Understanding RDBMS Transactions and Procedures

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Overview

Introduction to Transactions

- Commit
- Rollback

Demos

- Transactions
- Stored Procedure

Testing Database Driven Application

Transactions

A transaction is a sequence of one or more tasks performed on a database as a single logical unit of work.

If all the tasks are successful, the result is SUCCESS; if any of the tasks fail, the result is FAILURE.

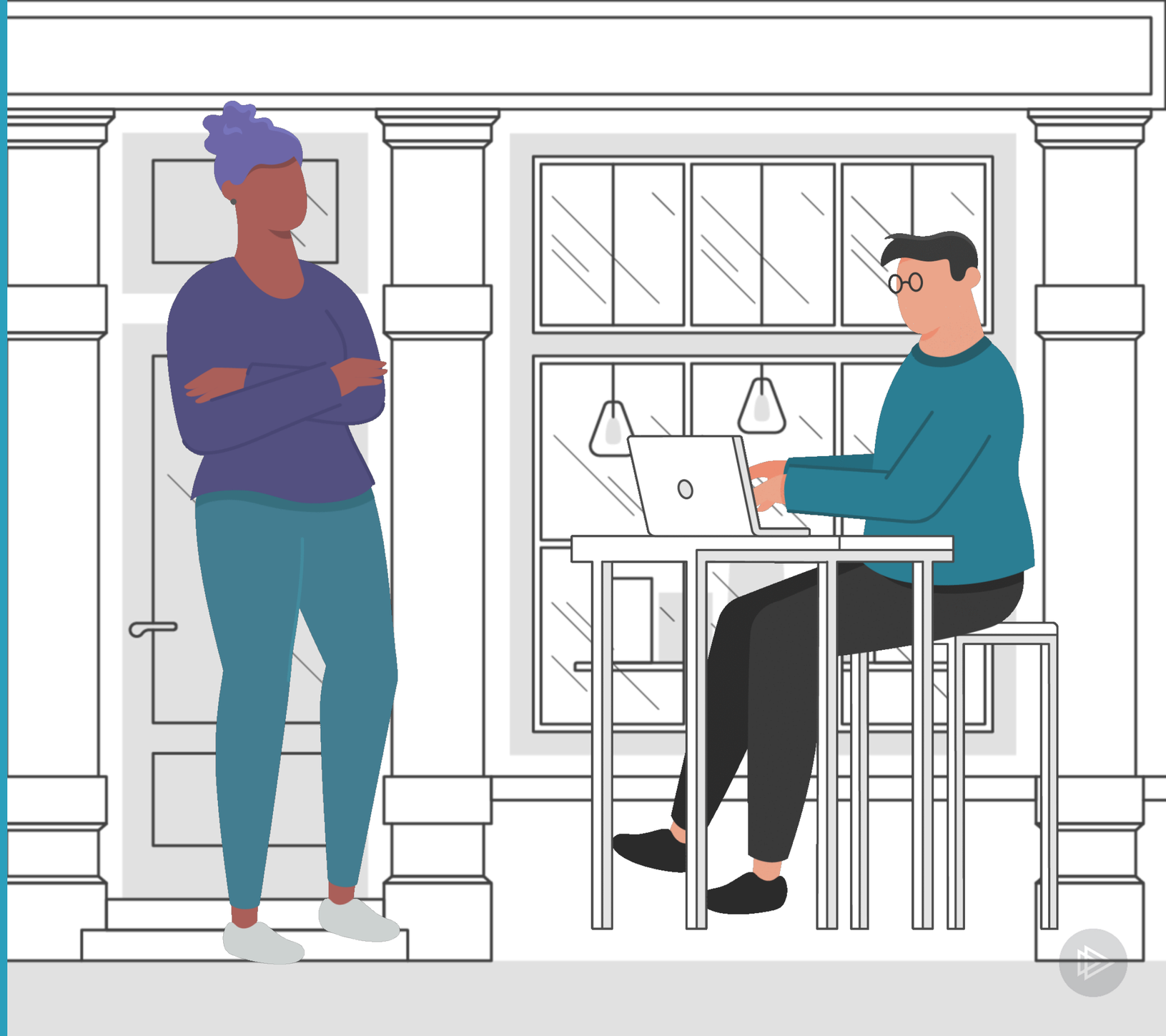
In case of success, all tasks are COMMITTED; upon failure, all the tasks are ROLLED BACK.

Demo

Transactions

- Successful Transaction - COMMIT
- Failed Transaction - ROLLBACK

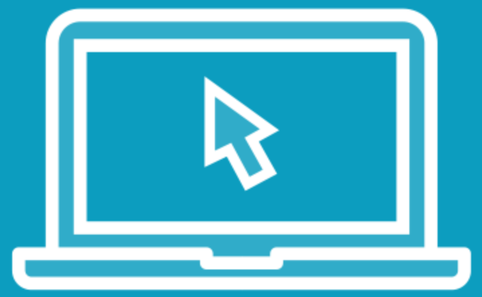
- Jen wants a unique entry for each actor in the database
- Mark to implement transaction to avoid duplicate entry of new actor



Stored Procedures

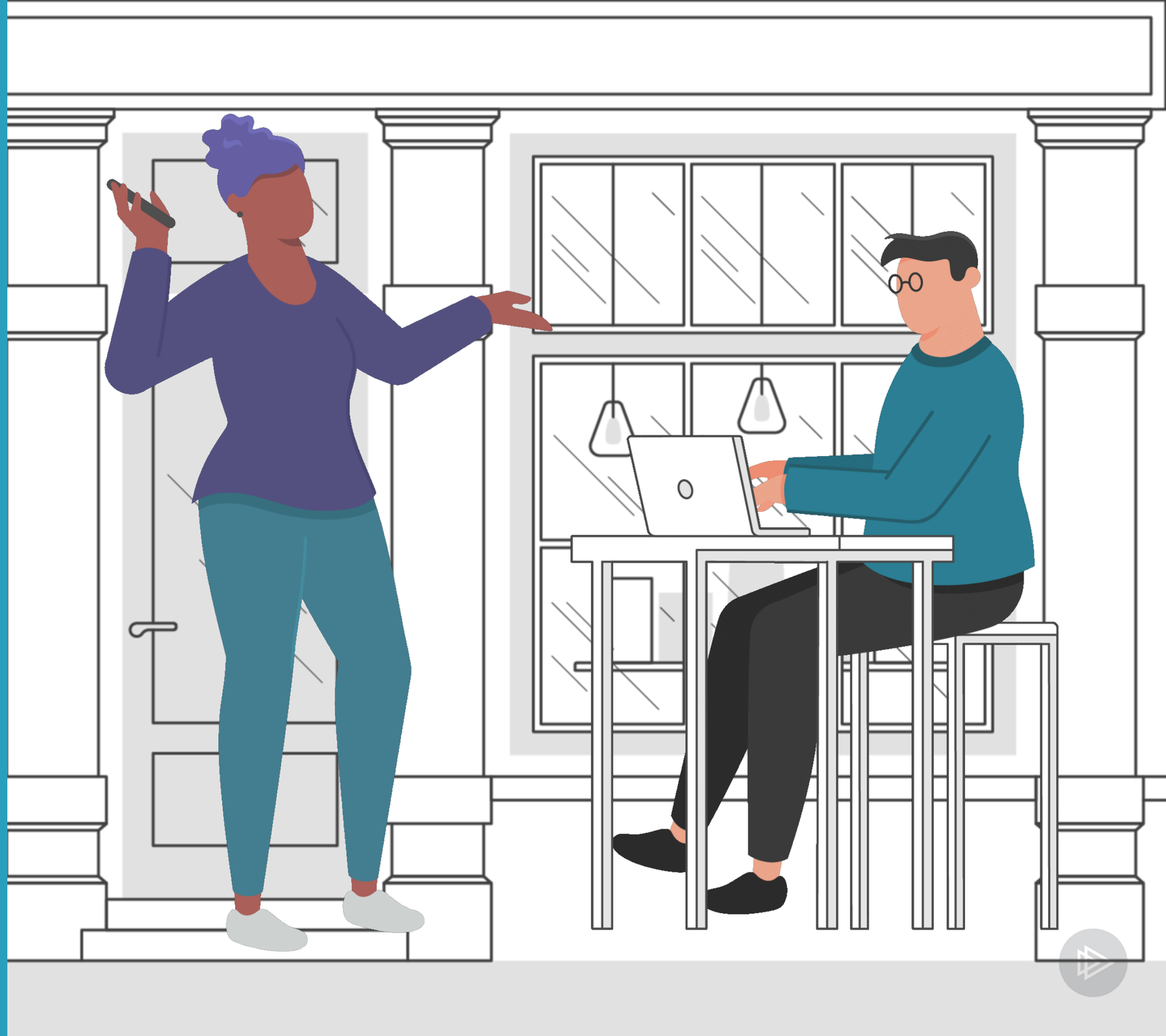
It is a group of SQL statements stored in a database in a single group with an assigned name.

Demo

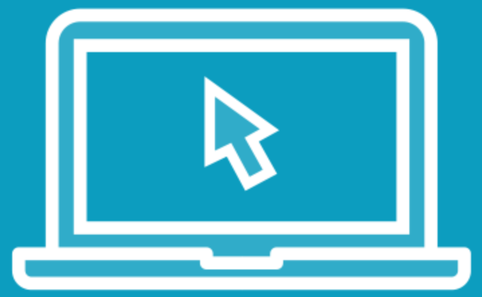


Stored Procedures

- Jen moved all logic of adding actors to stored procedure
- Mark to implement logic to call stored procedure with multiple parameters

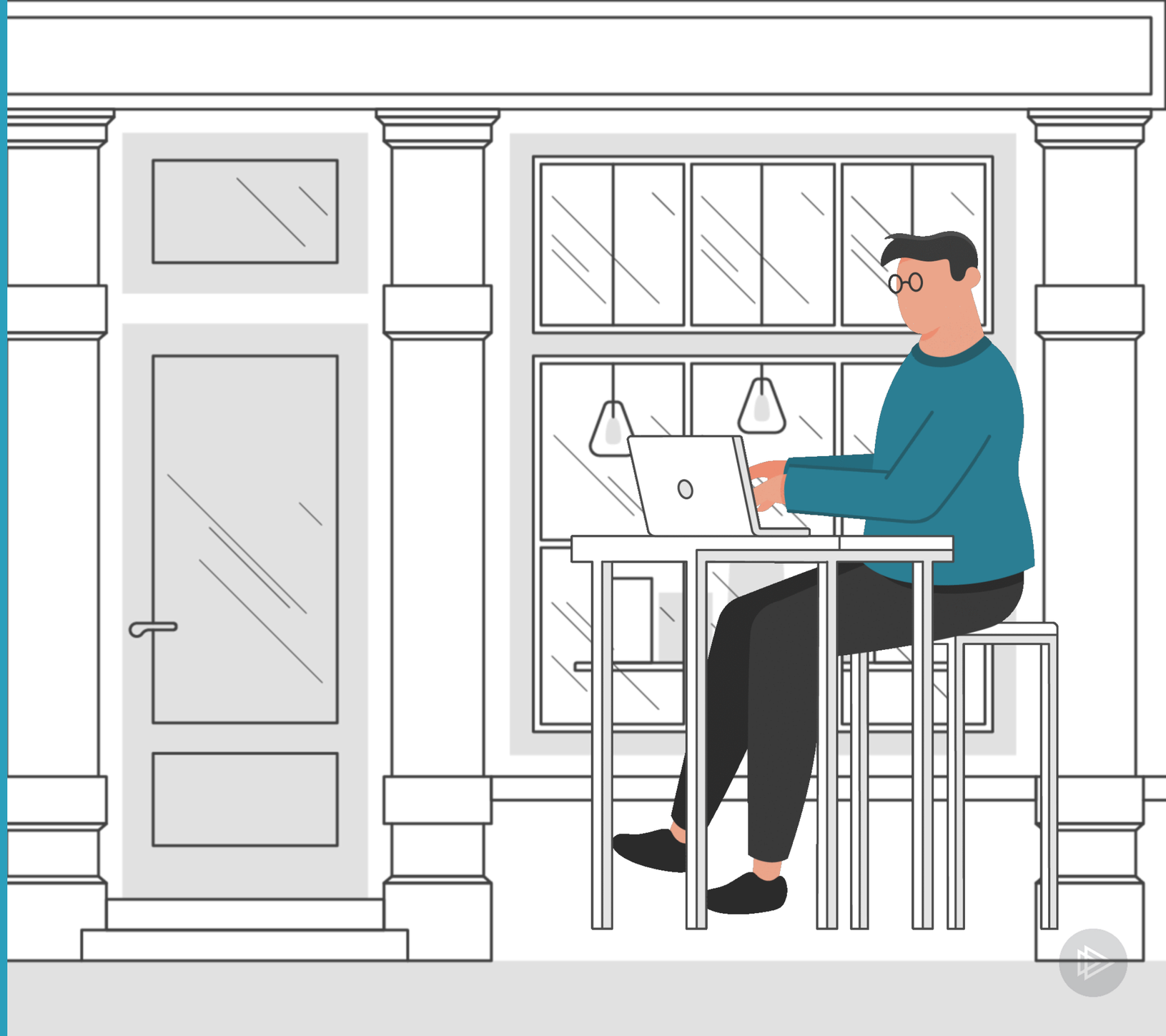


Demo



Testing Database-Driven Application

- Mark wants to write error-free code and wants to test them without needing an actual database
- Mark to test the code with a mock database by simulating SQL driver behavior



Thanks for helping us with our job!

Summary

Transactions help the database maintain to integrity of data

Stored Procedures are preferred for multiple SQL statements (operations)

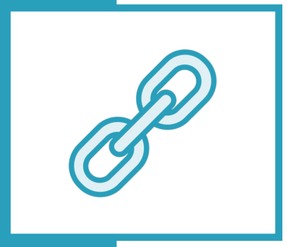
Always test database-driven applications with unit tests

Resources Reference in This Course

Go programming language documentation https://go.dev/doc/

MySQL documentation https://dev.mysql.com/doc/

Pluralsight Course Library: Search Terms : 'MySQL' and 'Go Lang'



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