Using Connection Handlers

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Contents

Introduction 1

Basic usage
  Creating an instance .................................................. 1
  Pooled connections .................................................. 1
  Querying a database .................................................. 1

Introduction

ConnectionHandler classes are R6 instances that intent to provide consistent manners to connect to relational database instances on top of DatabaseConnector utilities. These are designed for long running applications, such as Plumber APIs or Shiny applications and would generally be encapsulated in other objects (such as a DataMigrationManager).

Basic usage

Creating an instance

Creating a connection handler only requires a connection details object

```r
collectionDetails <- DatabaseConnector::createConnectionDetails("sqlite", server = "MyDb.sqlite")
collectionHandler <- ConnectionHandler$new(collectionDetails)
```

Pooled connections

In applications such as Shiny apps that require many long running or concurrent requests, pooled connections are often required. In this case, a polled connection handler should be used. Instantiation is similar to above:

```r
collectionDetails <- DatabaseConnector::createConnectionDetails("sqlite", server = "MyDb.sqlite")
collectionHandler <- PooledConnectionHandler$new(collectionDetails)
```

These classes should behave identically in terms of queries as they implement a common set of functions. See the pool::dbPool class for information regarding pooled connections.

Querying a database

Submitting queries to a database is straightforward and uses SqlRender parameterization, for example:

```r
result <- connectionHandler$setQuery("SELECT * FROM my_table WHERE id = @id", id = 1)
```

Similarly, SQL execution can occur
result <- connectionHandler$executeSql("CREATE TABLE foo (id INT);")

Note that the above queries render and translate using SqlRender functionality. Should direct querying or execution be required the functions connectionHandler$queryFunction and connectionHandler$executeFunction can be used, respectively.