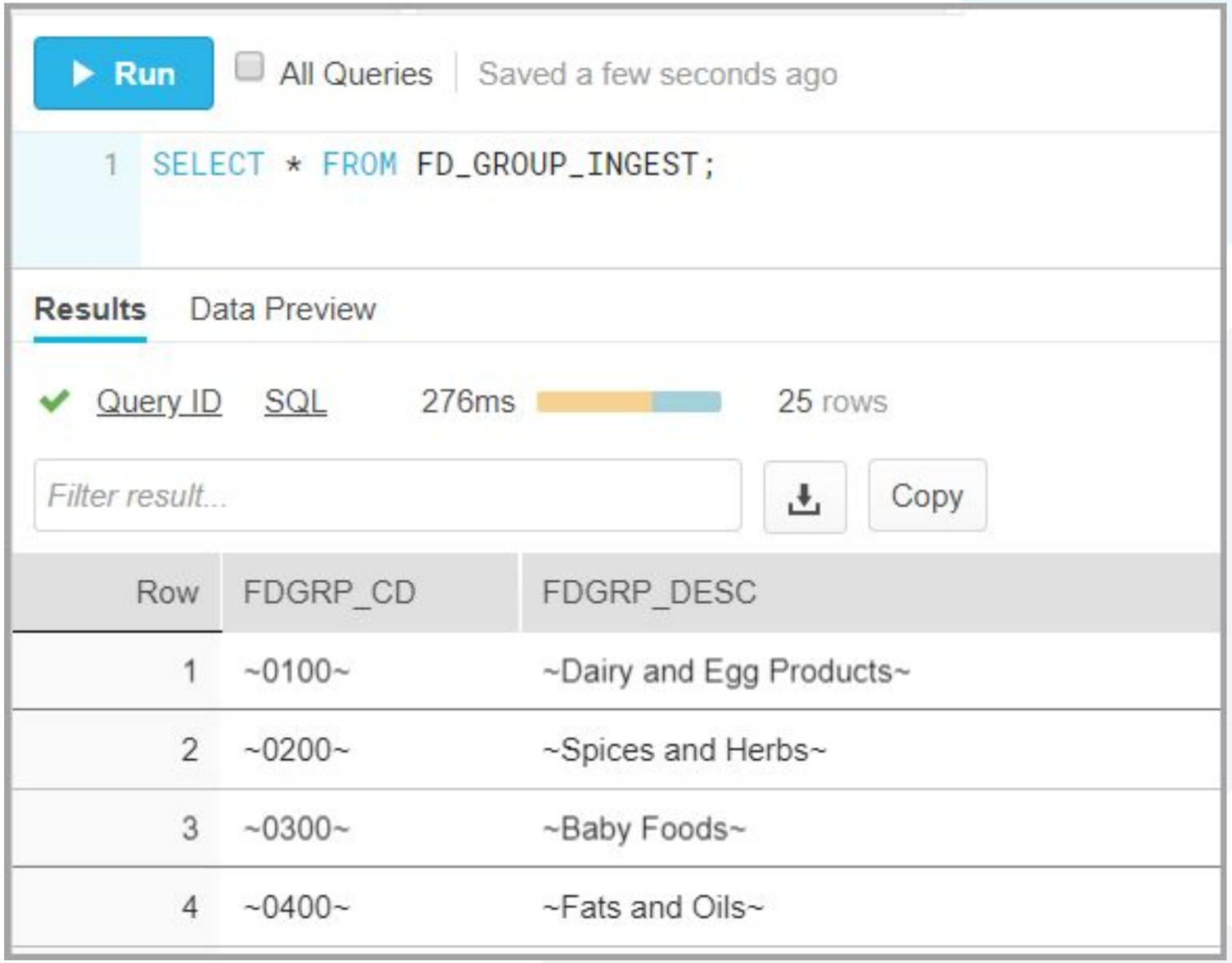
Essentials Lab 6
Exercise 1

1) Type a simple select statement into the **Worksheets SQL Pane** as a starting point.

2) Click **[Run]**.

   NOTE: A “Select Star” statement written using the word “select” followed by an asterisk will select all columns in a table.

   Select Star statements can be costly, especially if embedded in often-used procedures but it can be used in a limited way as a shortcut.



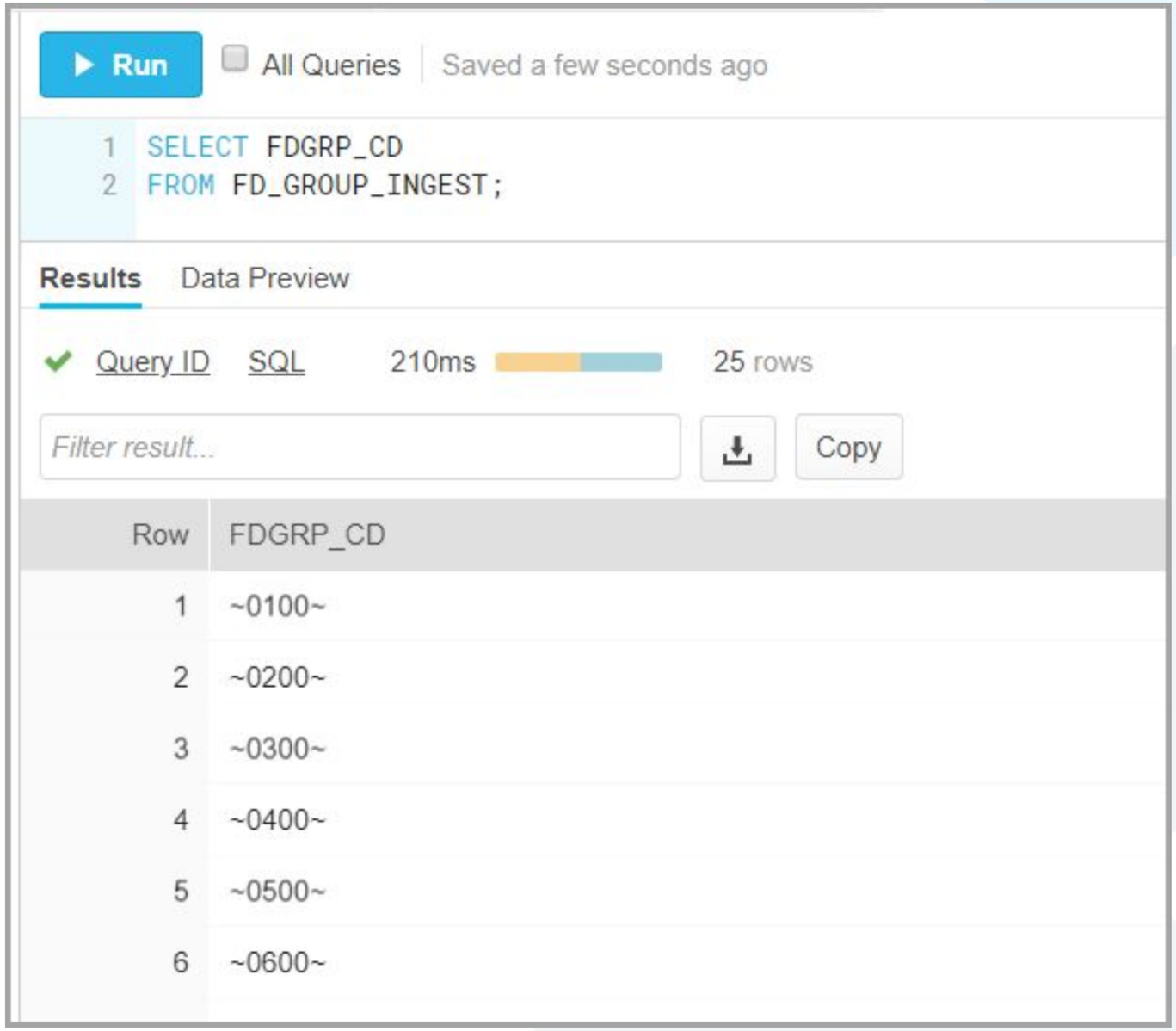
Essentials Lab 6
Exercise 2

1) Replace the asterisk with the name of the first column, **`FDGRP_CD`**.

2) Use **[Enter]** to push the **`FROM`** clause to a new line.

3) Click **[Run]**.

   NOTE: Having each part of a SQL clause on its own line can make code easier to read.

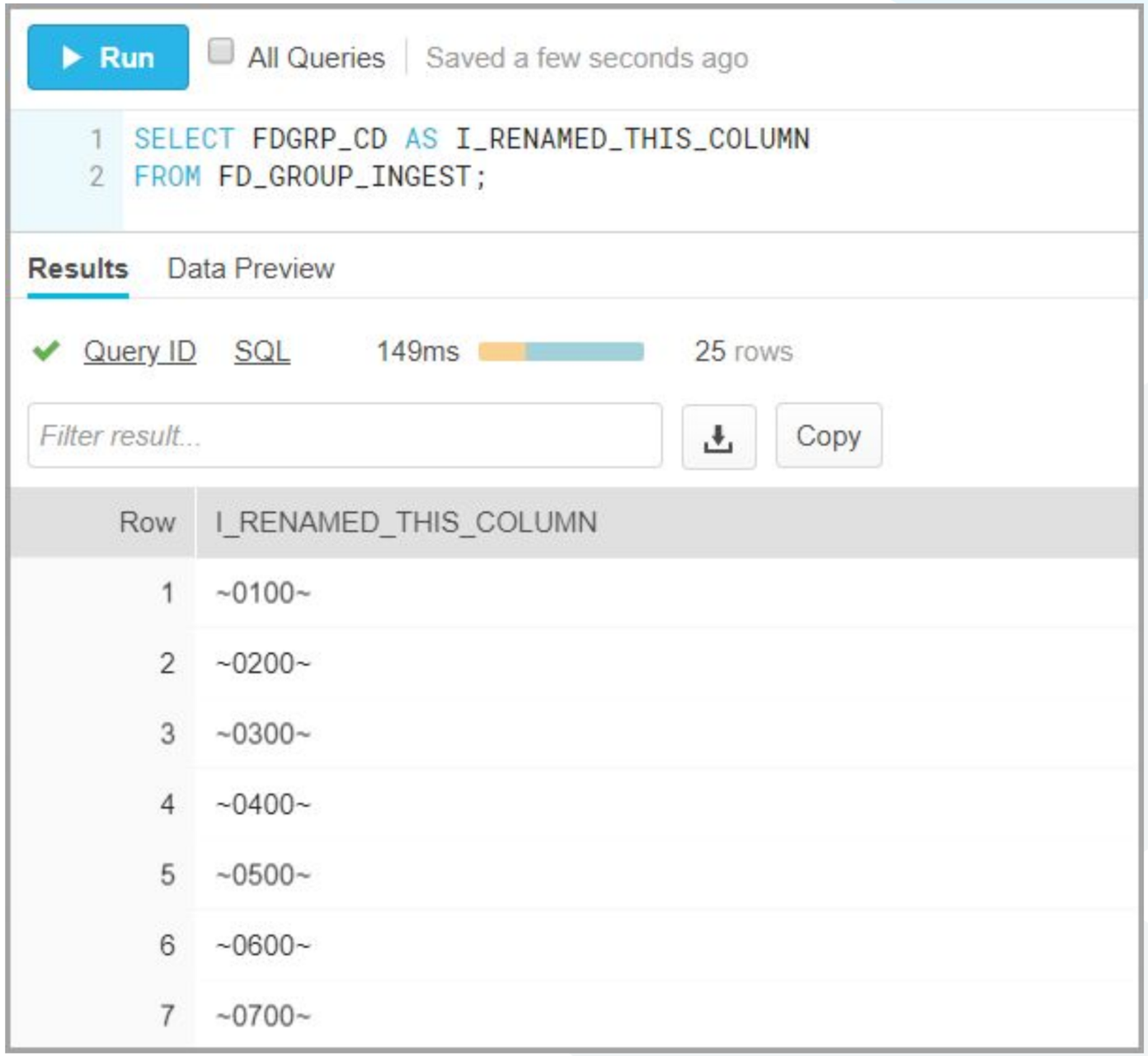


Essentials Lab 6
Exercise 3

1) Rename the **FDGRP_CD** column using **AS** followed by a new name for the column.

2) Click **[Run]**.

   NOTE: Notice that the new column name appears in the gray results header in the results pane.



Essentials Lab 6
Exercise 4

1) Remove the **`AS`** keyword and the name you replaced the column name with.

2) Use the **`REPLACE`** function to replace parts of the **`FDGRP_CD`** column. Try several variations of the replace function as shown in the screenshot here.

3) Click **[Run]** to run the various **`REPLACE`** function statements.

   Do you understand why the third and fourth code samples give you same results?

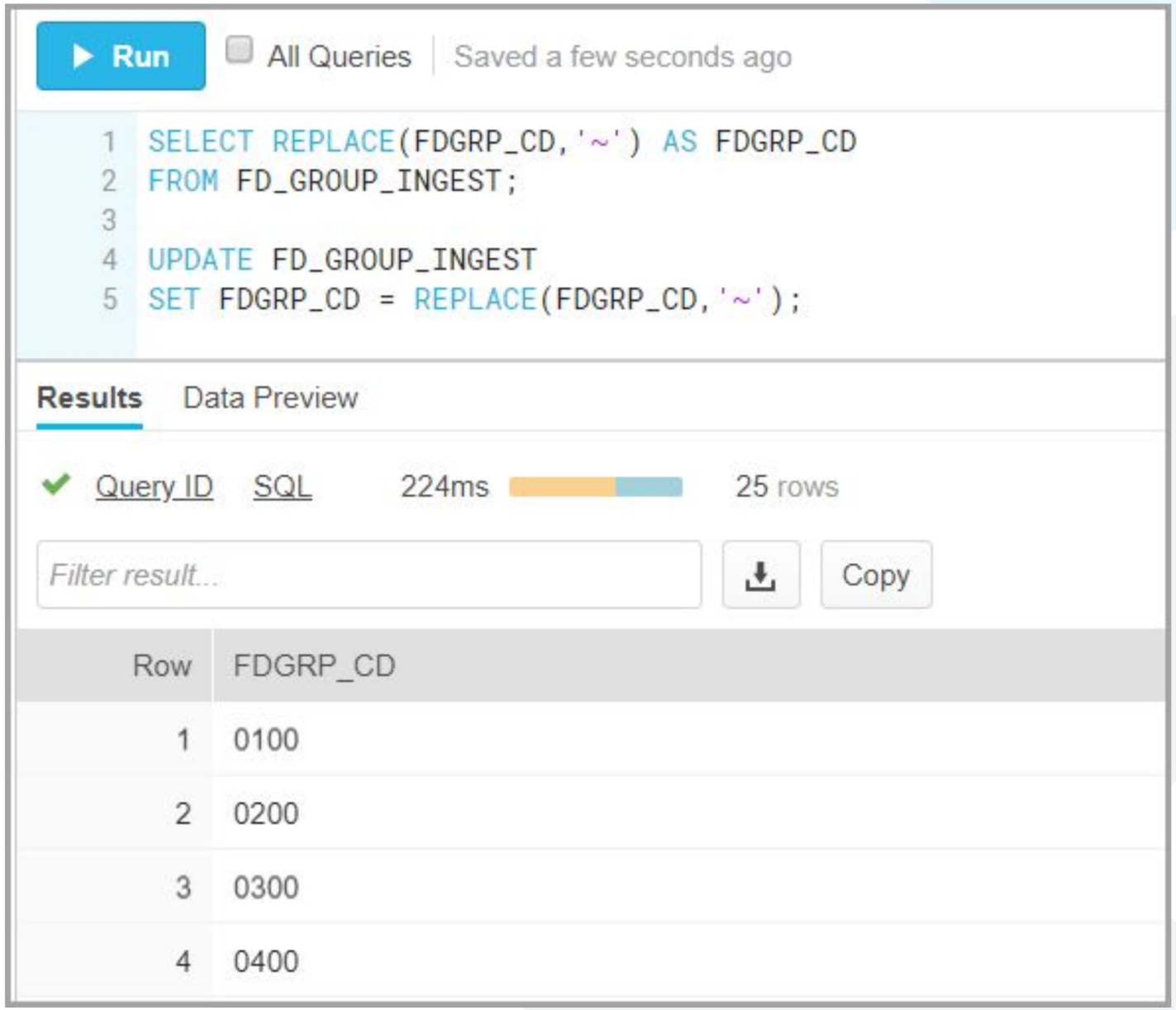
Essentials Lab 6
Exercise 5

1) Remove all of the statements except the **`REPLACE`** statement that removes the tildes by using only the first two arguments.

2) Add the **`AS FDGRP_CD`** clause back to the first line of the statement.

3) Create an **`UPDATE`** statement that uses similar code to the **`SELECT`** statement, especially the **`REPLACE`** function.

   Compare the two statements. Which statement will change the data stored in the table and which just changes the way the data is displayed?



Essentials Lab 6
Exercise 6

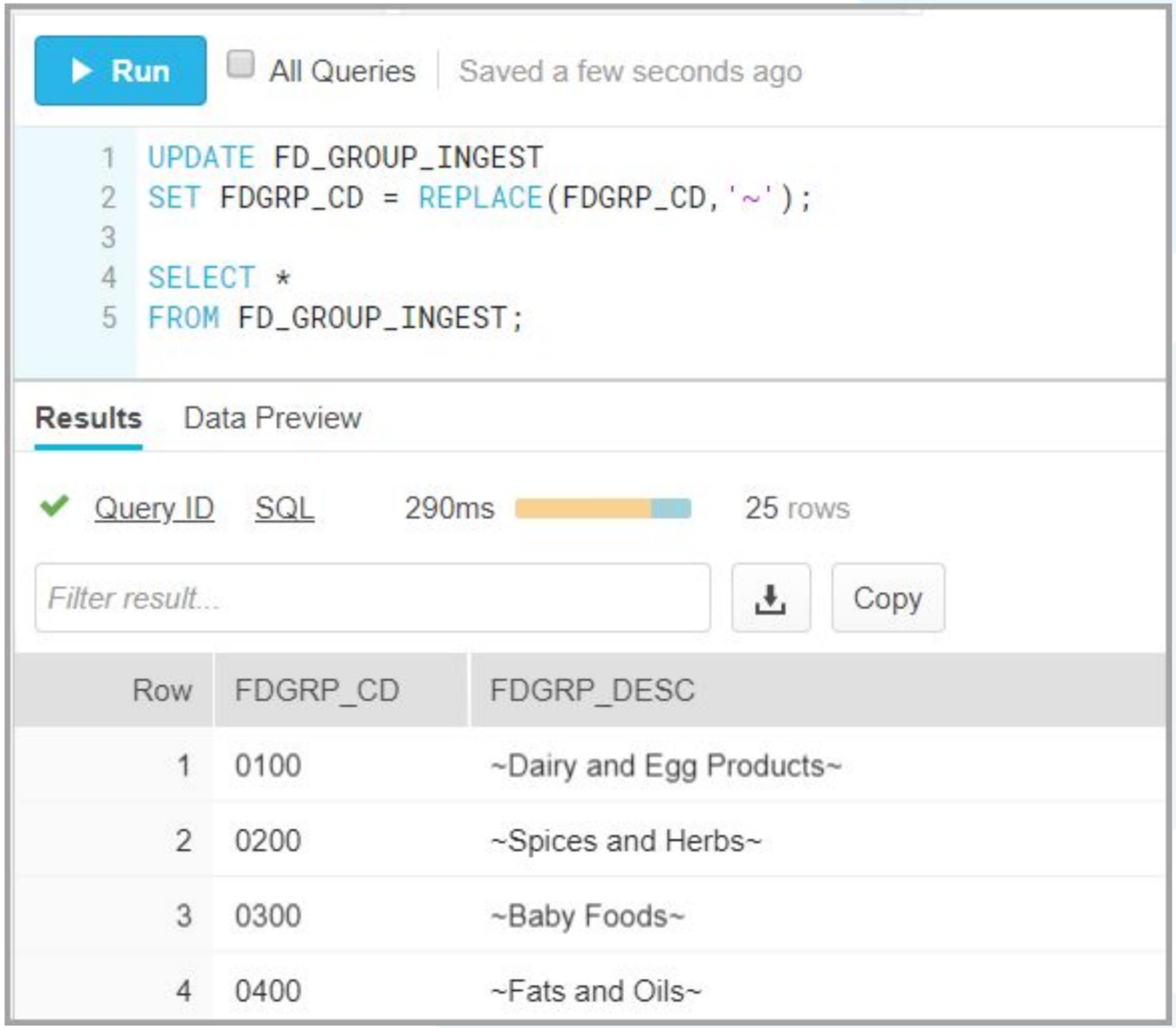
1) Run the **`UPDATE`** statement.

2) Run a new “Select Star” statement on the table.

NOTE: Notice that you have now updated the ***FDGRP_CD*** column to remove the tildes, but have not done the same to the ***FDGRP_DESC*** field.

This type of transformation is called an “UPDATE in PLACE” because you have not moved the data but have cleaned it up where it already sits.

There are other ways to transform data, which you will see in the next exercise.



Essentials Lab 6
Exercise 7

NOTE: Instead of performing an UPDATE IN PLACE, you can perform an ETL. This involves moving the data and transforming it *en route*.

Before performing the ETL update, let's add the tildes back into the table, and make it appear as if you did not remove them.

Experiment with the following statements until you understand how to add the tildes back to the field.

Then, convert one of these statements into something you want to use in an UPDATE statement. Run the update statement to add the tildes back into the FDGRP_CD field.

```
1  SELECT CONCAT(FDGRP_CD,'~')
2  FROM FD_GROUP_INGEST;
3
4  SELECT CONCAT('~',FDGRP_CD)
5  FROM FD_GROUP_INGEST;
6
7  SELECT CONCAT('~',CONCAT(FDGRP_CD,'~'))
8  FROM FD_GROUP_INGEST;
9
10 SELECT '~'||FDGRP_CD||'~'
11 FROM FD_GROUP_INGEST;
```

IMPORTANT:
The statement on lines 7 & 8 is actually a combination of the first two statements (lines 1&2 combined with lines 4&5). When two statements are combined into one, this is called "nesting."

Essentials Lab 6
Exercise 8

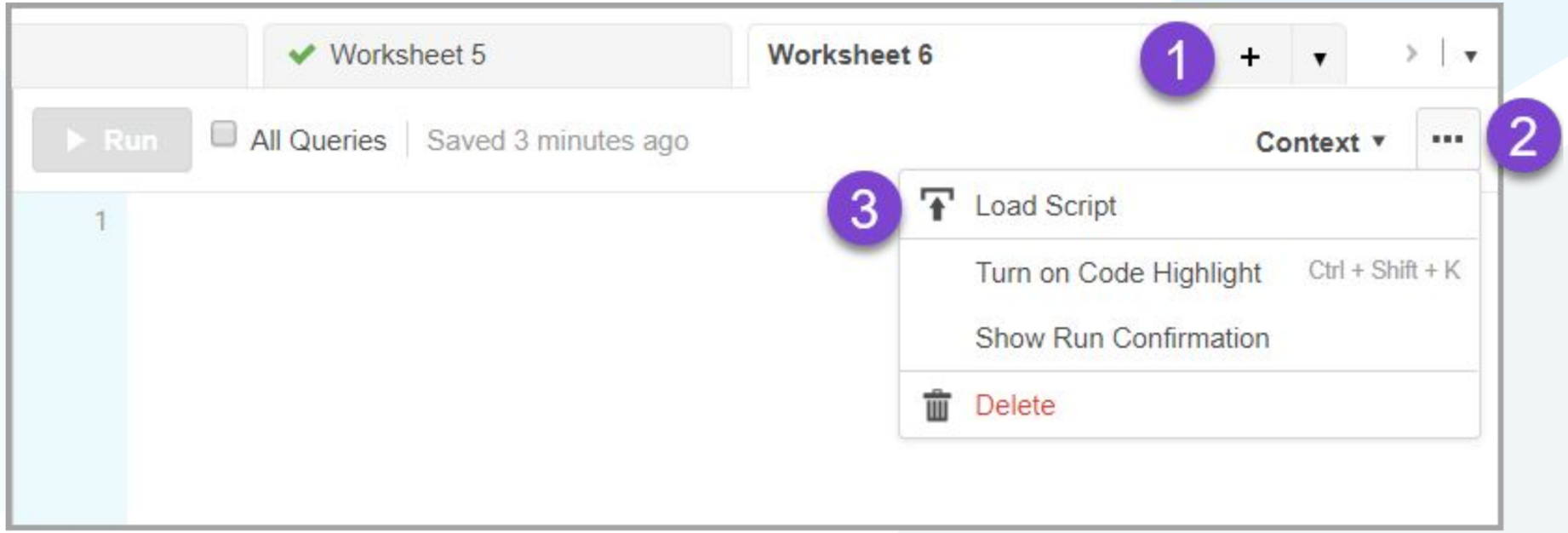
1) Download the files located here:
   https://www.snowflakeuniversity.com/EL6/downloads/Essentials_Lesson_6_files_.zip

2) Unzip the files.

Essentials Lab 6
Exercise 9

1) Open a new, blank worksheet by clicking on the **[+]** tab next to the tabs of other open worksheets.

2) Click **[...]** to the right of the **Context** drop menu.



3) Select the **[Load Script]** option.

4) Navigate to the files you downloaded and unzipped in Exercise 8.

5) Select the **create_FD_GROUP_target_table.txt** file to open it in the worksheet.

Essentials Lab 6
Exercise 10

1) With the **create_FD_GROUP_target_table.txt** script loaded into the worksheet, click **[Run]** to create a new target table.

   NOTE: Notice that the fields are each 2 characters less wide than those in the **FD_GROUP_INGEST** table.

   This is because we have no intention of loading the tildes into this table so it will not need the extra width.

Essentials Lab 6
Exercise 11

Run | All Queries | Saved a few seconds ago | Context:

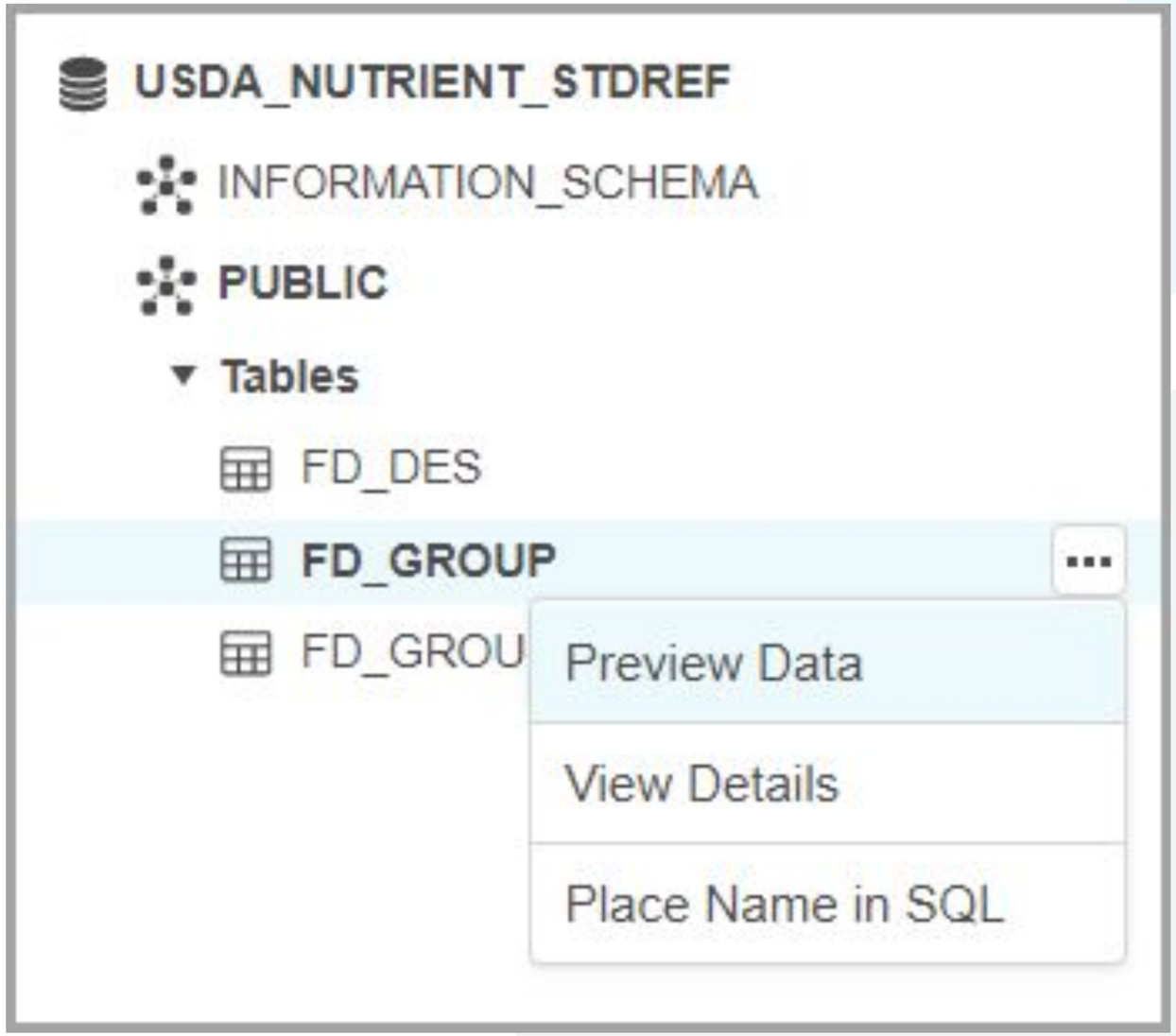
```
1  //LOAD - our target table is the food group table which we load using the insert command
2  INSERT INTO "USDA_NUTRIENT_STDREF"."PUBLIC"."FD_GROUP"
3
4  SELECT
5  //TRANSFORM - we clean up the data by replacing the tildes in both fields
6  REPLACE(fdgrp_cd,'~','') as fdgrp_cd,
7  REPLACE(fdgrp_desc,'~','') as fdgrp_desc
8  //EXTRACT - source table is the food group ingest table
9  FROM "USDA_NUTRIENT_STDREF"."PUBLIC"."FD_GROUP_INGEST";
10
11
```

1) Open another new, blank worksheet (refer back to Exercise 9 if you have forgotten how).
2) Load the **ETL-FDGRP_CD_INGEST-to-FDGRP_CD.txt** into the open worksheet.
3) Notice the Comment lines that appear in light gray.
4) Click any line in the script to highlight the statement.
5) Click **[Run]**.

Essentials Lab 6
Exercise 12

1) Check the FD_GROUP table to see your data as you've just loaded it.

   Are all the rows there?
   Are all the tildes removed?



Essentials Lab 6
Exercise 13

```
1  //LOAD - our target table is the food group table which we load using the insert command
2  LOAD - our target table is the food group table which we load using the insert command
3  --LOAD - our target table is the food group table which we load using the insert command
4
```

1) Remove the two slash marks in front of the word **LOAD**. What happens to the text? Does it remain gray?

2) Type in two dashes instead of two slashes. What happens to the text color now?

NOTE: Double-slash and Double-dash marks turn lines of text into "Notes" or "Comments." The text displayed in gray is not treated as code. Snowflake will skip over them as if they do not exist. Comments are used in code to remind ourselves and/or other developers of certain details or explain why we have written things a certain way.

In this example, we are using comments to call out certain lines of the code to show how an update statement can represent the Extract, Load and Transform parts of a process.

There is a quiz question that checks to see whether you recall these three relationships:

EXTRACT = FROM, TRANSFORM = REPLACE, and LOAD = INSERT