

Curriculum Developer's Manual

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Introduction

Overview

The 'Curriculum Developer's 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

Note

The following software specifications outline the software information for which our 'Curriculum' Database Application has been successfully executed. The installation instructions for these packages are defined on the following page.

Python

Version Information:	3.7.3
Integrated Development Environment:	Eclipse PyDev IDE

MySQL

MySQL Community Server:	version 5.7.26
MySQL Connector/Python:	version 8.0.16
Optional MySQL Software:	MySQL Workbench version 8.0.16

Installation Instructions

Python

Location of Download:

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

Located at the bottom of the page are the files for download. Choose the file that corresponds to your system. The download launches an installation manager which will effectively walk you through the installation process, while also presenting optional software to download.

Files

Version	Operating System	Description	MD5 Sum	File Size	GPG
Gzipped source tarball	Source release		2ee10f25e3d1b14215d56c3882486fcf	22973527	SIG
XZ compressed source tarball	Source release		93df27aec0cd18d6d42173e601ffbafd	17108364	SIG
macOS 64-bit/32-bit installer	Mac OS X	for Mac OS X 10.6 and later	5a95572715e0d600de28d6232c656954	34479513	SIG
macOS 64-bit installer	Mac OS X	for OS X 10.9 and later	4ca0e30f48be690bfe80111daee9509a	27839889	SIG
Windows help file	Windows		7740b11d249bca16364f4a45b40c5676	8090273	SIG
Windows x86-64 embeddable zip file	Windows	for AMD64/EM64T/x64	854ac011983b4c799379a3baa3a040ec	7018568	SIG
Windows x86-64 executable installer	Windows	for AMD64/EM64T/x64	a2b79563476e9aa47f11899a53349383	26190920	SIG
Windows x86-64 web-based installer	Windows	for AMD64/EM64T/x64	047d19d2569c963b8253a9b2e52395ef	1362888	SIG
Windows x86 embeddable zip file	Windows		70df01e7b0c1b7042aabb5a3c1e2fbd5	6526486	SIG
Windows x86 executable installer	Windows		ebf1644cdc1eeebacc92afa949cfc01	25424128	SIG
Windows x86 web-based installer	Windows		d3944e218a45d982f0abcd93b151273a	1324632	SIG

Integrated Development Environments:

Eclipse PyDev IDE

Location of Download:

<https://www.pydev.org/download.html>

The link provided above is where you will find the PyDev development environment as a plugin if you already have the Eclipse IDE, as well as a full installation of the Eclipse IDE with PyDev. In addition, there is a thorough installation guide for each installation process.

URLs for PyDev as Eclipse plugin

Urls to use when updating with the Eclipse update manager:

Latest version:

- <http://www.pydev.org/updates>

Nightly builds:

- <http://www.pydev.org/nightly>

Browse other versions (**open in browser to select URL for Eclipse**):

- http://www.pydev.org/update_sites

Get zip releases

- [SourceForge download](#)

Installation Instructions

Integrated Development Environments:

PyCharm IDE

Location of Download:

<https://www.jetbrains.com/pycharm/>

The link provided above is where you will find the PyCharm IDE download. By selecting the 'Download' button at the top of the page, JetBrains will launch the PyCharm installation manager, which will guide you through the installation and configuration process.

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[Download](#)



Installation Instructions

MySQL

MySQL Community Server

Location of Download:

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

Extract the ZIP Archive to a location of your choosing. Recommended to unpack in the location with other development packages. Below is an example of where to place the contents of the ZIP Archive for the Windows Operating System.

MySQL Community Server 5.7.26

Select Version:

Select Operating System:

Select OS Version:

ZIP Archive	5.7.26	321.6M	Download
(mysql-5.7.26-winx64.zip)		MD5: 336bd3ef438d8d2324ce7f450d9b1fc2 Signature	

This PC > Windows-SSD (C:) > MySQL					Search MySQL	
	Name	Date modified	Type	Size		
	bin	5/6/2019 5:45 PM	File folder			
	data	5/7/2019 12:32 PM	File folder			
	docs	5/6/2019 5:45 PM	File folder			
	include	5/6/2019 5:45 PM	File folder			
	lib	5/6/2019 5:45 PM	File folder			
	share	5/6/2019 5:45 PM	File folder			
	COPYING	5/6/2019 5:45 PM	File			
	MySQL server setup.docx	5/6/2019 1:49 PM	DOCX File			
	MySQL_initial_setup.bat	5/6/2019 1:49 PM	Windows Batch File			
	MySQLStart.bat	5/6/2019 1:49 PM	Windows Batch File			
	MySQLStop.bat	5/6/2019 1:49 PM	Windows Batch File			
	README	5/6/2019 5:45 PM	File			

Installation Instructions

MySQL

MySQL Connector/Python

Location of Download:

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

Connector/Python 8.0.16

Select Operating System:

Microsoft Windows ▼

Select OS Version:

Windows (x86, 64-bit) ▼

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](#)

MySQL Workbench (Optional)

Location of Download:

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

Although this application is not necessary for using our 'Curriculum' Database Application, it provides a graphical user interface (GUI) for interacting with the MySQL Database, which our application utilizes.

Windows (x86, 64-bit), MSI Installer

8.0.16

35.1M

Download

(mysql-workbench-community-8.0.16-winx64.msi)

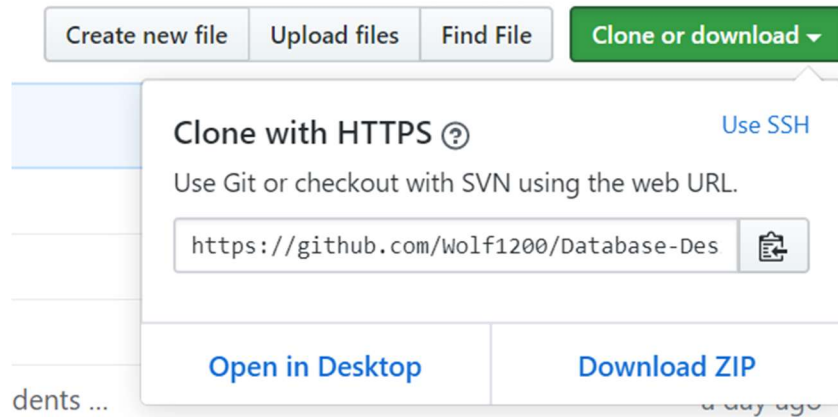
MD5: 6228c775ba5f7578e411dc221d6ceab6 | [Signature](#)

Installation Instructions

Curriculum Database Application

Location of Download/Clone:

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



Running Our Application

1. Initialize/Start MySQL Community Server

In order to run our application, you must first initialize and start the MySQL Community Server. This can be done by executing the 'MySQL_initial_setup.bat' file followed by the 'MySQLStart.bat' file, both can be found with the other Curriculum Database Application files at the previously mentioned GitHub URL. (See Installation Instructions above). You should see this information in the terminal window.

```
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)
```

2. Run the Curriculum Application

After successfully launching the MySQL Community Server, you can now launch our Curriculum Database Application, which can be done through an Integrated Development Environment or via the command line.

3. Stop MySQL Community Server

After you have finished using our application be sure to stop the MySQL Community Server by executing the 'MySQLStop.bat' file, which can be found with the other Curriculum Database Application files at the previously mentioned GitHub URL. (See Installation Instructions above). You should see this information in the terminal window.

```
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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