

## Welcome to Week 3

July 20-26, 2020

## **Database Analyst/ Administrator**

### REMEMBER!!

Submit ALL of this week's challenges (or screen shots of them) to experience@iechamilton.ca by Sunday at noon for your chance to win 1 of 50 \$10 Gift Cards

GRAND PRIZE of up to \$300 towards an online coding &/or technology related activity, camp, course or subscription (subject to approval).

or the

Have you ever thought about how companies manage their electronic information like sales or customer contacts, or wondered how searching or sorting a database works, or how hospitals share information? These are the work of Data Analysts and Administrators. Data Administrators use specialized software to store and organize data while Data Analysts inspect, clean, transform and model data with the goal of discovering useful information, which can inform a companies conclusions and support their decision-making.

Database analysts and administrators can be found in just about every career sector since all of them have information to keep. Database management can be a great career option when you wish to join a few of your many interests, providing one of them is technology! You can use your technological skills to enhance medical or sport based companies or even use it to assist not-forprofit organizations to reach their goals.

Careers in databasing may also have names such as Database Engineer or Developer. Jobs are available in both the public and private sectors and, as we continue to advance technologically, it is a rapidly growing field to enter. Salaries for this field can vary depending on where you choose to work, with the private sector and urban locations generally being a bit higher, but you can expect to enter the occupation with a yearly income of \$50,000.

There are a few courses and programs at Mohawk College that can help lead you to a career in Database Management. Take a look at some of their offerings (they'll let you know which courses you should be looking for in high school too!):

Computer Systems Technician Software Support 548-558 - 2 Year Diploma Program Computer Systems Technology Software Development - 559 - 3 Year Advanced Diploma Program



















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## **Challenge!**

This week, we are taking you to Khan Academy to explore the "Basics of SQL", a programming language for databases. You will find a series of videos to watch, instructions to read, follow and practice. To be entered to win one of the prizes this week, you will need to complete (and send in screenshots for) the following challenges/projects:

- **Book List Database** 1.
- 2. **Box Office Hits Database**
- 3. To Do List Database
- 4. Design a Store Database

### Tips:

- Be creative! You don't need to copy our examples, you can (and should) include your own ideas!
- Read the whole article (and then re-read it) for help finding how to complete each task.
- If you are struggling, Hamilton Code Clubs Camp can help! Register
- When taking screenshots, try to show as much of your coding detail as possible.
- Feel free to zoom in or send a few pictures to show both your code and the robots.

Send your completed exercises to experience@iechamilton.ca. Make sure you include your full name! Prize winners will be contacted next week via information provided at registration.

> You can find our finished practices on the next few pages. Be sure to be creative when completing yours!

If you are interested in exploring Databases further, here are ways to keep going!

Follow these links: More SQL Queries, Relational SQL Queries, Modifying Databases, Further SQL Learning.



















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## **Databases**

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Submit ALL of this week's challenges (or screen shots of them) to

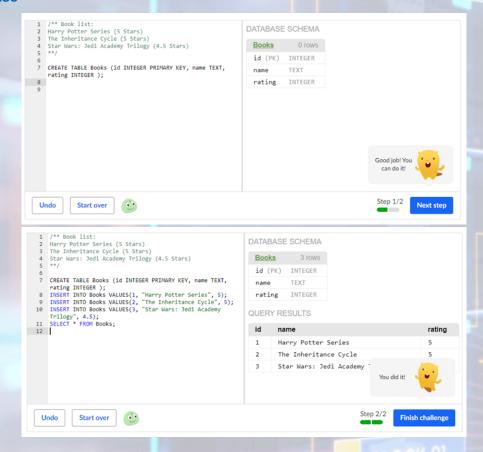
experience@iechamilton.ca

by Sunday at noon for your chance to win 1 of 50 \$10 Gift Cards

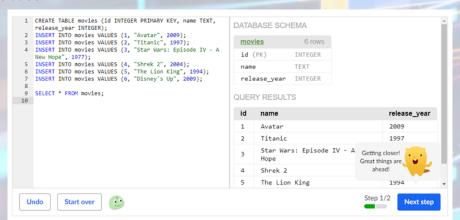
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or the

### **Book List Database**



### **Box Office Hits Database**





















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# **Databases**

### REMEMBER!!

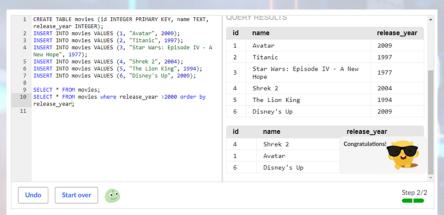
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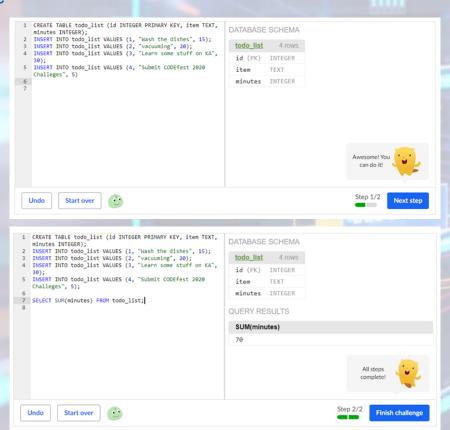
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### Box Office Hits Database Cont'd.



### To Do List Database





















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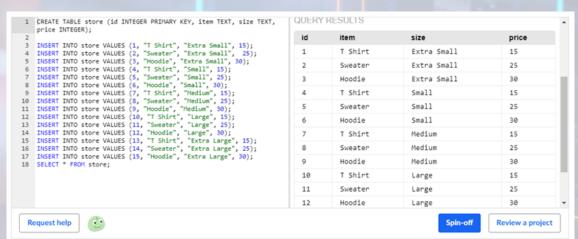
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### **Design a Store Database**



CREATE TABLE store (id INTEGER PRIMARY KEY, item TEXT, size T price INTEGER);
INSERT INTO store VALUES (1, "T Shirt", "Extra Small", 15);
INSERT INTO store VALUES (2, "Sweater", "Extra Small", 25);
INSERT INTO store VALUES (3, "Hoodie", "Extra Small", 30);
INSERT INTO store VALUES (4, "T Shirt", "Small", 15);
INSERT INTO store VALUES (5, "Sweater", "Small", 15);
INSERT INTO store VALUES (6, "Hoodie", "Small", 30);
INSERT INTO store VALUES (7, "T Shirt", "Medium", 15);
INSERT INTO store VALUES (8, "Sweater", "Medium", 30);
INSERT INTO store VALUES (9, "Hoodie", "Medium", 30);
INSERT INTO store VALUES (10, "T Shirt", "Large", 15);
INSERT INTO store VALUES (11, "Sweater", "Large", 25);
INSERT INTO store VALUES (12, "Hoodie", "Large", 30);
INSERT INTO store VALUES (13, "T Shirt", "Extra Large", 15);
INSERT INTO store VALUES (14, "Sweater", "Extra Large", 25);
INSERT INTO store VALUES (14, "Sweater", "Extra Large", 25);
INSERT INTO store VALUES (14, "Sweater", "Extra Large", 25);
INSERT INTO store VALUES (15, "Hoodie", "Extra Large", 30); 1 CREATE TABLE store (id INTEGER PRIMARY KEY, item TEXT, size TEXT, T Shirt Extra Small 15 T Shirt Medium 15 T Shirt 15 Extra Large 13 T Shirt 15 2 Sweater Extra Small 25 Sweater Small 25 13 14 15 25 8 Sweater Medium 25 Sweater Large Sweater Extra Large SELECT \* FROM store; SELECT \* FROM store order by price; Extra Small 30 Hoodie 30 Start over Request help

Don't forget to check out more SQL practices below!

Follow these links: **More SOL Queries** Relational SQL Queries **Modifying Databases** Further SQL Learning.















