

# **Curriculum Developer's Manual**

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# Introduction

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## Overview

The *Curriculum Developer's Manual* is a quick start guide for running the *Curriculum Database Application*. This manual aims to instruct developers on the various requirements and software packages that are essential to the effective operation of our database application. In addition, this manual describes the installation process for all required software, as well as any optional packages that may provide a more user-friendly experience while utilizing our application.

# Software Requirements

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The following specifications outline the software information for which our *Curriculum Database Application* has been successfully executed. The installation instructions for these packages are defined on **Pages 5-10**.

## *Python*

|  |                              |
|--|------------------------------|
| <b>Version:</b>                            | 3.7.3                        |
| <b>Integrated Development Environment:</b> | <i>JetBrains PyCharm IDE</i> |

## *MySQL*

|                                 |                                       |
|---------------------------------|---------------------------------------|
| <b>MySQL Community Server:</b>  | version 5.7.26                        |
| <b>MySQL Connector/Python:</b>  | version 8.0.16                        |
| <b>Optional MySQL Software:</b> | <i>MySQL Workbench</i> version 8.0.16 |

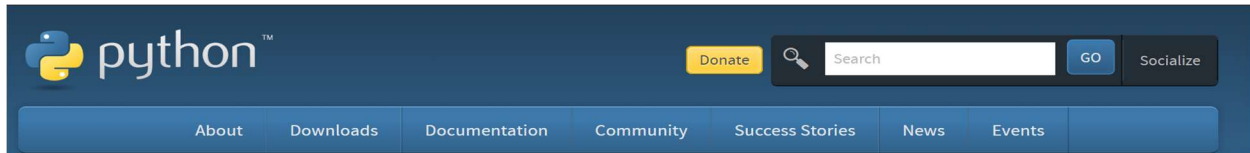
**Note:** There are many integrated development environments for which our application is compatible. Other IDEs include: *Eclipse + PyDev IDE, IDLE, etc.*

# Installation Instructions

## Python

### Location of Download:

<https://www.python.org/downloads/release/python-373/>



## Python 3.7.3

### Windows users

- The binaries for AMD64 will also work on processors that implement the Intel 64 architecture. (Also known as the "x64" architecture, and formerly known as both "EM64T" and "x86-64".)
- There are now "web-based" installers for Windows platforms; the installer will download the needed software components at installation time.
- There are redistributable zip files containing the Windows builds, making it easy to redistribute Python as part of another software package. Please see the documentation regarding [Embedded Distribution](#) for more information.

### macOS users

- For Python 3.7 releases, we provide two binary installer options for download. The default variant is 64-bit-only and works on macOS 10.9 (Mavericks) and later systems. We also continue to provide a 64-bit/32-bit variant that works on all versions of macOS from 10.6 (Snow Leopard) on. Use the 10.9 64-bit-only installer variant unless you are building Python applications that also need to work on older macOS systems. Both variants come with batteries-included versions of Tcl/Tk 8.6 for users of IDLE and other tkinter-based GUI applications; third-party and system versions of Tcl/Tk are no longer used.
- Both python.org installer variants include private copies of OpenSSL 1.1.0. Please carefully read the Important Information displayed during installation for information about SSL/TLS certificate validation and the Install Certificates.command.

1. Locate the file at the bottom of the page that corresponds to your system.

### Files

| Version   | Operating System | Description                 | MD5 Sum                          | File Size | GPG                 |
|---|------------------|-----------------------------|----------------------------------|-----------|---------------------|
| <a href="#">Gzipped source tarball</a>              | Source release   |                             | 2ee10f25e3d1b14215d56c3882486cf  | 22973527  | <a href="#">SIG</a> |
| <a href="#">XZ compressed source tarball</a>        | Source release   |                             | 93df27aec0cd18d6d42173e601ffbbfd | 17108364  | <a href="#">SIG</a> |
| <a href="#">macOS 64-bit/32-bit installer</a>       | Mac OS X         | for Mac OS X 10.6 and later | 5a95572715e0d600de28d6232c656954 | 34479513  | <a href="#">SIG</a> |
| <a href="#">macOS 64-bit installer</a>              | Mac OS X         | for OS X 10.9 and later     | 4ca0e30f48be690bfe80111daee9509a | 27839889  | <a href="#">SIG</a> |
| <a href="#">Windows help file</a>                   | Windows          |                             | 7740b11d249bca16364f4a45b40c5676 | 8090273   | <a href="#">SIG</a> |
| <a href="#">Windows x86-64 embeddable zip file</a>  | Windows          | for AMD64/EM64T/x64         | 854ac011983b4c799379a3baa3a040ec | 7018568   | <a href="#">SIG</a> |
| <a href="#">Windows x86-64 executable installer</a> | Windows          | for AMD64/EM64T/x64         | a2b79563476e9aa47f11899a53349383 | 26190920  | <a href="#">SIG</a> |
| <a href="#">Windows x86-64 web-based installer</a>  | Windows          | for AMD64/EM64T/x64         | 047d19d2569c963b8253a9b2e52395ef | 1362888   | <a href="#">SIG</a> |
| <a href="#">Windows x86 embeddable zip file</a>     | Windows          |                             | 70df01e7b0c1b7042aabb5a3c1e2fbd5 | 6526486   | <a href="#">SIG</a> |
| <a href="#">Windows x86 executable installer</a>    | Windows          |                             | ebf1644cdc1eeebacc92afa949cfc01  | 25424128  | <a href="#">SIG</a> |
| <a href="#">Windows x86 web-based installer</a>     | Windows          |                             | d3944e218a45d982f0abcd93b151273a | 1324632   | <a href="#">SIG</a> |

2. If an executable file is selected, the executable will launch an installation manager which will provide an easy interface for installing additional *Python* software.

# Installation Instructions

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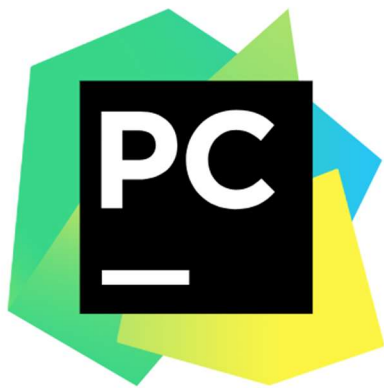
## Integrated Development Environment

### *JetBrains PyCharm IDE*

#### Location of Download:

<https://www.jetbrains.com/pycharm/download/#section=windows>

1. Select the download that corresponds to your system, and then follow the steps outlined below.



## Download PyCharm

Windows

macOS

Linux

### Professional

For both Scientific and Web Python development. With HTML, JS, and SQL support.

DOWNLOAD

Free trial

### Community

For pure Python development

DOWNLOAD

Free, open-source

### Installation Instructions

- Run the **pycharm-2019.1.1.exe** file that starts the Installation Wizard
- Follow all steps suggested by the wizard. Please pay special attention to the corresponding installation options

# Installation Instructions

## MySQL

### MySQL Community Server

#### Location of Download:

<https://dev.mysql.com/downloads/mysql/5.7.html#downloads>

1. At the bottom of the page, enter your system's specifications.

## MySQL Community Server 5.7.26

Select Version:

5.7.26

Select Operating System:

Microsoft Windows

Select OS Version:

Windows (x86, 64-bit)

2. Select to download the ZIP Archive.

ZIP Archive

5.7.26

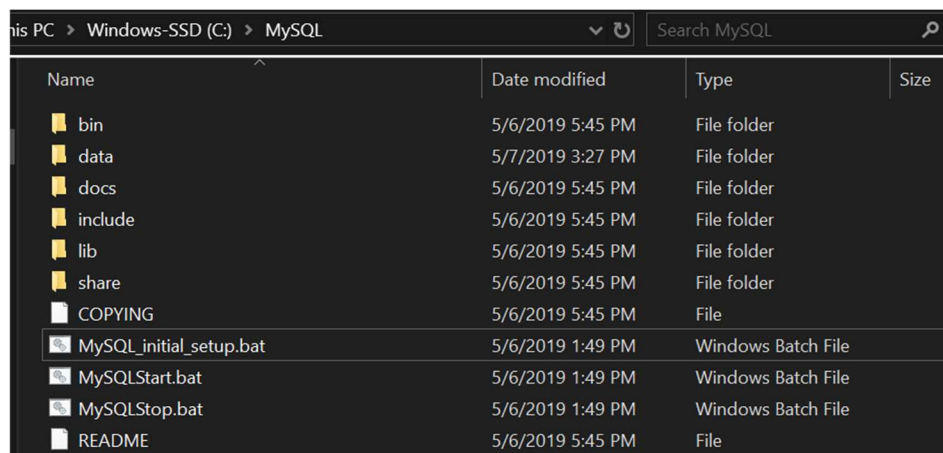
321.6M

Download

(mysql-5.7.26-winx64.zip)

MD5: 336bd3ef438d8d2324ce7f450d9b1fc2 | Signature

3. On the next page, select *No thanks, just start my download*.
4. Extract the contents of the archive into a location like other development packages on your system. Here is an example for *Windows*:



# Installation Instructions

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## MySQL

### MySQL Connector/Python

#### Location of Download:

<https://dev.mysql.com/downloads/connector/python/>

1. At the bottom of the page, enter your system's specifications.

## Connector/Python 8.0.16

Select Operating System:

Microsoft Windows ▼

Select OS Version:

Windows (x86, 64-bit) ▼

2. Select the *MSI Installer, Python 3.7*.

MSI Installer, Python 3.7

8.0.16

3.5M

[Download](#)

(mysql-connector-python-8.0.16-py3.7-windows-x86-64bit.msi)

MD5: 3dadf2914af6e463de88892d878f6b7d | [Signature](#)

3. On the next page select, *No thanks, just start my download*.
4. For further information, *MySQL* provides more in-depth installation instructions. (Located at the top of the *Download* page).

Online Documentation:

- [MySQL Connector/Python Installation Instructions](#)
- [Documentation](#)
- [MySQL Connector/Python X DevAPI Reference](#)
- [Change History](#)



# Installation Instructions

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## MySQL

### MySQL Workbench (Optional)

#### Location of Download:

<https://dev.mysql.com/downloads/workbench/>

1. At the bottom of the page, select your operating system.

## MySQL Workbench 8.0.16

Select Operating System:

Microsoft Windows ▼

2. Select to download the *Windows (x86, 64-bit), MSI Installer*.

|   |        |   |                          |
|---|--------|---|--------------------------|
| <b>Windows (x86, 64-bit), MSI Installer</b>   | 8.0.16 | 35.1M   | <a href="#">Download</a> |
| (mysql-workbench-community-8.0.16-winx64.msi) |        | MD5: 6228c775ba5f7578e411dc221d6ceab6   <a href="#">Signature</a> |                          |

3. On the next page, select *No thanks, just start my download*.
4. Follow the instructions provided by the installation manager to complete the download.

# Installation Instructions

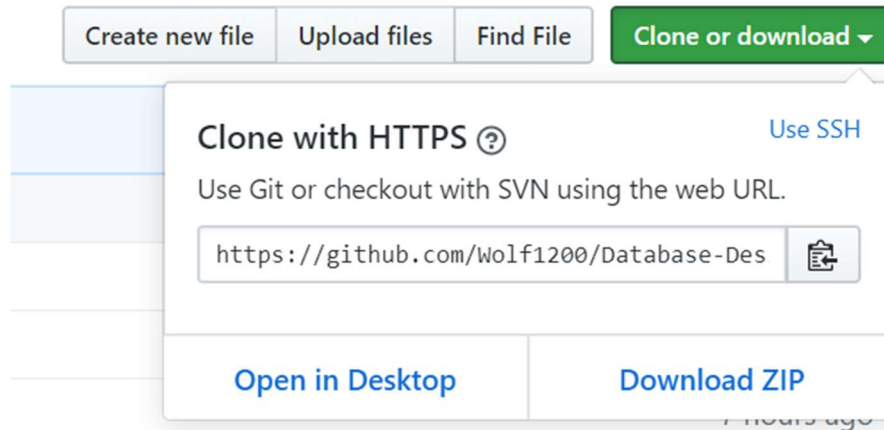
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## ***Curriculum*** Database Application

### **Location of Download/Clone:**

*<https://github.com/Wolf1200/Database-Design-Curriculum>*

1. You can either clone or download a ZIP Archive of our application.



2. Now, you can open the application in your desired development environment.

# Running Our Application

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-  [MySQLStart.bat](#)
-  [MySQLStop.bat](#)
-  [MySQL\\_initial\\_setup.bat](#)

## 1. Initialize *MySQL Community Server*

Locate the batch file *MySQL\_initial\_setup.bat*, and run to configure your *MySQL Community Server*.

## 2. Start *MySQL Community Server*

Locate the batch file *MySQLStart.bat*, and run to start your *MySQL Community Server*.

**Note:** You should see this information in the terminal window, if you run this file via the command line.

```
2019-05-07T17:32:46.110349Z 0 [Note] InnoDB: Initializing buffer pool, total size = 128M, instances = 1, chunk size = 128M
2019-05-07T17:32:46.121462Z 0 [Note] InnoDB: Completed initialization of buffer pool
2019-05-07T17:32:46.153497Z 0 [Note] InnoDB: Highest supported file format is Barracuda.
2019-05-07T17:32:46.207874Z 0 [Note] InnoDB: Creating shared tablespace for temporary tables
2019-05-07T17:32:46.208860Z 0 [Note] InnoDB: Setting file '.\ibtmp1' size to 12 MB. Physically writing the file full; Please wait ...
2019-05-07T17:32:46.224683Z 0 [Note] InnoDB: File '.\ibtmp1' size is now 12 MB.
2019-05-07T17:32:46.228693Z 0 [Note] InnoDB: 96 redo rollback segment(s) found. 96 redo rollback segment(s) are active.
2019-05-07T17:32:46.229206Z 0 [Note] InnoDB: 32 non-redo rollback segment(s) are active.
2019-05-07T17:32:46.230044Z 0 [Note] InnoDB: Waiting for purge to start
2019-05-07T17:32:46.285136Z 0 [Note] InnoDB: 5.7.26 started; log sequence number 2603081
2019-05-07T17:32:46.286184Z 0 [Note] Plugin 'FEDERATED' is disabled.
2019-05-07T17:32:46.287405Z 0 [Note] InnoDB: Loading buffer pool(s) from C:\MySQL\data\ib_buffer_pool
2019-05-07T17:32:46.298466Z 0 [Warning] Failed to set up SSL because of the following SSL library error: SSL context is not usable without certificate and private key
2019-05-07T17:32:46.301115Z 0 [Note] Server hostname (bind-address): '*'; port: 3306
2019-05-07T17:32:46.301883Z 0 [Note] IPv6 is available.
2019-05-07T17:32:46.303156Z 0 [Note] - '::' resolves to '::';
2019-05-07T17:32:46.303721Z 0 [Note] Server socket created on IP: '::'.
2019-05-07T17:32:46.313320Z 0 [Note] InnoDB: Buffer pool(s) load completed at 190507 12:32:46
2019-05-07T17:32:46.345607Z 0 [Note] Event Scheduler: Loaded 0 events
2019-05-07T17:32:46.346286Z 0 [Note] bin\mysqld: ready for connections.
Version: '5.7.26' socket: '' port: 3306 MySQL Community Server (GPL)
```

# Running Our Application

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## 3. Run our *Curriculum* Database Application

After successfully launching the *MySQL Community Server*, you can now launch our *Curriculum* Database Application.

**Note:** Create a username, password, and database for the default user as follows:

|                       |                   |
|-----------------------|-------------------|
| <b>Username:</b>      | <i>testUser</i>   |
| <b>Password:</b>      | <i>SicEmBears</i> |
| <b>Database Name:</b> | <i>Curriculum</i> |

## 4. Stop *MySQL Community Server*

After you have finished using our *Curriculum* Database Application, be sure to stop your *MySQL Community Server* connection by executing the batch file *MySQLStop.bat*.

**Note:** You should see this information in the terminal window, if you run this file via the command line.

```
2019-05-07T20:27:43.293847Z 0 [Note] InnoDB: Starting shutdown...
2019-05-07T20:27:43.395127Z 0 [Note] InnoDB: Dumping buffer pool(s) to C:\MySQL\data\ib_buffer_pool
2019-05-07T20:27:43.403462Z 0 [Note] InnoDB: Buffer pool(s) dump completed at 190507 15:27:43
2019-05-07T20:27:44.642981Z 0 [Note] InnoDB: Shutdown completed; log sequence number 2603109
2019-05-07T20:27:44.643601Z 0 [Note] InnoDB: Removed temporary tablespace data file: "ibtmp1"
2019-05-07T20:27:44.644003Z 0 [Note] Shutting down plugin 'MEMORY'
2019-05-07T20:27:44.644595Z 0 [Note] Shutting down plugin 'CSV'
2019-05-07T20:27:44.645074Z 0 [Note] Shutting down plugin 'sha256_password'
2019-05-07T20:27:44.645580Z 0 [Note] Shutting down plugin 'mysql_native_password'
2019-05-07T20:27:44.646082Z 0 [Note] Shutting down plugin 'binlog'
2019-05-07T20:27:44.647075Z 0 [Note] bin\mysqld: Shutdown complete
```

# Credits

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## Our Development Team

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