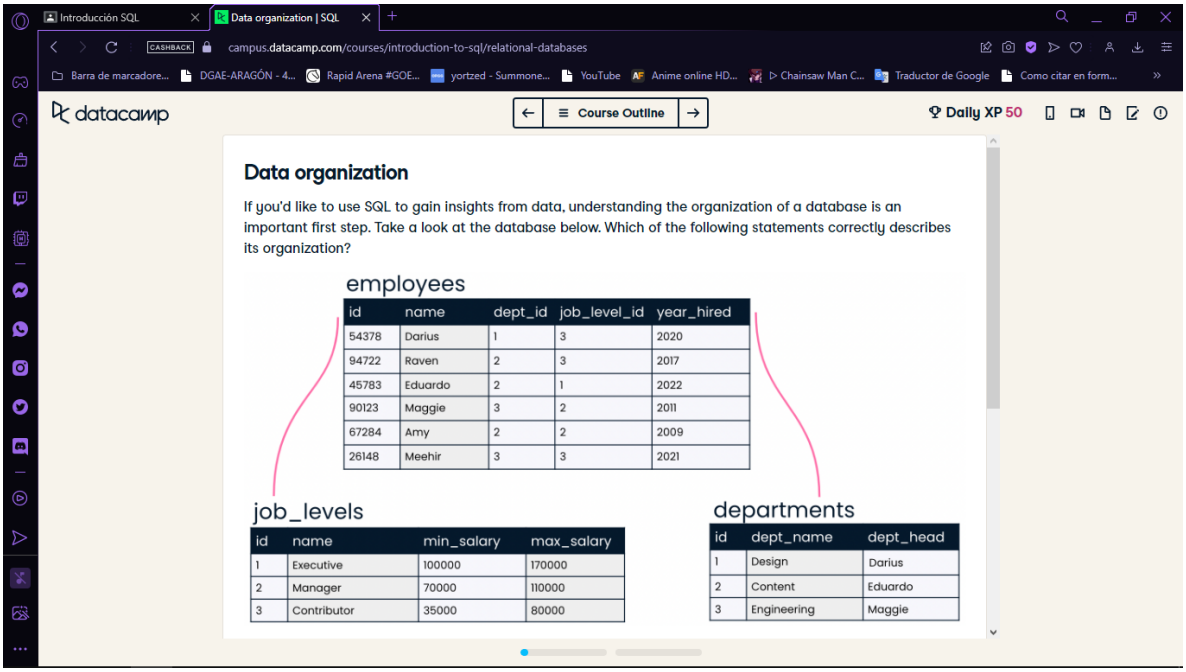
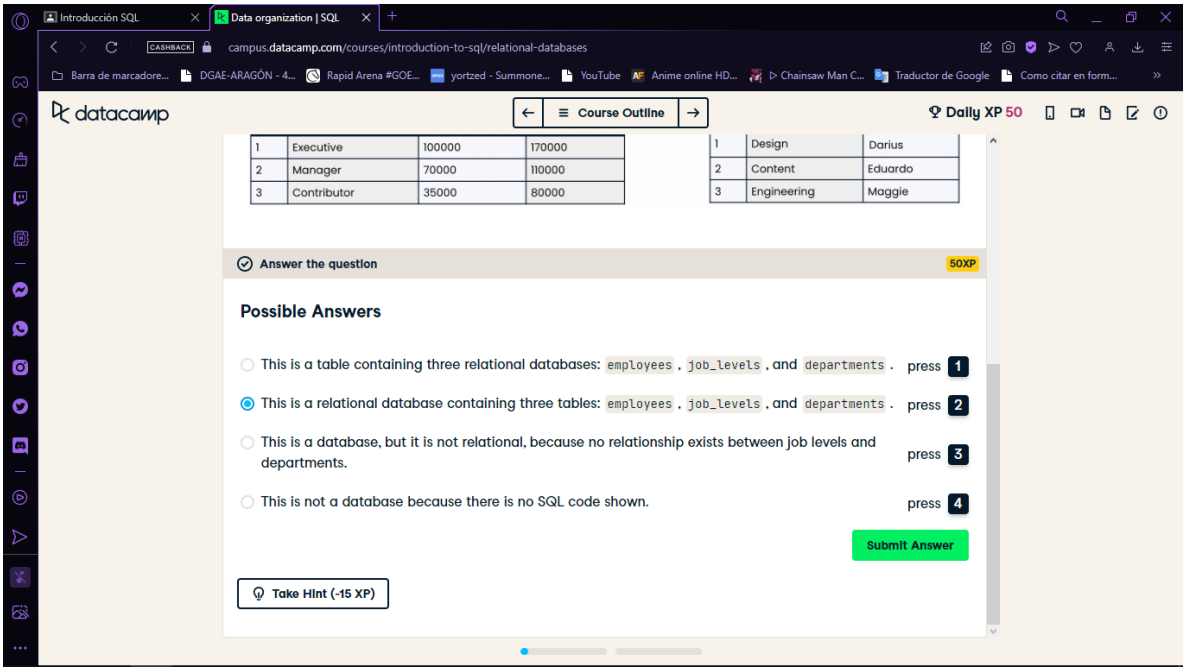
Introducción SQL

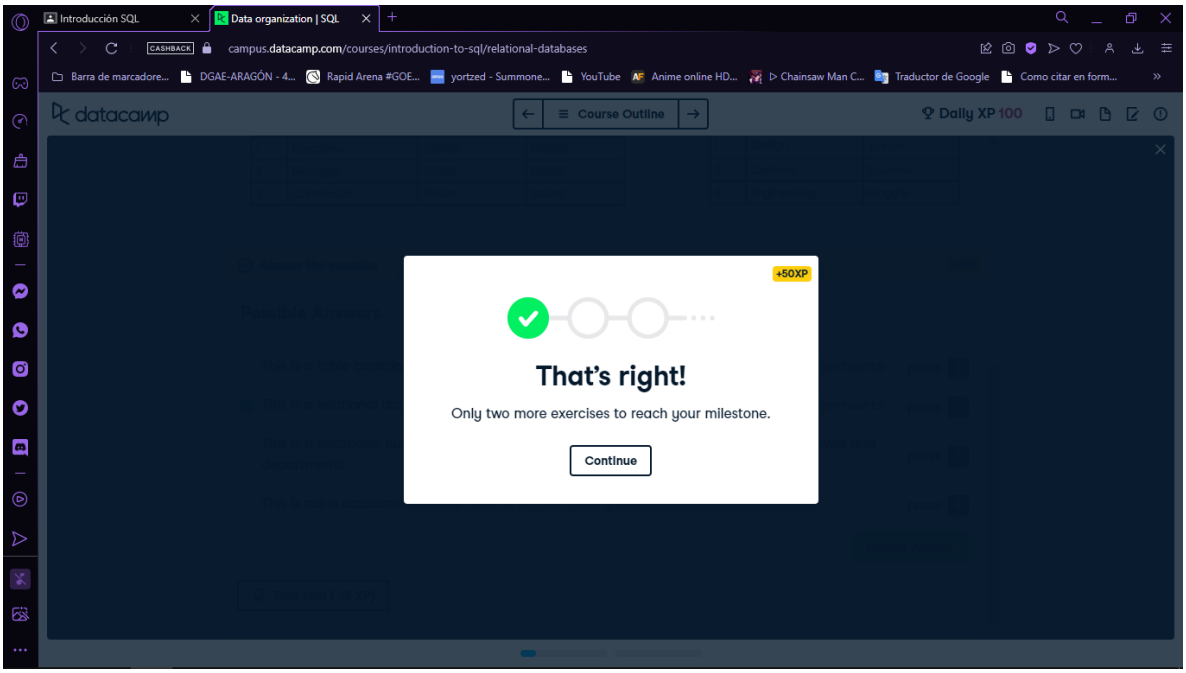
Alumno: Quintana Escamilla Roberto Carlos

Relational Databases

1.-



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Data organization | SQL
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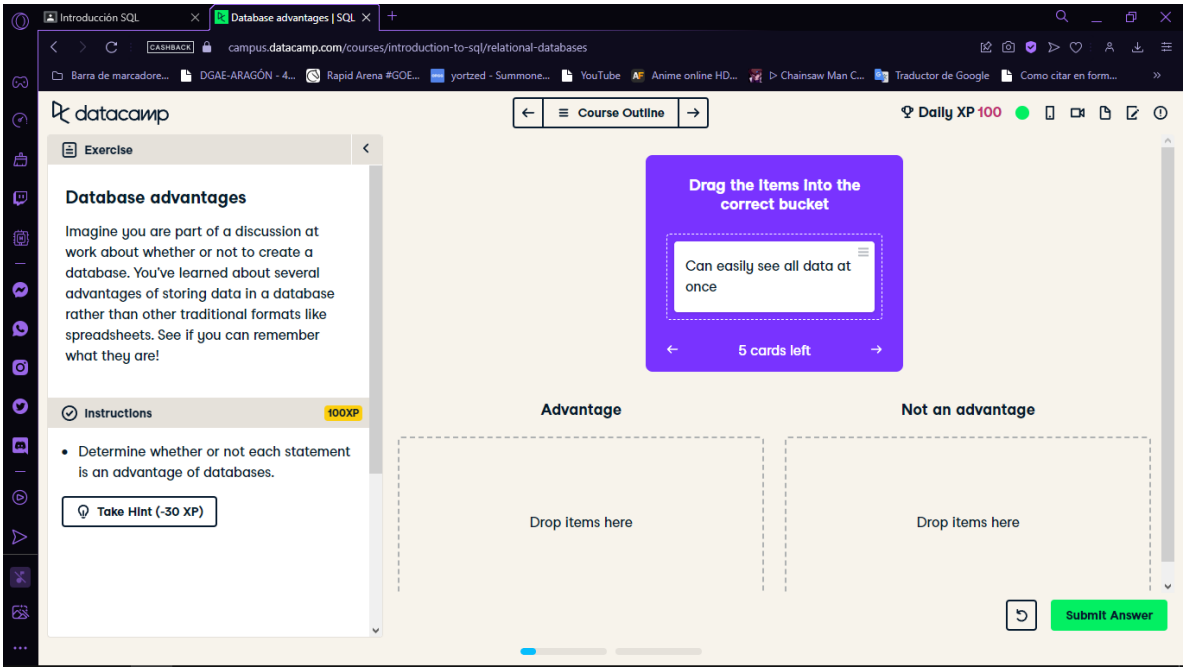
Course Outline
Daily XP 100
+50XP
That's right!
Only two more exercises to reach your milestone.
Continue

2.-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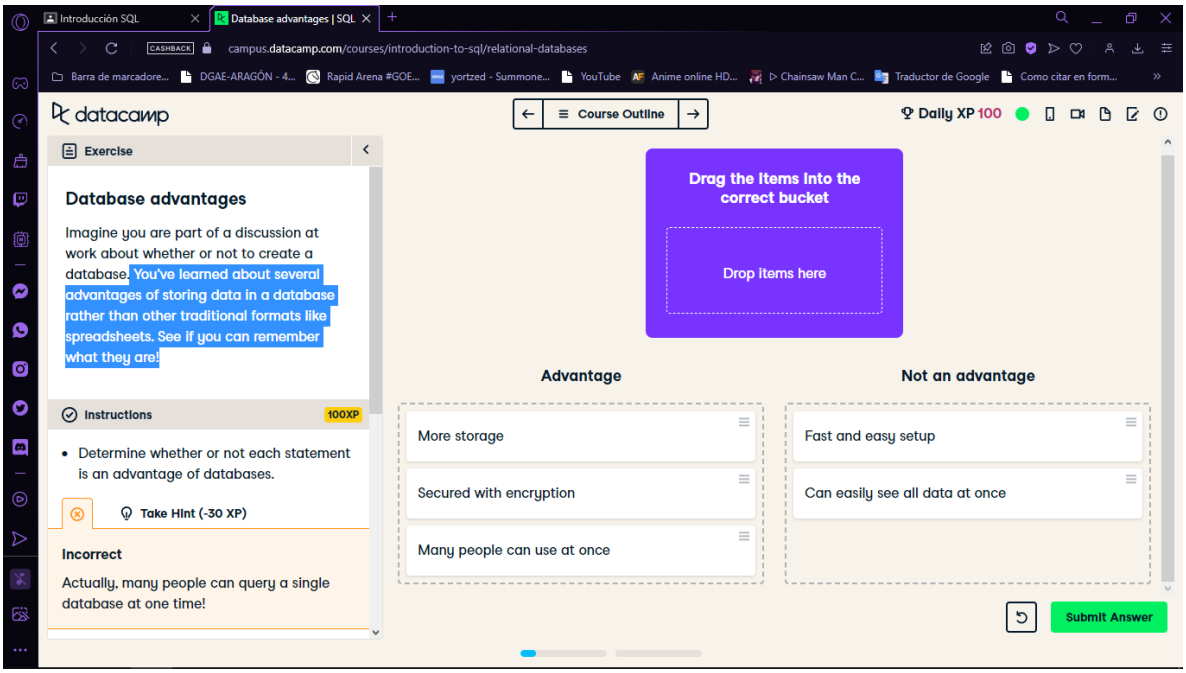
Exercise
Database advantages
Imagine you are part of a discussion at work about whether or not to create a database. You've learned about several advantages of storing data in a database rather than other traditional formats like spreadsheets. See if you can remember what they are!
Instructions
100XP
Determine whether or not each statement is an advantage of databases.
Take Hint (-30 XP)
Drag the items into the correct bucket
Can easily see all data at once
5 cards left
Advantage
Not an advantage
Drop items here
Drop items here
Submit Answer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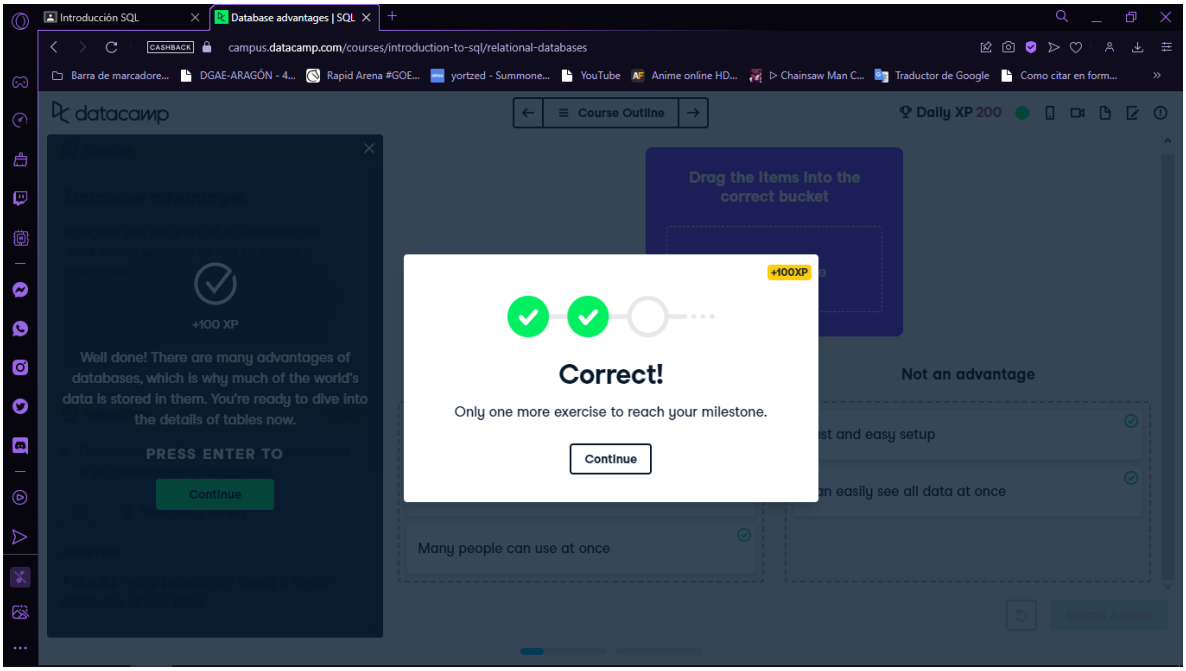
Daily XP 100
Exercise
Database advantages
Imagine you are part of a discussion at work about whether or not to create a database. You've learned about several advantages of storing data in a database rather than other traditional formats like spreadsheets. See if you can remember what they are!
Instructions
100XP
Determine whether or not each statement is an advantage of databases.
Take Hint (-30 XP)
Incorrect
Actually, many people can query a single database at one time!
Drag the items into the correct bucket
Drop items here
Advantage
Not an advantage
More storage
Secured with encryption
Many people can use at once
Fast and easy setup
Can easily see all data at once
Submit Answer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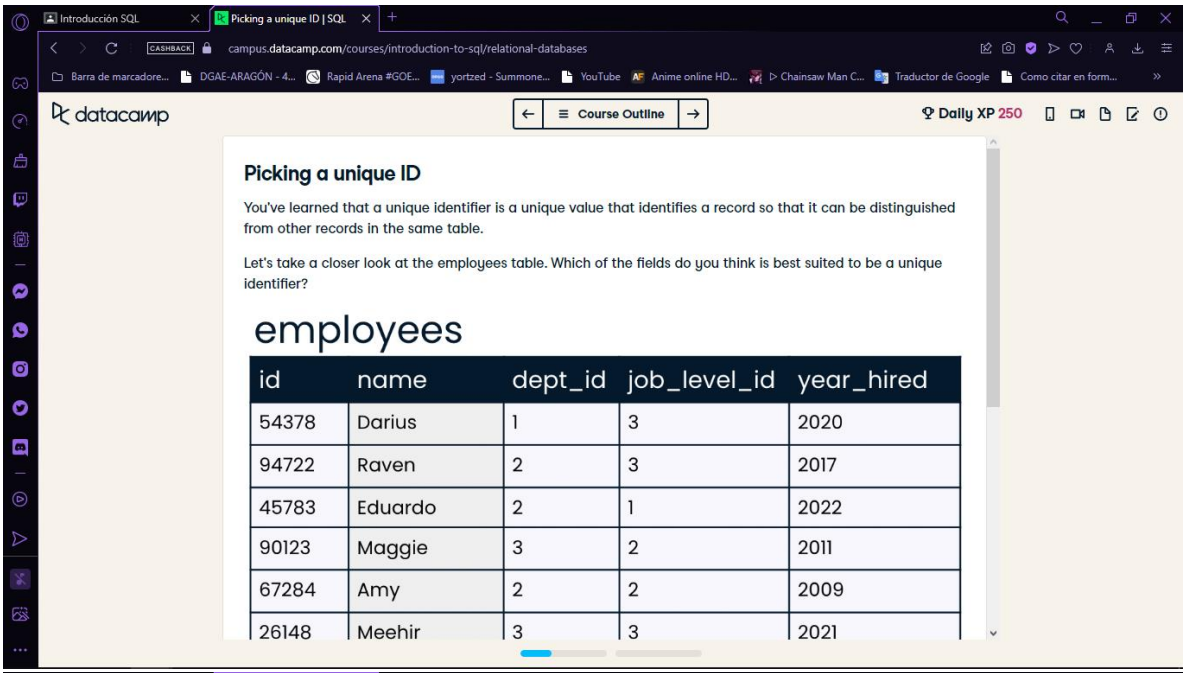
Course Outline
Daily XP 200
+100 XP
Well done! There are many advantages of databases, which is why much of the world's data is stored in them. You're ready to dive into the details of tables now.
PRESS ENTER TO
Continue
+100XP
Correct!
Only one more exercise to reach your milestone.
Continue
Drag the items into the correct bucket
Not an advantage
Many people can use at once

3.-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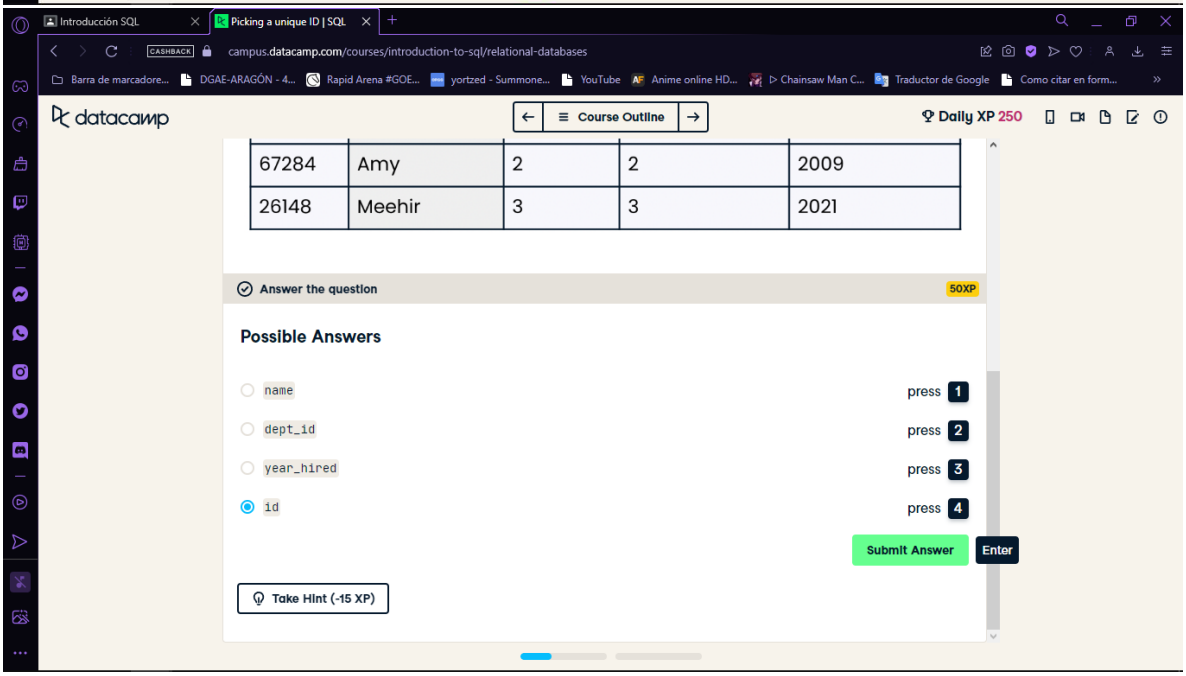
Course Outline
Daily XP 250
Picking a unique ID
You've learned that a unique identifier is a unique value that identifies a record so that it can be distinguished from other records in the same table.
Let's take a closer look at the employees table. Which of the fields do you think is best suited to be a unique identifier?
employees
id name dept_id job_level_id year_hired
54378 Darius 1 3 2020
94722 Raven 2 3 2017
45783 Eduardo 2 1 2022
90123 Maggie 3 2 2011
67284 Amy 2 2 2009
26148 Meehir 3 3 2021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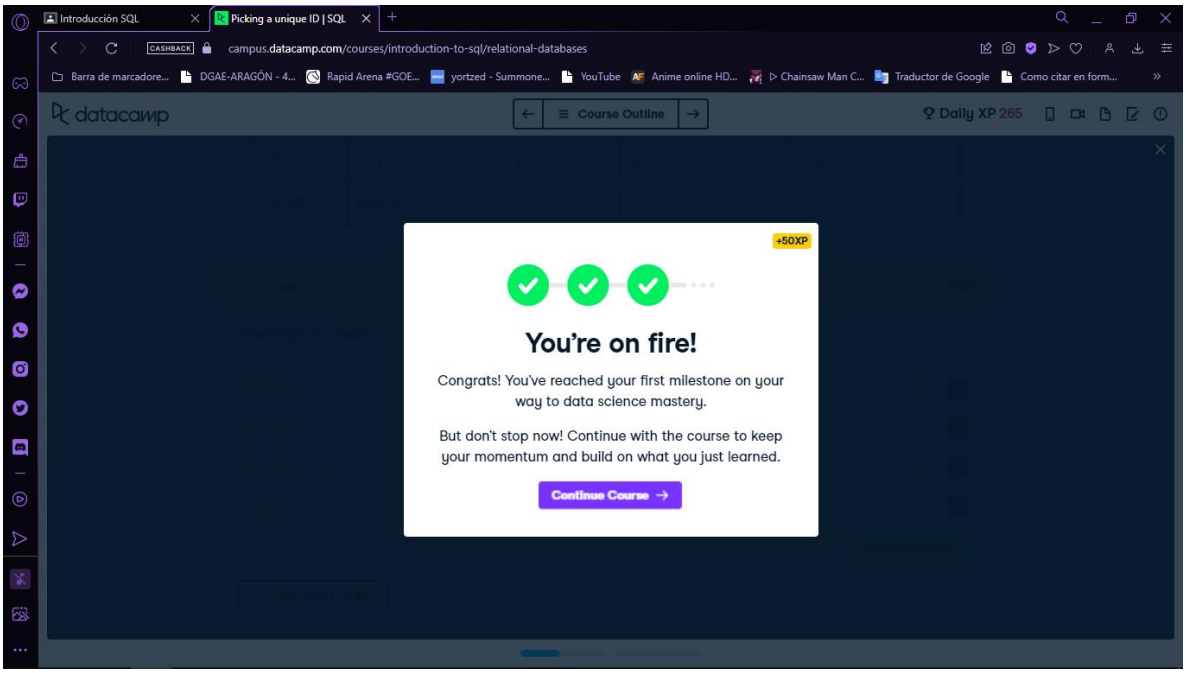
Course Outline
Daily XP 250
67284 Amy 2 2 2009
26148 Meehir 3 3 2021
Answer the question
50XP
Possible Answers
name
dept_id
year_hired
id
press 1
press 2
press 3
press 4
Submit Answer
Enter
Take Hint (-15 XP)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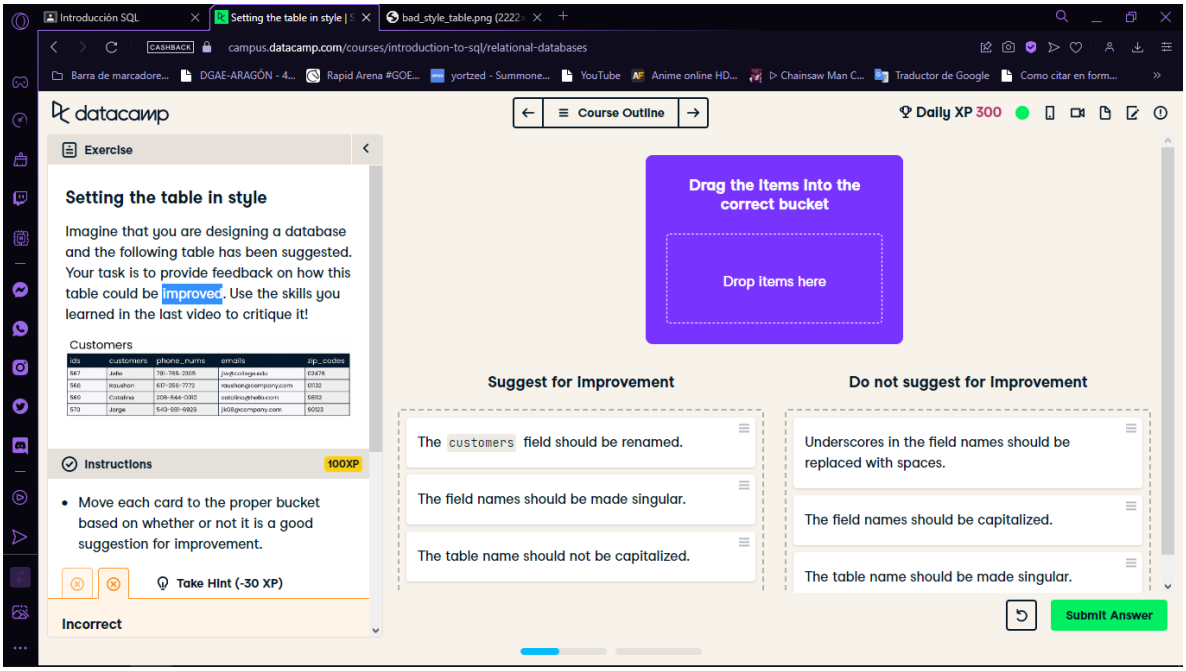
Course Outline
Daily XP 265
+50XP
You're on fire!
Congrats! You've reached your first milestone on your way to data science mastery.
But don't stop now! Continue with the course to keep your momentum and build on what you just learned.
Continue Course

4.-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Setting the table in style
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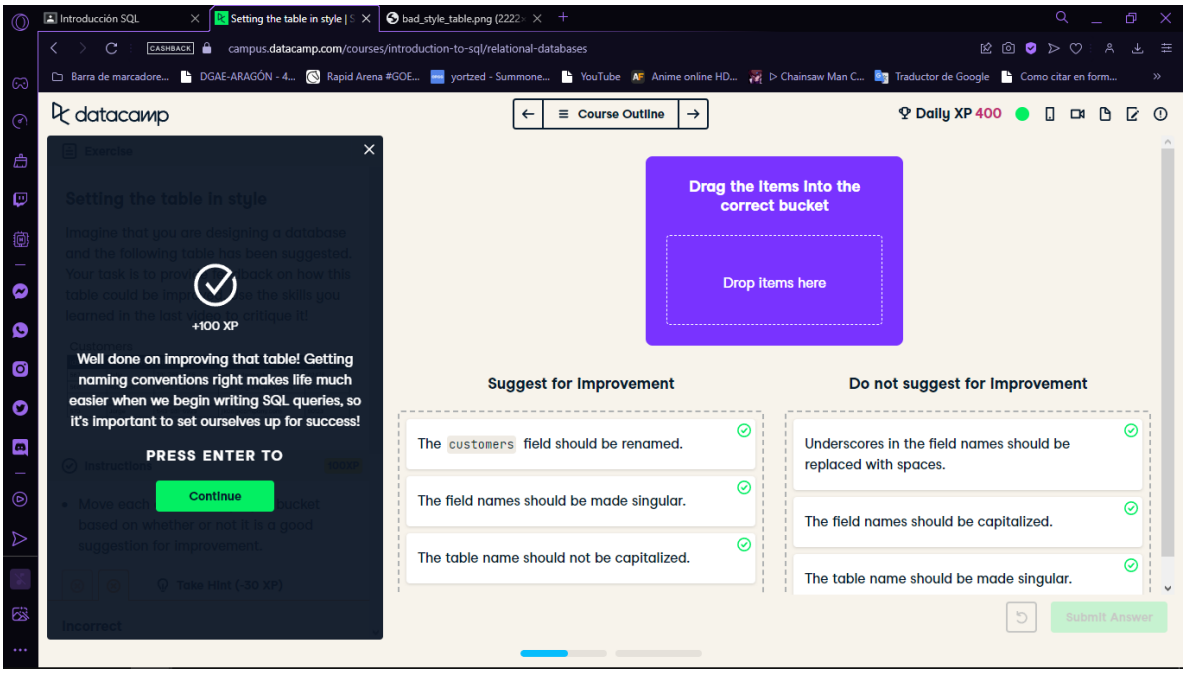
Daily XP 300
Exercise
Setting the table in style
Imagine that you are designing a database and the following table has been suggested. Your task is to provide feedback on how this table could be improved. Use the skills you learned in the last video to critique it!
Customers
Instructions
100XP
Move each card to the proper bucket based on whether or not it is a good suggestion for improvement.
Take Hint (-30 XP)
Incorrect
Drag the items into the correct bucket
Drop items here
Suggest for Improvement
Do not suggest for Improvement
The customers field should be renamed.
The field names should be made singular.
The table name should not be capitalized.
Underscores in the field names should be replaced with spaces.
The field names should be capitalized.
The table name should be made singular.
Submit Answer


Introducción SQL
Setting the table in style |
bad_style_table.png (2222
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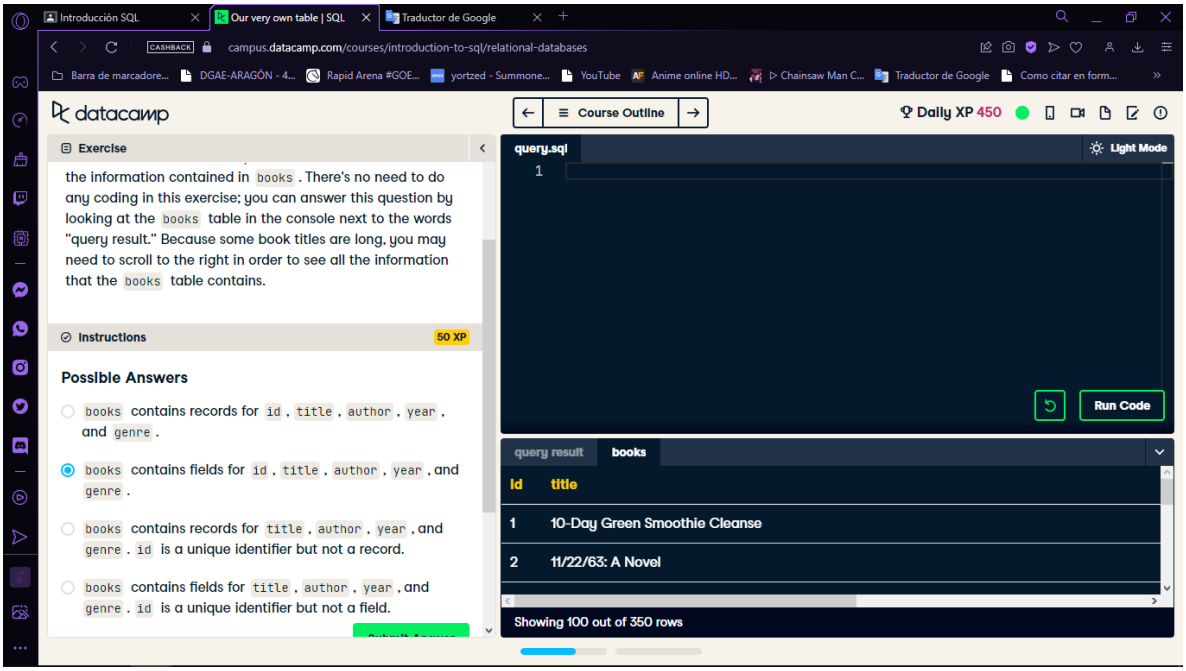
datacamp
Course Outline
Daily XP 400
Setting the table in style
+100 XP
Well done on improving that table! Getting naming conventions right makes life much easier when we begin writing SQL queries, so it's important to set ourselves up for success!
PRESS ENTER TO
Continue
Drag the items into the correct bucket
Drop items here
Suggest for Improvement
Do not suggest for Improvement
The customers field should be renamed.
The field names should be made singular.
The table name should not be capitalized.
Underscores in the field names should be replaced with spaces.
The field names should be capitalized.
The table name should be made singular.
Submit Answer

4.-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Our very own table | SQL
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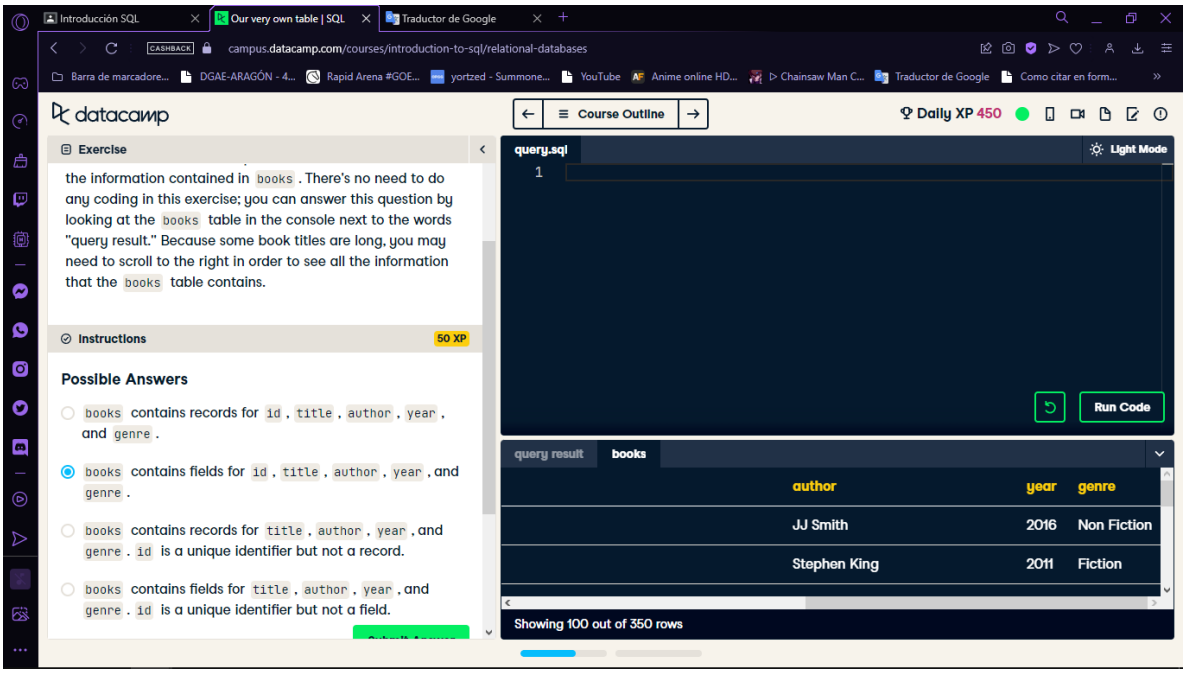
Course Outline
Daily XP 450
Exercise
the information contained in books . There's no need to do any coding in this exercise; you can answer this question by looking at the books table in the console next to the words "query result." Because some book titles are long, you may need to scroll to the right in order to see all the information that the books table contains.
Instructions
50 XP
Possible Answers
books contains records for id , title , author , year , and genre .
books contains fields for id , title , author , year , and genre .
books contains records for title , author , year , and genre . id is a unique identifier but not a record.
books contains fields for title , author , year , and genre . id is a unique identifier but not a field.
query.sql
Light Mode
Run Code
query result
books
id
title
1
10-Day Green Smoothie Cleanse
2
11/22/63: A Novel
Showing 100 out of 350 rows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Course Outline
Daily XP 450
Exercise
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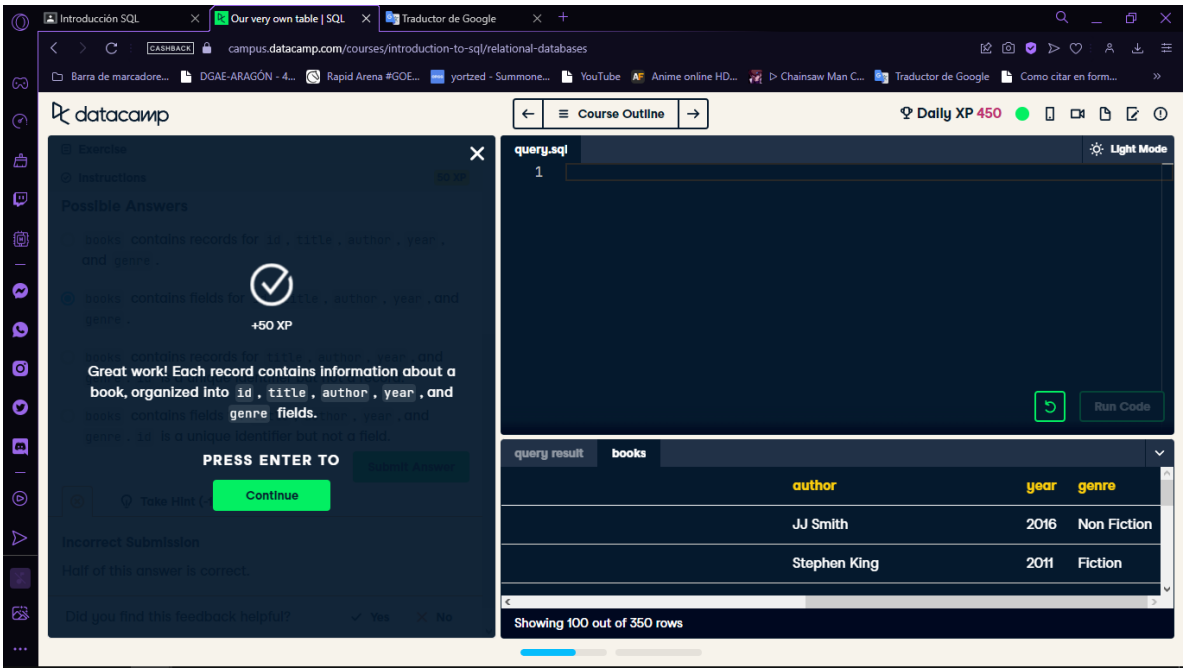
Instructions
50 XP
Possible Answers
books contains records for id , title , author , year , and genre .
books contains fields for id , title , author , year , and genre .
books contains records for title , author , year , and genre . id is a unique identifier but not a record.
books contains fields for title , author , year , and genre . id is a unique identifier but not a field.
query.sql
Light Mode
Run Code
query result
books
author
year
genre
JJ Smith
2016
Non Fiction
Stephen King
2011
Fiction
Showing 100 out of 350 rows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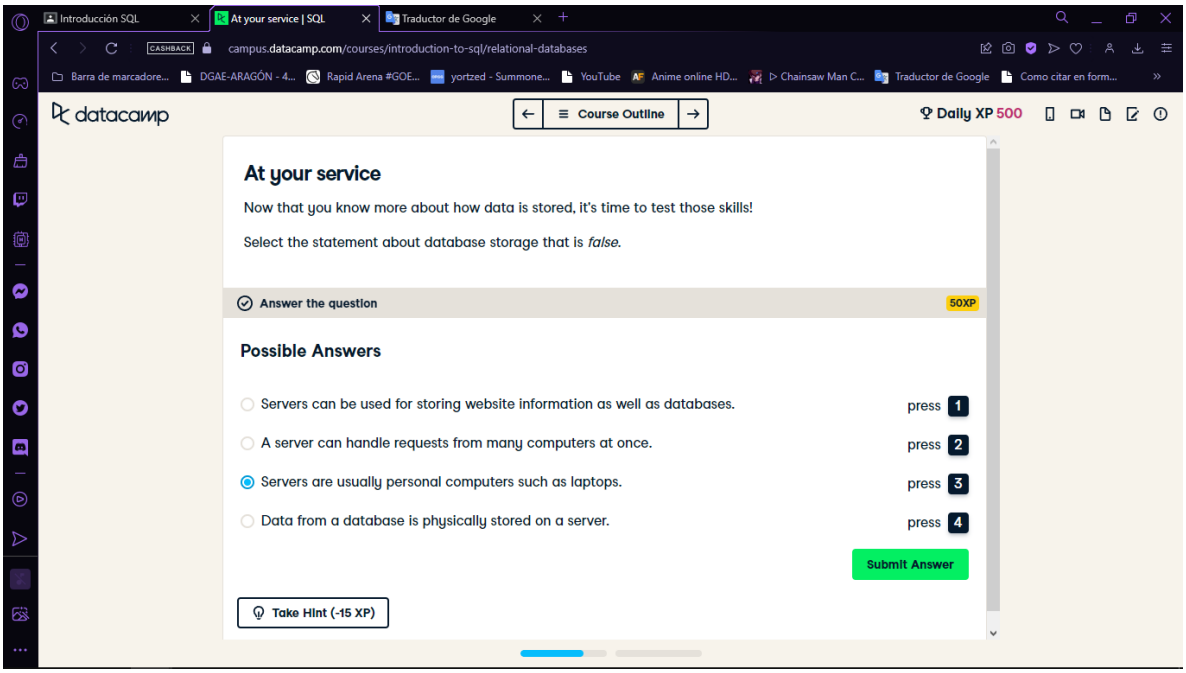
Course Outline
Daily XP 450
+50 XP
Great work! Each record contains information about a book, organized into id , title , author , year , and genre fields.
PRESS ENTER TO
Continue
query.sql
Light Mode
Run Code
query result
books
author
year
genre
JJ Smith
2016
Non Fiction
Stephen King
2011
Fiction
Showing 100 out of 350 rows

5.-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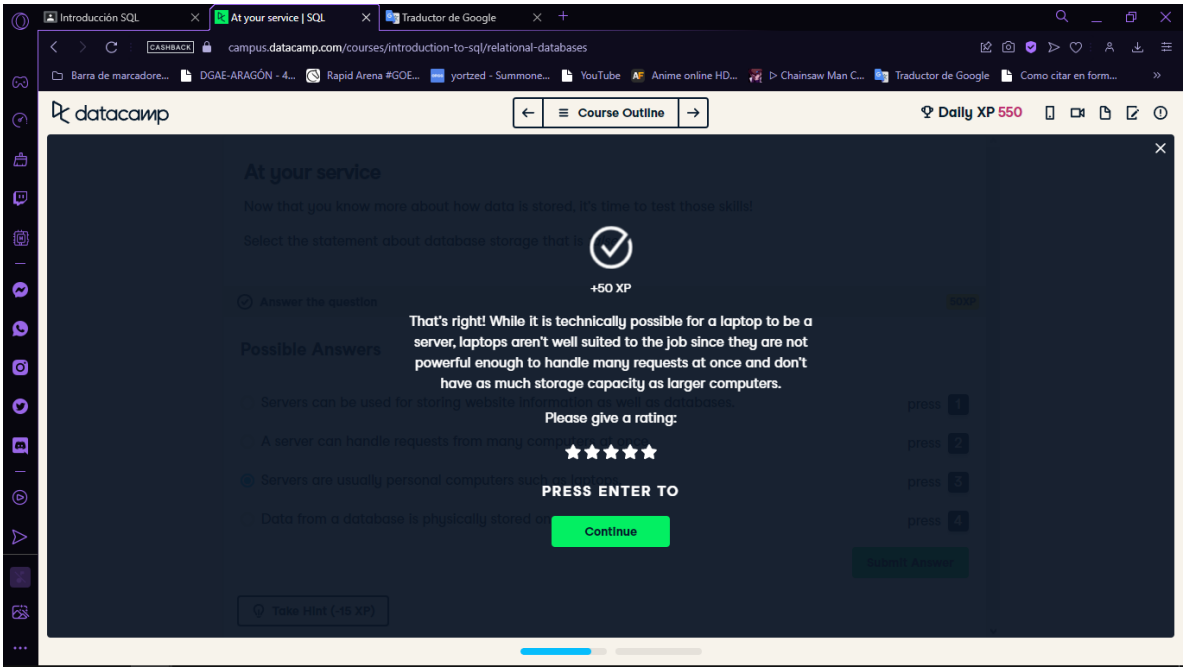
Course Outline
Daily XP 500
At your service
Now that you know more about how data is stored, it's time to test those skills!
Select the statement about database storage that is false.
Answer the question
50XP
Possible Answers
Servers can be used for storing website information as well as databases.
press 1
A server can handle requests from many computers at once.
press 2
Servers are usually personal computers such as laptops.
press 3
Data from a database is physically stored on a server.
press 4
Submit Answer
Take Hint (-15 XP)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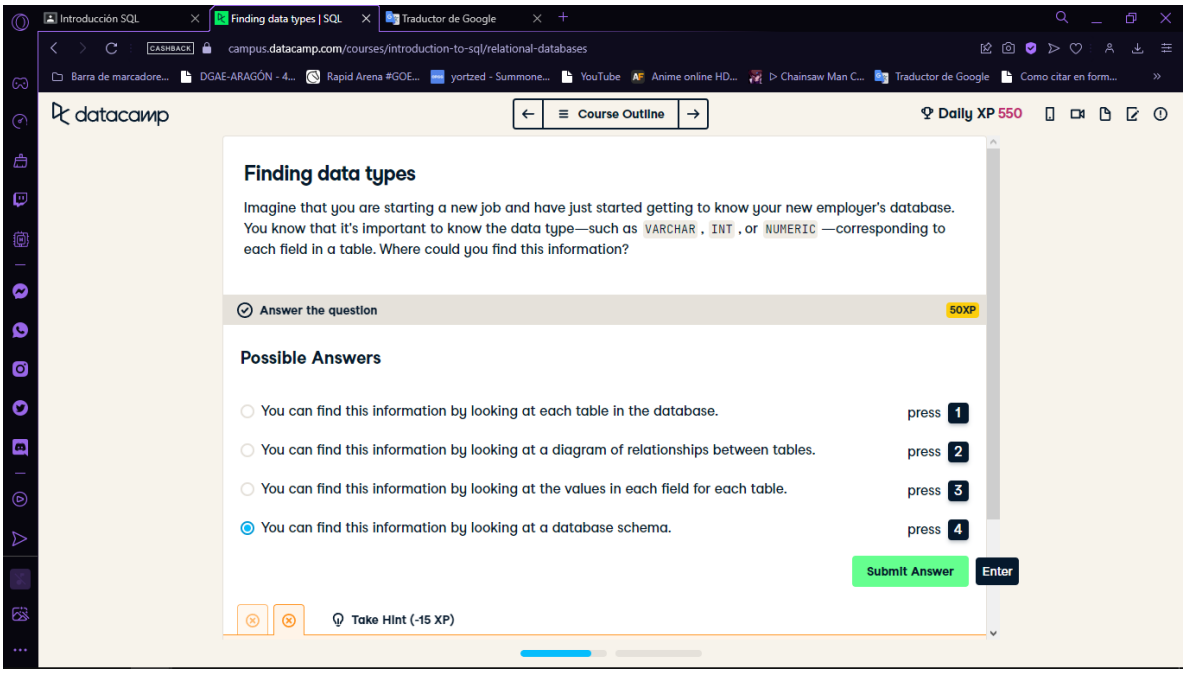
Course Outline
Daily XP 550
+50 XP
That's right! While it is technically possible for a laptop to be a server, laptops aren't well suited to the job since they are not powerful enough to handle many requests at once and don't have as much storage capacity as larger computers.
Please give a rating:
PRESS ENTER TO
Continue

6.-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Finding data types | SQL
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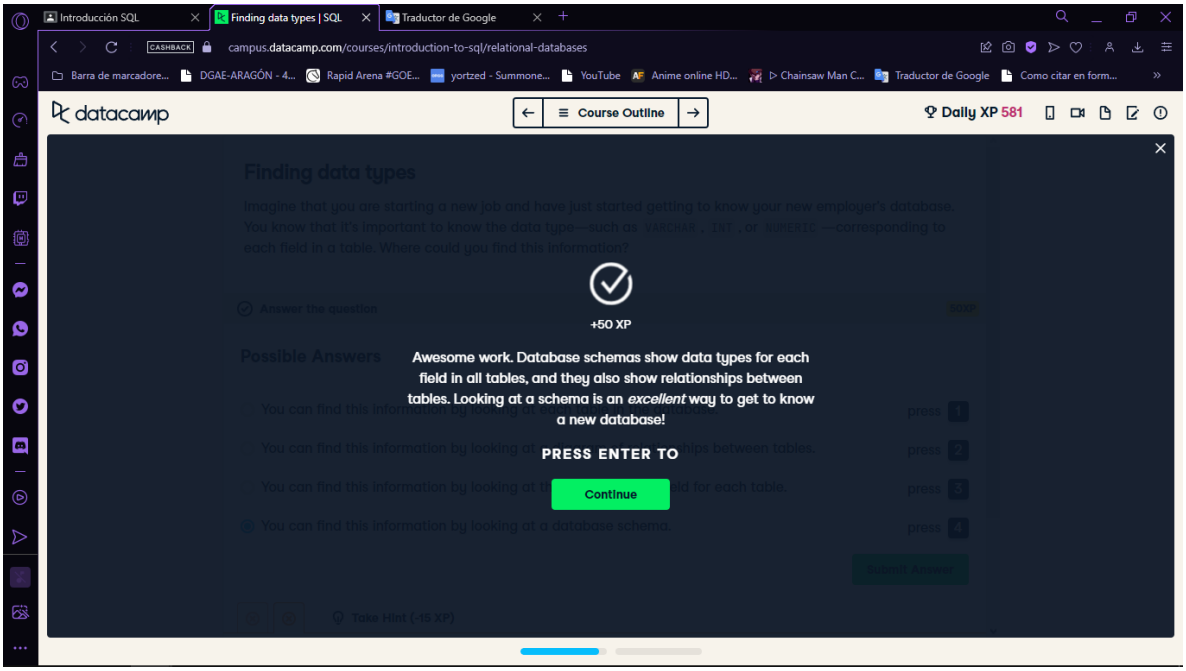
Course Outline
Daily XP 550
Finding data types
Imagine that you are starting a new job and have just started getting to know your new employer's database. You know that it's important to know the data type—such as VARCHAR, INT, or NUMERIC—corresponding to each field in a table. Where could you find this information?
Answer the question
50XP
Possible Answers
You can find this information by looking at each table in the database.
press 1
You can find this information by looking at a diagram of relationships between tables.
press 2
You can find this information by looking at the values in each field for each table.
press 3
You can find this information by looking at a database schema.
press 4
Submit Answer
Enter
Take Hint (-15 XP)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Finding data types | SQL
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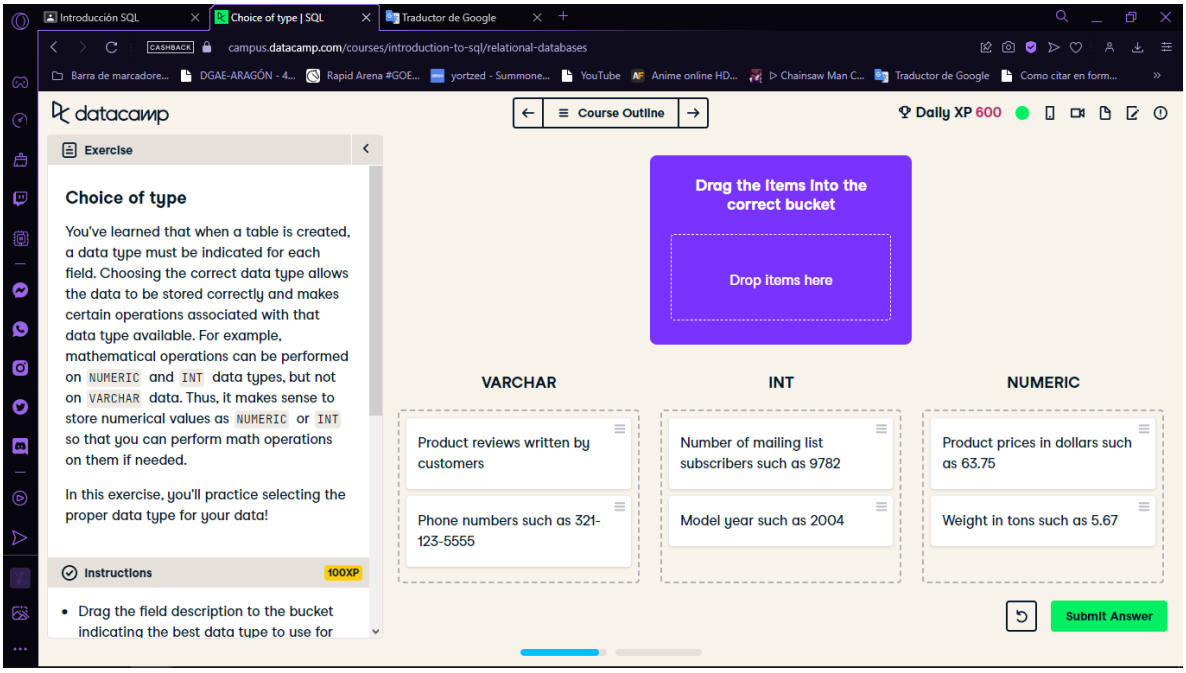
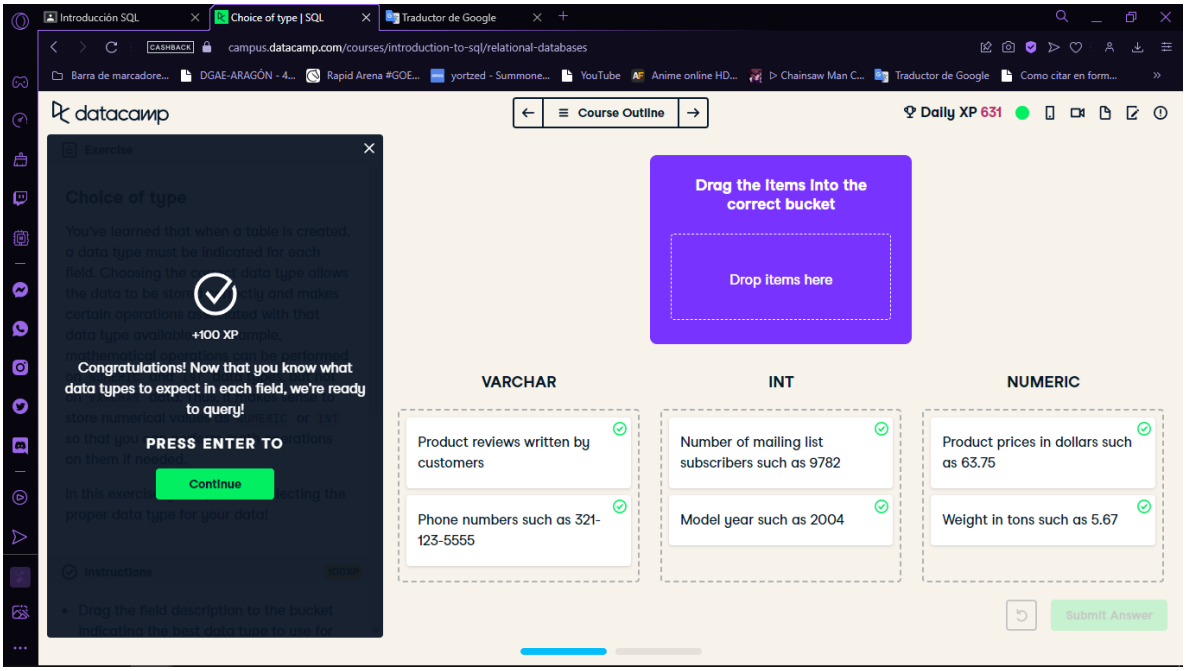
Course Outline
Daily XP 581
+50 XP
Awesome work. Database schemas show data types for each field in all tables, and they also show relationships between tables. Looking at a schema is an excellent way to get to know a new database!
PRESS ENTER TO
Continue

7.-



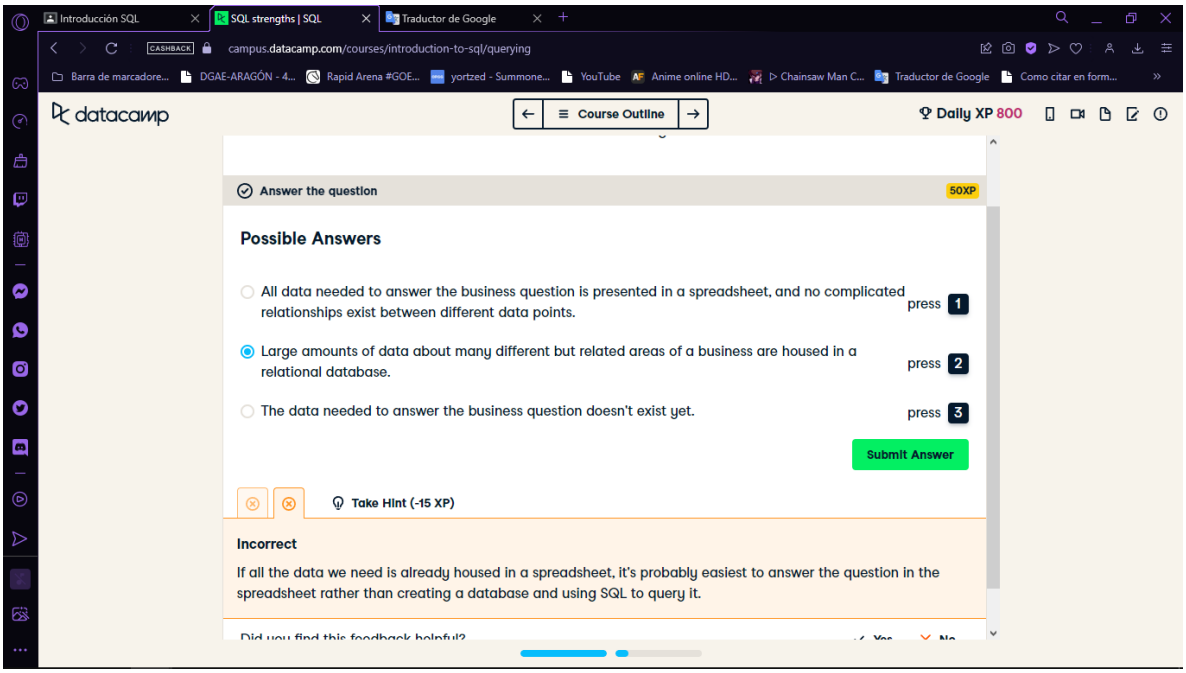


Conclusión

En este curso se reforzaron los conocimientos de estructura y construcción de bases de datos.

Querying

1.-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SQL strengths | SQL
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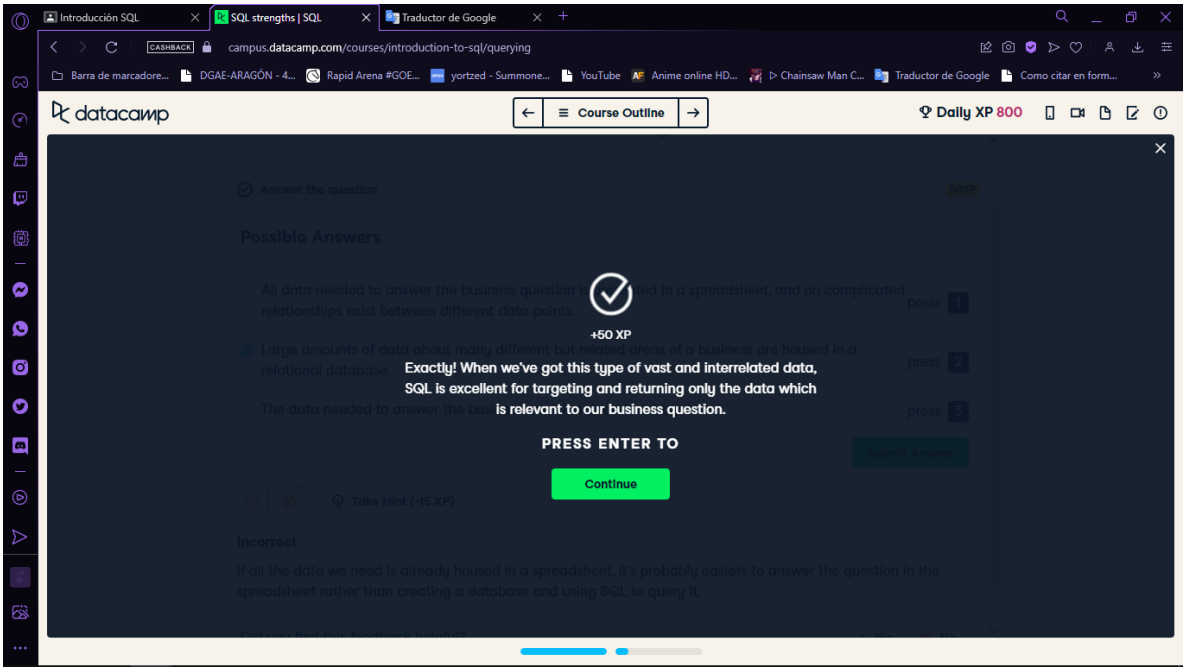
Daily XP 800
Answer the question
50XP
Possible Answers
All data needed to answer the business question is presented in a spreadsheet, and no complicated relationships exist between different data points.
press 1
Large amounts of data about many different but related areas of a business are housed in a relational database.
press 2
The data needed to answer the business question doesn't exist yet.
press 3
Submit Answer
Take Hint (-15 XP)
Incorrect
If all the data we need is already housed in a spreadsheet, it's probably easiest to answer the question in the spreadsheet rather than creating a database and using SQL to query it.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SQL strengths | SQL
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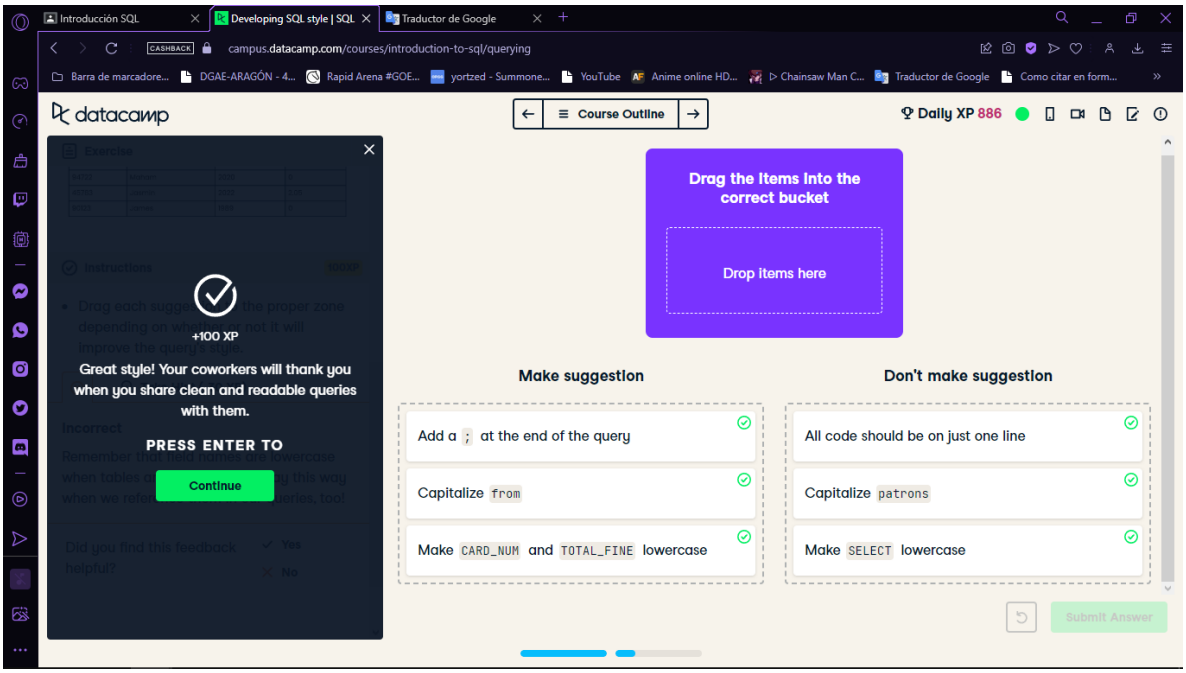
Course Outline
Daily XP 800
+50 XP
Exactly! When we've got this type of vast and interrelated data, SQL is excellent for targeting and returning only the data which is relevant to our business question.
PRESS ENTER TO
Continue

2.-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Developing SQL style | SQL
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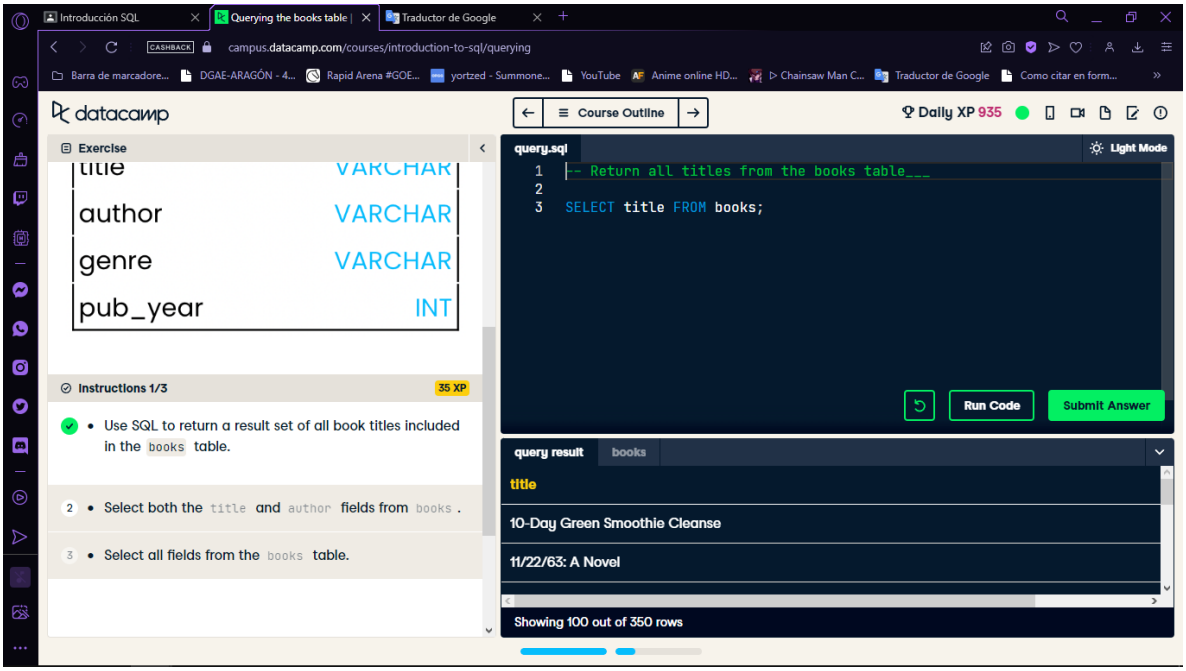
Course Outline
Daily XP 886
Drag the items into the correct bucket
Drop items here
+100 XP
Great style! Your coworkers will thank you when you share clean and readable queries with them.
PRESS ENTER TO
Continue
Make suggestion
Don't make suggestion
Add a ; at the end of the query
Capitalize from
Make CARD_NUM and TOTAL_FINE lowercase
All code should be on just one line
Capitalize patrons
Make SELECT lowercase
Submit Answer

3.-


Introducción SQL
Querying the books table |
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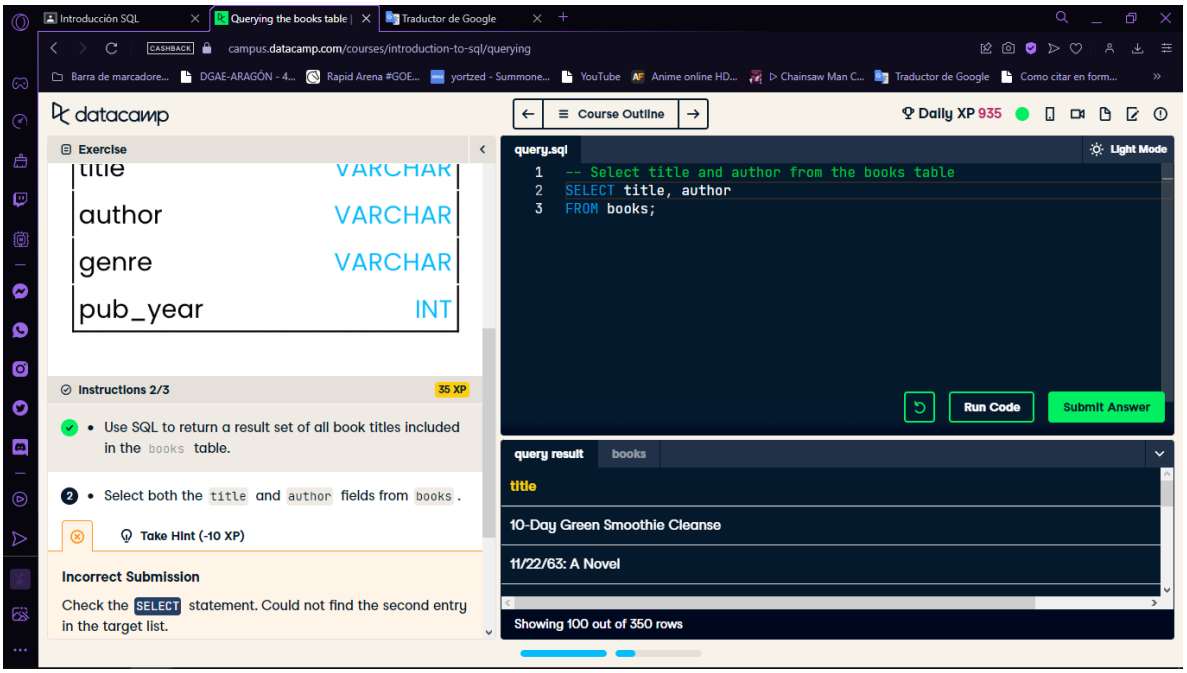
Course Outline
Daily XP 935
Exercise
author VARCHAR
genre VARCHAR
pub_year INT
Instructions 1/3
35 XP
Use SQL to return a result set of all book titles included in the books table.
Select both the title and author fields from books .
Select all fields from the books table.
query.sql
Light Mode
-- Return all titles from the books table___
SELECT title FROM books;
Run Code
Submit Answer
query result
books
title
10-Day Green Smoothie Cleanse
11/22/63: A Novel
Showing 100 out of 350 rows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Querying the books table
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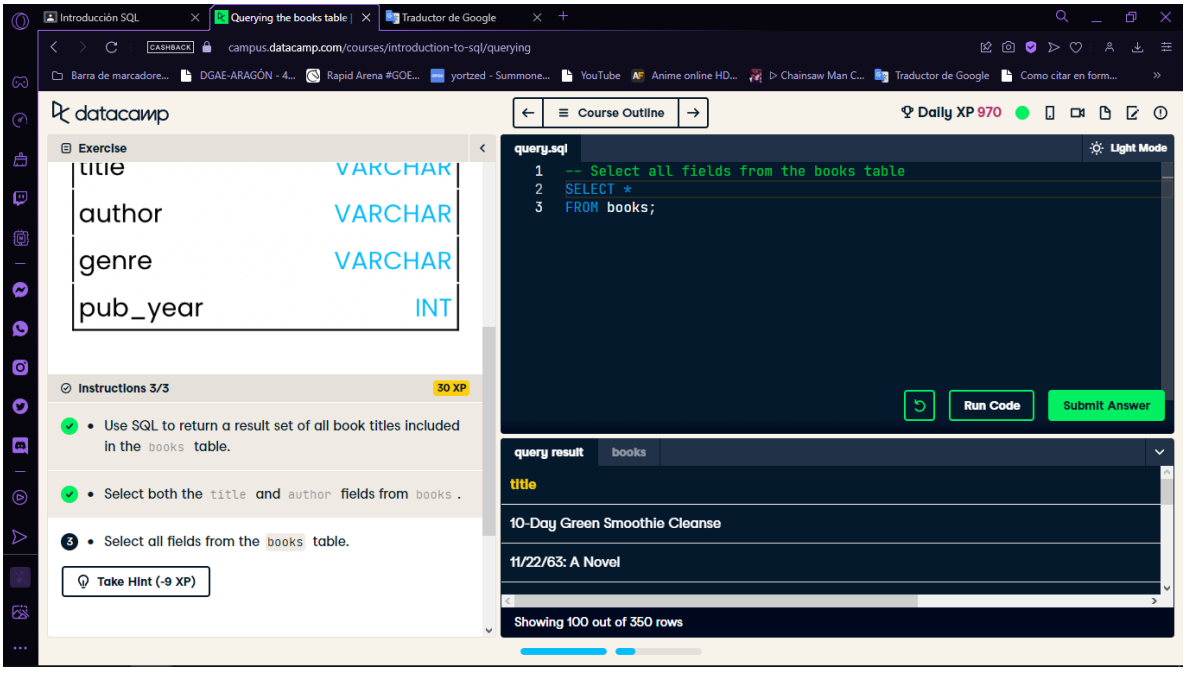
Course Outline
Daily XP 935
Exercise
author VARCHAR
genre VARCHAR
pub_year INT
Instructions 2/3
35 XP
Use SQL to return a result set of all book titles included in the books table.
Select both the title and author fields from books.
Take Hint (-10 XP)
Incorrect Submission
Check the SELECT statement. Could not find the second entry in the target list.
query.sql
Light Mode
1 -- Select title and author from the books table
2 SELECT title, author
3 FROM books;
Run Code
Submit Answer
query result
books
title
10-Day Green Smoothie Cleanse
11/22/63: A Novel
Showing 100 out of 350 rows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Querying the books table
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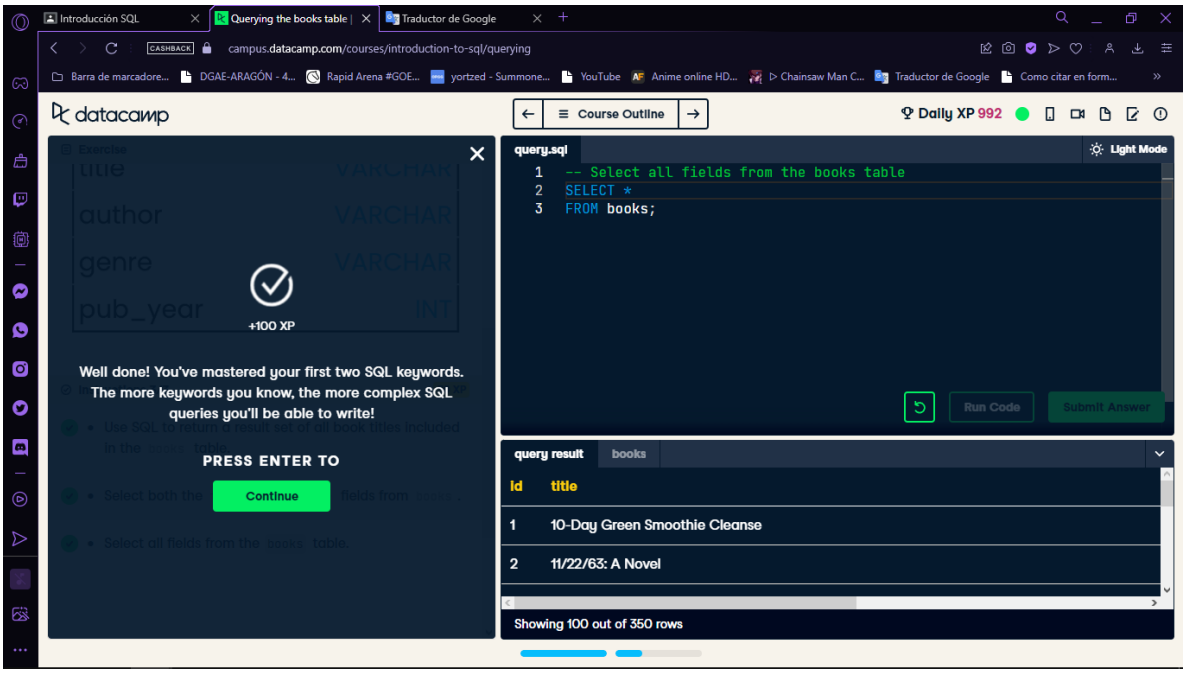
datacamp
Course Outline
Daily XP 970
Exercise
author VARCHAR
genre VARCHAR
pub_year INT
Instructions 3/3
30 XP
Use SQL to return a result set of all book titles included in the books table.
Select both the title and author fields from books.
Select all fields from the books table.
Take Hint (-9 XP)
query.sql
Light Mode
1 -- Select all fields from the books table
2 SELECT *
3 FROM books;
Run Code
Submit Answer
query result
books
title
10-Day Green Smoothie Cleanse
11/22/63: A Novel
Showing 100 out of 350 rows


Introducción SQL
Querying the books table
Traductor de Google
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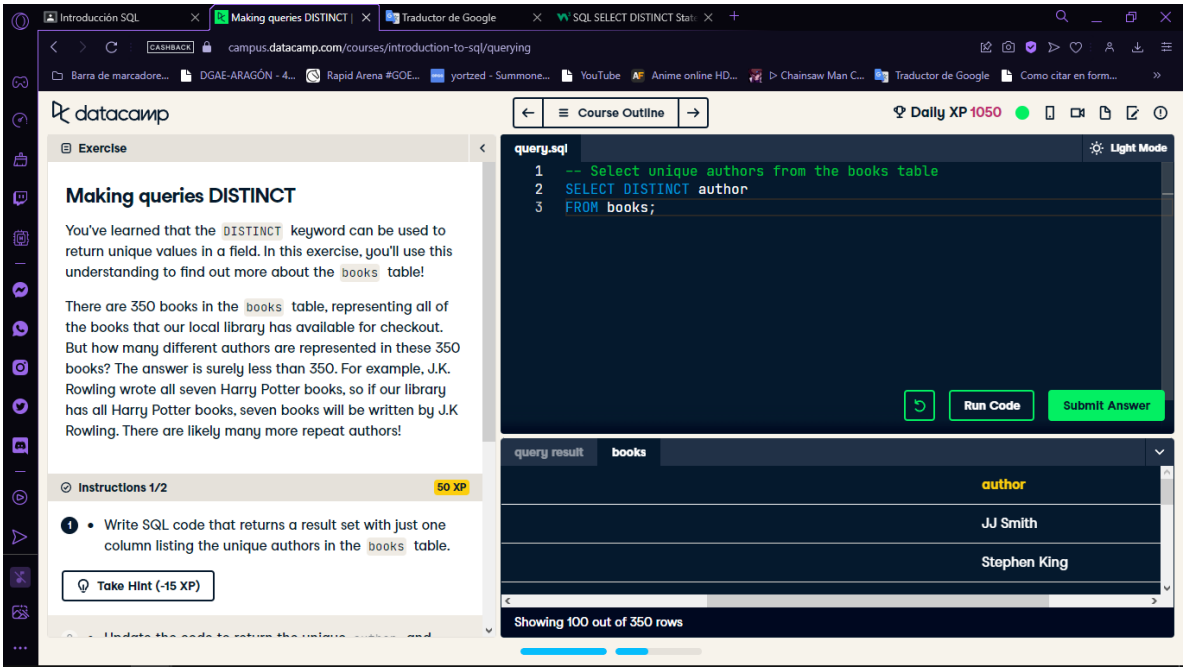
datacamp
Course Outline
Daily XP 992
Light Mode
query.sql
1 -- Select all fields from the books table
2 SELECT *
3 FROM books;
+100 XP
Well done! You've mastered your first two SQL keywords. The more keywords you know, the more complex SQL queries you'll be able to write!
PRESS ENTER TO
Continue
Run Code
Submit Answer
query result
books
id
title
1
10-Day Green Smoothie Cleanse
2
11/22/63: A Novel
Showing 100 out of 350 rows

4.-


Introducción SQL
Making queries DISTINCT
Traductor de Google
SQL SELECT DISTINCT Stat
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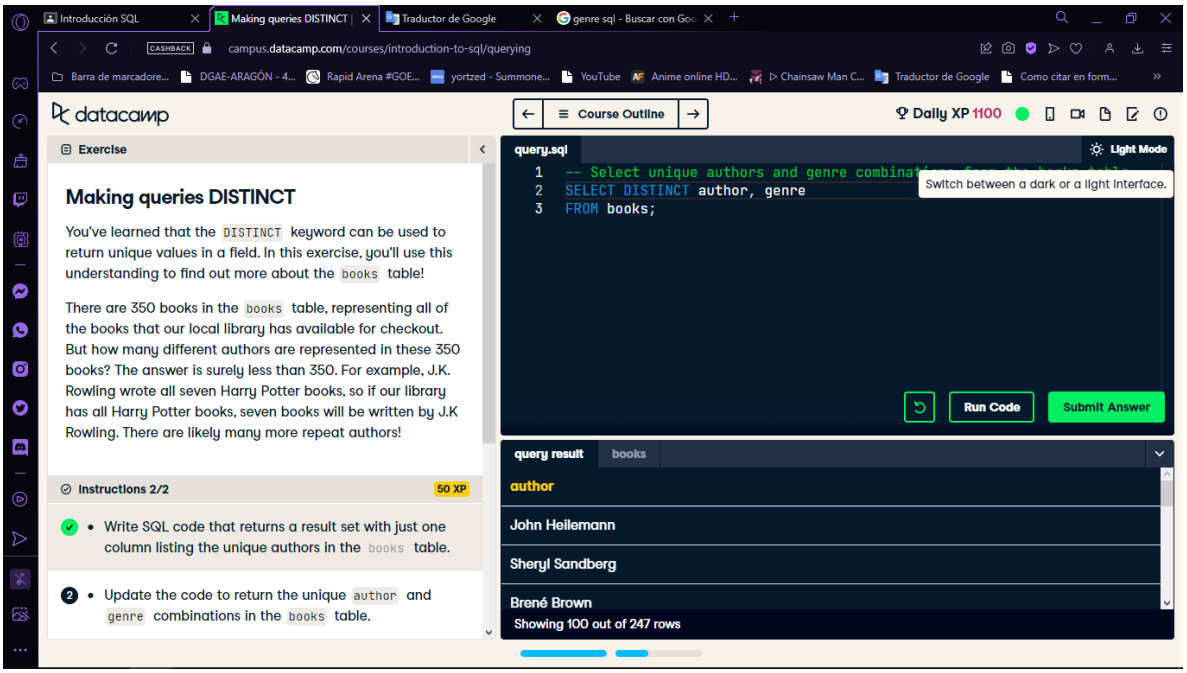
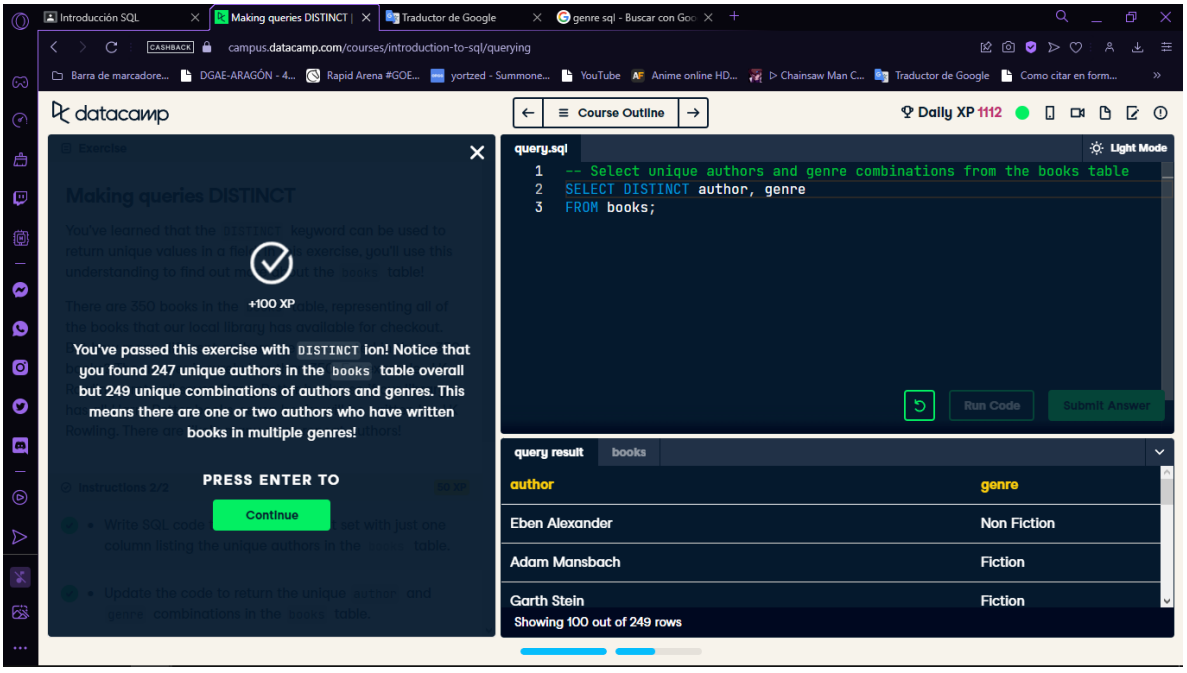
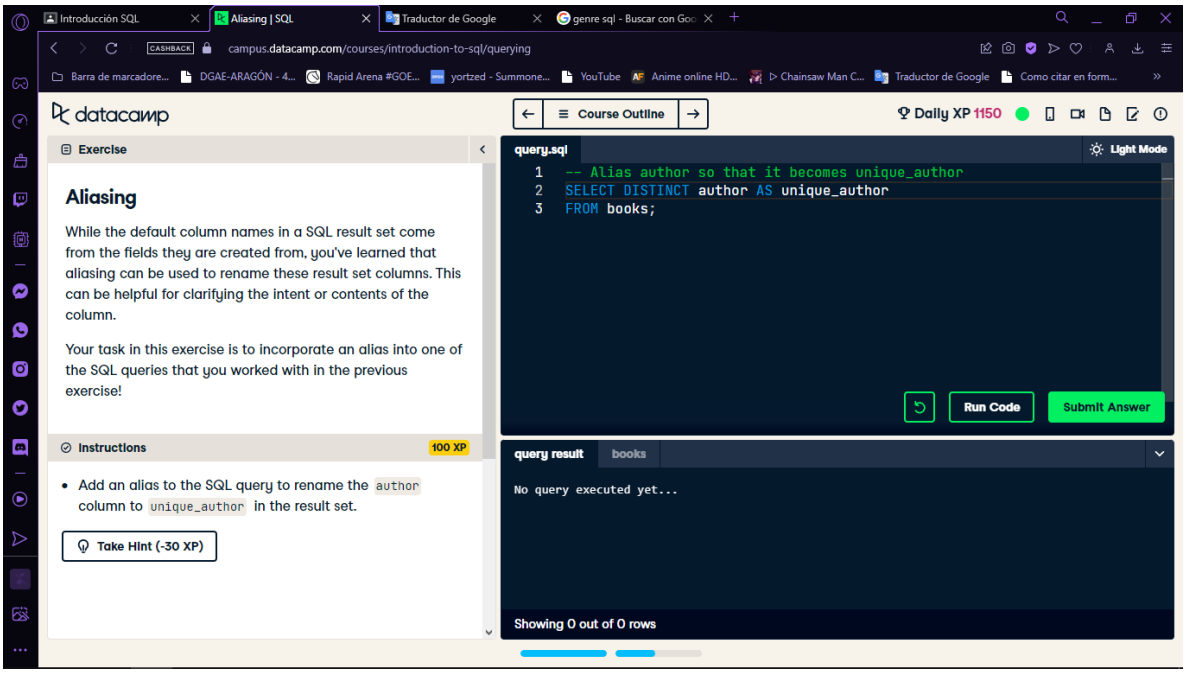
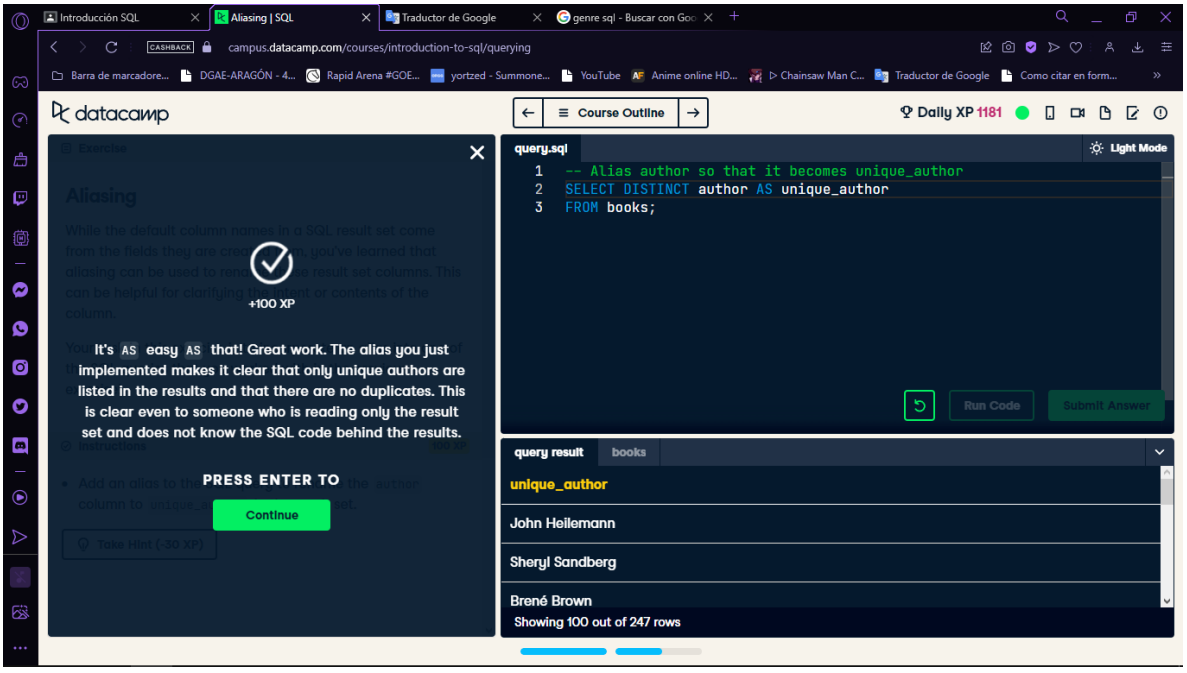
datacamp
Course Outline
Daily XP 1050
Light Mode
Exercise
Making queries DISTINCT
You've learned that the DISTINCT keyword can be used to return unique values in a field. In this exercise, you'll use this understanding to find out more about the books table!
There are 350 books in the books table, representing all of the books that our local library has available for checkout. But how many different authors are represented in these 350 books? The answer is surely less than 350. For example, J.K. Rowling wrote all seven Harry Potter books, so if our library has all Harry Potter books, seven books will be written by J.K Rowling. There are likely many more repeat authors!
Instructions 1/2
50 XP
1 • Write SQL code that returns a result set with just one column listing the unique authors in the books table.
Take Hint (-15 XP)
query.sql
1 -- Select unique authors from the books table
2 SELECT DISTINCT author
3 FROM books;
Run Code
Submit Answer
query result
books
author
JJ Smith
Stephen King
Showing 100 out of 350 rows


Introducción SQL
Making queries DISTINCT
Traductor de Google
genre sql - Buscar con Goo
campus.datacamp.com/courses/introduction-to-sql/querying
datacamp
Course Outline
Daily XP 1100
Exercise
Making queries DISTINCT
You've learned that the DISTINCT keyword can be used to return unique values in a field. In this exercise, you'll use this understanding to find out more about the books table!
There are 350 books in the books table, representing all of the books that our local library has available for checkout. But how many different authors are represented in these 350 books? The answer is surely less than 350. For example, J.K. Rowling wrote all seven Harry Potter books, so if our library has all Harry Potter books, seven books will be written by J.K Rowling. There are likely many more repeat authors!
Instructions 2/2
50 XP
Write SQL code that returns a result set with just one column listing the unique authors in the books table.
Update the code to return the unique author and genre combinations in the books table.
query.sql
Light Mode
Switch between a dark or a light interface.
1 -- Select unique authors and genre combinat
2 SELECT DISTINCT author, genre
3 FROM books;
Run Code
Submit Answer
query result
books
author
John Heilemann
Sheryl Sandberg
Brené Brown
Showing 100 out of 247 rows


Introducción SQL
Making queries DISTINCT
Traductor de Google
genre sql - Buscar con Goo
campus.datacamp.com/courses/introduction-to-sql/querying
datacamp
Course Outline
Daily XP 1112
+100 XP
You've passed this exercise with DISTINCT ion! Notice that you found 247 unique authors in the books table overall but 249 unique combinations of authors and genres. This means there are one or two authors who have written books in multiple genres!
PRESS ENTER TO
Continue
query.sql
Light Mode
1 -- Select unique authors and genre combinations from the books table
2 SELECT DISTINCT author, genre
3 FROM books;
Run Code
Submit Answer
query result
books
author
genre
Eben Alexander
Non Fiction
Adam Mansbach
Fiction
Garth Stein
Fiction
Showing 100 out of 249 rows

5.-


Introducción SQL
Aliasing | SQL
Traductor de Google
campus.datacamp.com/courses/introduction-to-sql/querying
datacamp
Course Outline
Daily XP 1150
Exercise
Aliasing
While the default column names in a SQL result set come from the fields they are created from, you've learned that aliasing can be used to rename these result set columns. This can be helpful for clarifying the intent or contents of the column.
Your task in this exercise is to incorporate an alias into one of the SQL queries that you worked with in the previous exercise!
Instructions
100 XP
Add an alias to the SQL query to rename the author column to unique_author in the result set.
Take Hint (-30 XP)
query.sql
Light Mode
1 -- Alias author so that it becomes unique_author
2 SELECT DISTINCT author AS unique_author
3 FROM books;
Run Code
Submit Answer
query result
books
No query executed yet...
Showing 0 out of 0 rows


Introducción SQL
Aliasing | SQL
Traductor de Google
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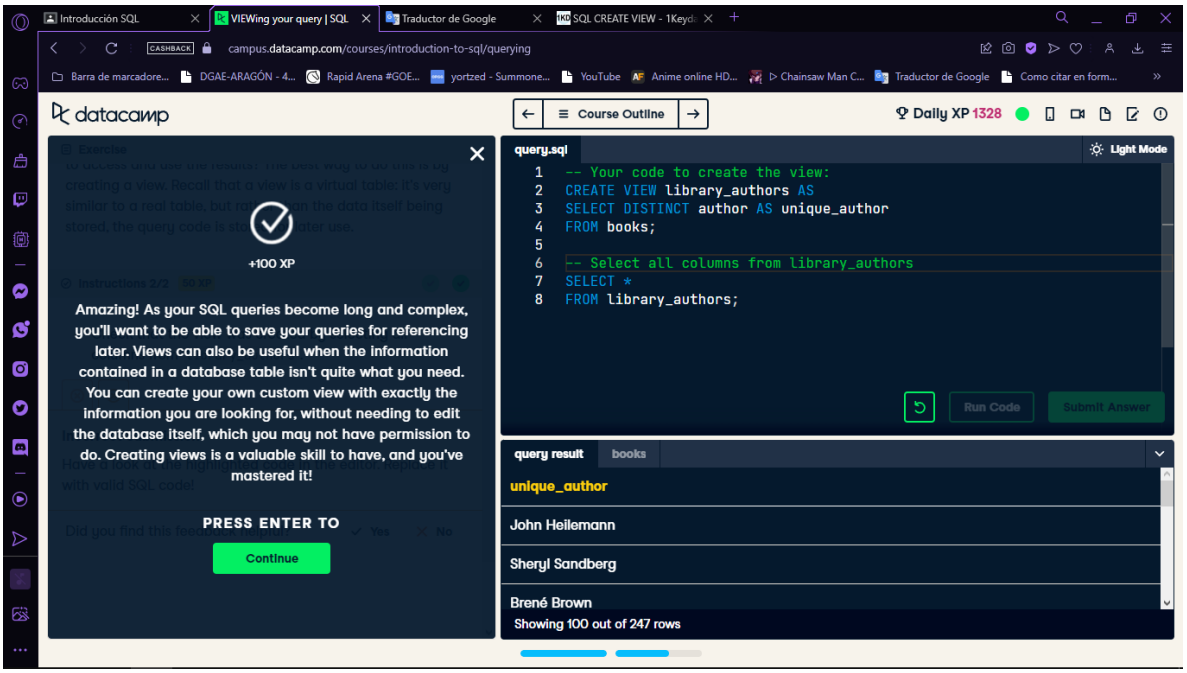
datacamp
Course Outline
Daily XP 1181
+100 XP
It's AS easy AS that! Great work. The alias you just implemented makes it clear that only unique authors are listed in the results and that there are no duplicates. This is clear even to someone who is reading only the result set and does not know the SQL code behind the results.
PRESS ENTER TO
Continue
query.sql
Light Mode
1 -- Alias author so that it becomes unique_author
2 SELECT DISTINCT author AS unique_author
3 FROM books;
Run Code
Submit Answer
query result
books
unique_author
John Heilemann
Sheryl Sandberg
Brené Brown
Showing 100 out of 247 rows

6.-


Introducción SQL
VIEWing your query | SQL
Traductor de Google
SQL CREATE VIEW - 1Keyd
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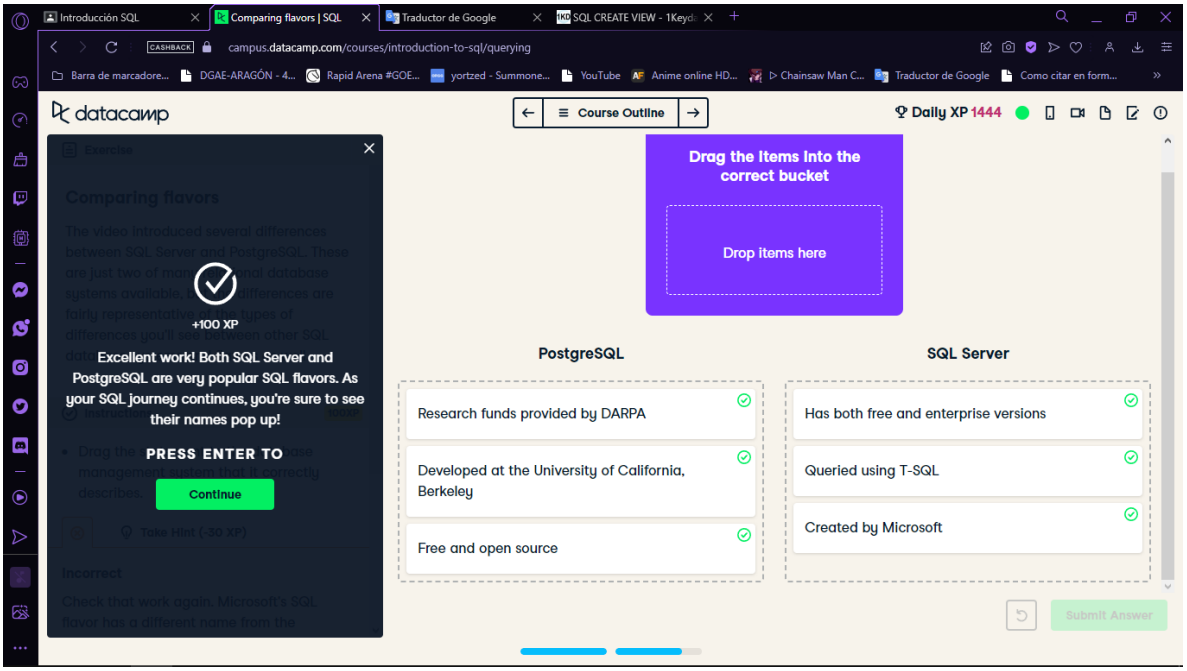
datacamp
Course Outline
Daily XP 1328
+100 XP
Amazing! As your SQL queries become long and complex, you'll want to be able to save your queries for referencing later. Views can also be useful when the information contained in a database table isn't quite what you need. You can create your own custom view with exactly the information you are looking for, without needing to edit the database itself, which you may not have permission to do. Creating views is a valuable skill to have, and you've mastered it!
PRESS ENTER TO
Continue
query.sql
Light Mode
1 -- Your code to create the view:
2 CREATE VIEW library_authors AS
3 SELECT DISTINCT author AS unique_author
4 FROM books;
5
6 -- Select all columns from library_authors
7 SELECT *
8 FROM library_authors;
Run Code
Submit Answer
query result
books
unique_author
John Heilemann
Sheryl Sandberg
Brené Brown
Showing 100 out of 247 rows

7.-


Introducción SQL
Comparing flavors | SQL
Traductor de Google
SQL CREATE VIEW - 1Keyd
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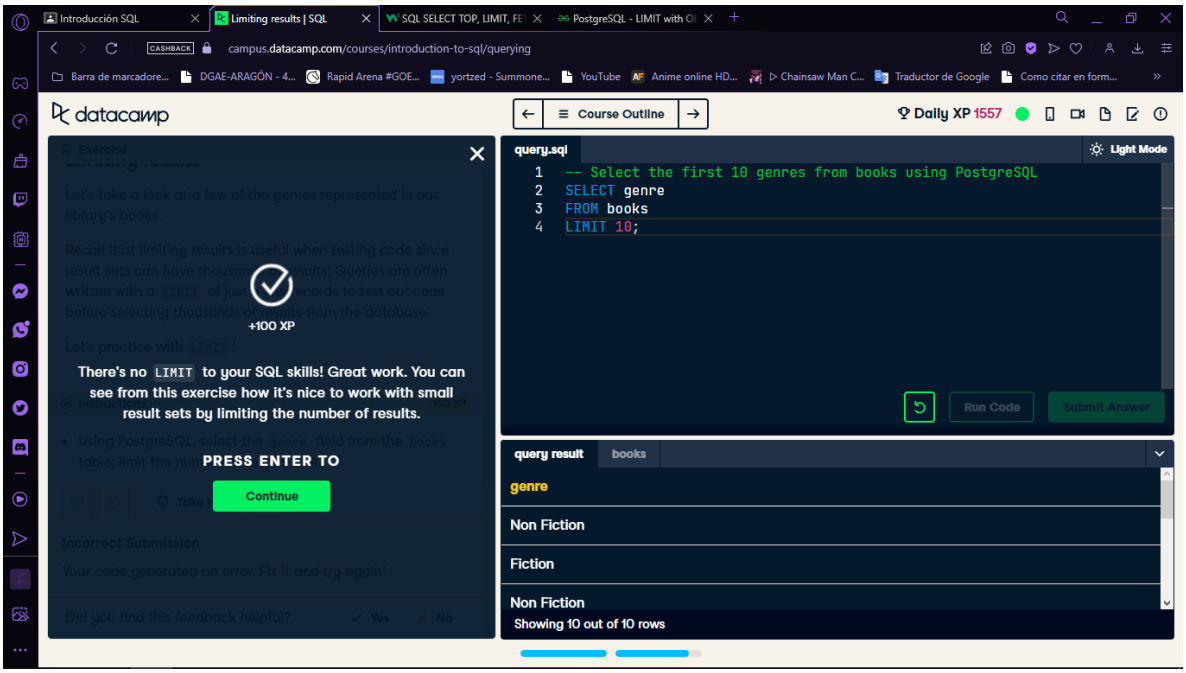
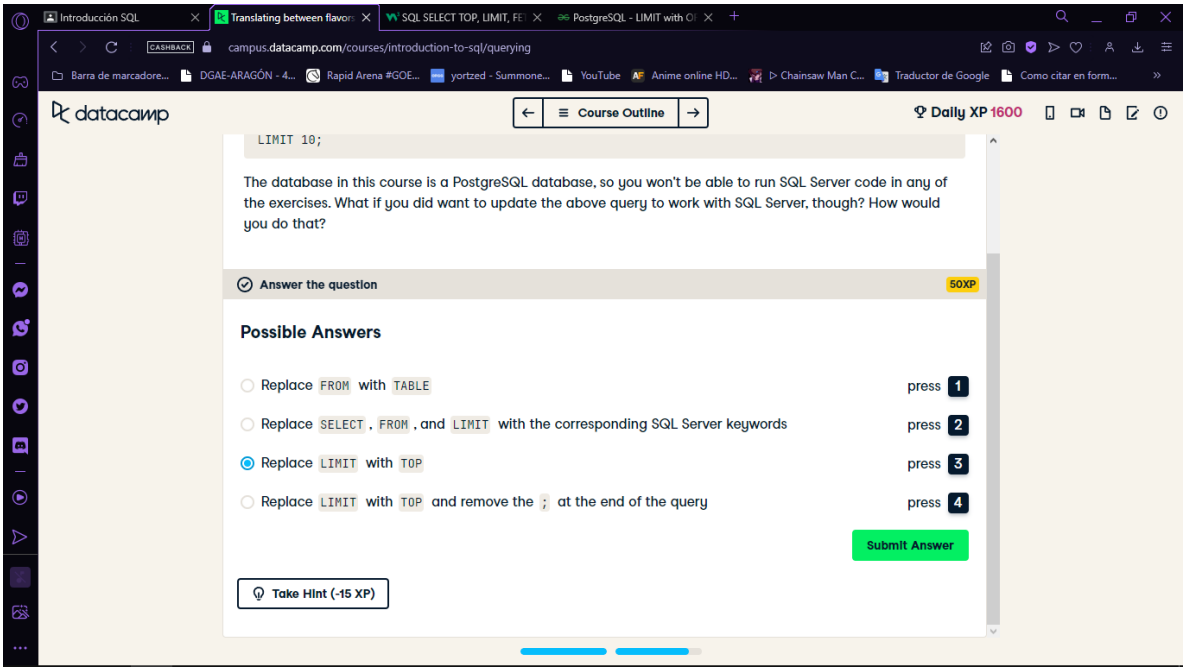
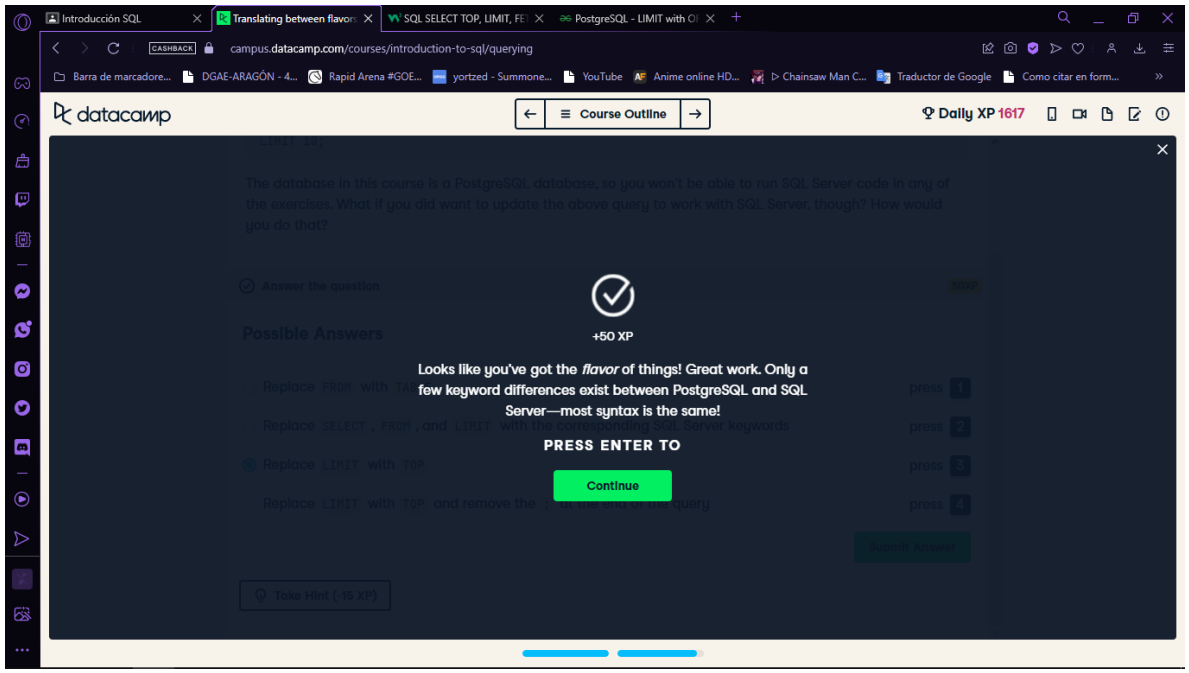
datacamp
Course Outline
Daily XP 1444
+100 XP
Excellent work! Both SQL Server and PostgreSQL are very popular SQL flavors. As your SQL journey continues, you're sure to see their names pop up!
PRESS ENTER TO
Continue
Drag the items into the correct bucket
Drop items here
PostgreSQL
SQL Server
Research funds provided by DARPA
Developed at the University of California, Berkeley
Free and open source
Has both free and enterprise versions
Queried using T-SQL
Created by Microsoft
Submit Answer

8.-


Introducción SQL
Limiting results | SQL
SQL SELECT TOP, LIMIT, FE
PostgreSQL - LIMIT with O
campus.datacamp.com/courses/introduction-to-sql/querying
datacamp
Course Outline
Daily XP 1557
+100 XP
There's no LIMIT to your SQL skills! Great work. You can see from this exercise how it's nice to work with small result sets by limiting the number of results.
PRESS ENTER TO
Continue
query.sql
Light Mode
1 -- Select the first 10 genres from books using PostgreSQL
2 SELECT genre
3 FROM books
4 LIMIT 10;
Run Code
Submit Answer
query result
books
genre
Non Fiction
Fiction
Non Fiction
Showing 10 out of 10 rows

9.-


Introducción SQL
Translating between flavor
SQL SELECT TOP, LIMIT, FE
PostgreSQL - LIMIT with O
campus.datacamp.com/courses/introduction-to-sql/querying
datacamp
Course Outline
Daily XP 1600
LIMIT 10;
The database in this course is a PostgreSQL database, so you won't be able to run SQL Server code in any of the exercises. What if you did want to update the above query to work with SQL Server, though? How would you do that?
Answer the question
50XP
Possible Answers
Replace FROM with TABLE
press 1
Replace SELECT, FROM, and LIMIT with the corresponding SQL Server keywords
press 2
Replace LIMIT with TOP
press 3
Replace LIMIT with TOP and remove the ; at the end of the query
press 4
Submit Answer
Take Hint (-15 XP)



Conclucion:

En este curso pudimos probar una introduccion a algunas consultas basicas echas en sql, asi como aprender la diferencia con postgreSQL.