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Accessing data with MySQL

This guide walks you through the process of creating a Spring application connected with a MySQL Database, as opposed to an in-memory, embedded database, which all of the other guides and many sample apps use. It uses Spring Data JPA to access the database, but this is only one of many possible choices (e.g. you could use plain Spring JDBC).

What you'll build

You'll create a MySQL database, build a Spring application and connect it with the newly created database.

> MySQL is licensed with the GPL, so any program binary that you distribute using it must use the GPL too. Refer to the GNU General Public Licence (https://www.gnu.org/licenses/gpl.html).

What you'll need

- MySQL (https://dev.mysql.com/downloads/) version 5.6 or better. If you have docker installed it might be useful to run the database as a container (https://hub.docker.com/_/mysql/).
- About 15 minutes
- A favorite text editor or IDE
- JDK 1.8 (http://www.oracle.com/technetwork/java/javase/downloads/index.html) or later
- Gradle 2.3+ (http://www.gradle.org/downloads) or Maven 3.0+ (https://maven.apache.org/download.cgi)
- You can also import the code straight into your IDE:
  - Spring Tool Suite (STS) (/guides/gs/sts)
  - IntelliJ IDEA (/guides/gs/intellij-idea/)

How to complete this guide

Like most Spring Getting Started guides (/guides), you can start from scratch and complete each step, or you can bypass basic setup steps that are already familiar to you. Either way, you end up with working code.

To **start from scratch**, move on to Build with Gradle.

To **skip the basics**, do the following:

- Download (https://github.com/spring-guides/gs-accessing-data-mysql/archive/master.zip) and unzip the source repository for this guide, or clone it using Git (/understanding/Git):
  `git clone https://github.com/spring-guides/gs-accessing-data-mysql.git (https://github.com/spring-guides/gs-accessing-data-mysql.git`
- cd into `gs-accessing-data-mysql/initial`
- Jump ahead to Create the database.

When you're finished, you can check your results against the code in `gs-accessing-data-mysql/complete`.

▶ Build with Gradle

▶ Build with Maven

▶ Build with your IDE

Create the database

Go to the terminal (command Prompt `cmd` in Microsoft Windows). Open MySQL client with a user that can create new users.

For example: On a Linux, use the command

```
$ sudo mysql --password
```