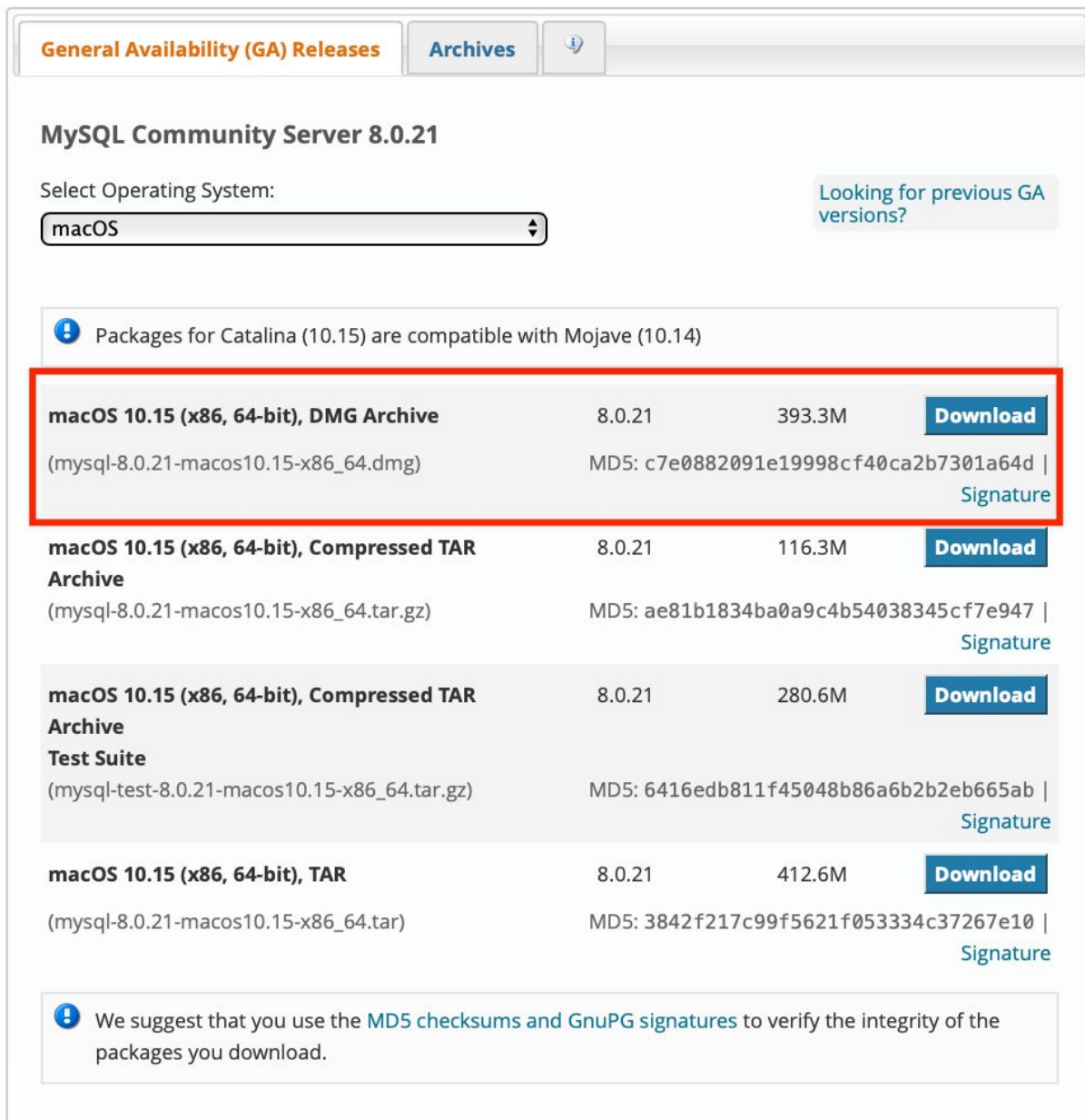


MySQL Installation Guide (OS X)

Step1- Install MySQL

Go to MySQL download page (<http://dev.mysql.com/downloads/mysql/>). Download the **DMG archive** version. Select the correct installer based on your system.



The screenshot shows the MySQL Community Server 8.0.21 download page. The 'General Availability (GA) Releases' tab is selected. The operating system is set to 'macOS'. A note indicates that packages for Catalina (10.15) are compatible with Mojave (10.14). The download options are listed in a table:

Package Name	Version	Size	Action
macOS 10.15 (x86, 64-bit), DMG Archive (mysql-8.0.21-macos10.15-x86_64.dmg)	8.0.21	393.3M	Download
macOS 10.15 (x86, 64-bit), Compressed TAR Archive (mysql-8.0.21-macos10.15-x86_64.tar.gz)	8.0.21	116.3M	Download
macOS 10.15 (x86, 64-bit), Compressed TAR Archive Test Suite (mysql-test-8.0.21-macos10.15-x86_64.tar.gz)	8.0.21	280.6M	Download
macOS 10.15 (x86, 64-bit), TAR (mysql-8.0.21-macos10.15-x86_64.tar)	8.0.21	412.6M	Download

MD5 checksums and GnuPG signatures are provided for each package. A note at the bottom suggests using MD5 checksums and GnuPG signatures to verify the integrity of the packages.

If the website asks you to login, you can just ignore it by clicking the left bottom link.

Login Now or Sign Up for a free account.

An Oracle Web Account provides you with the following advantages:

- Fast access to MySQL software downloads
- Download technical White Papers and Presentations
- Post messages in the MySQL Discussion Forums
- Report and track bugs in the MySQL bug system

Login »
using my Oracle Web account

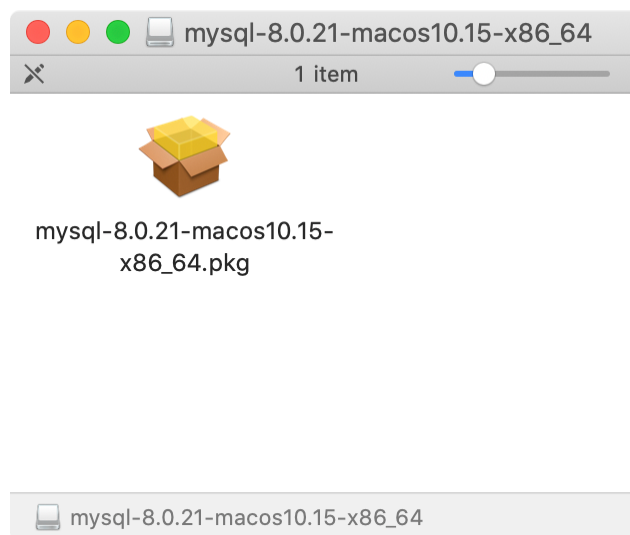
Sign Up »
for an Oracle Web account

MySQL.com is using Oracle SSO for authentication. If you already have an Oracle Web account, click the Login link. Otherwise, you can signup for a free account by clicking the Sign Up link and following the instructions.

No thanks, just start my download.

The following description is based on MySQL 8.0.21 for macOS.

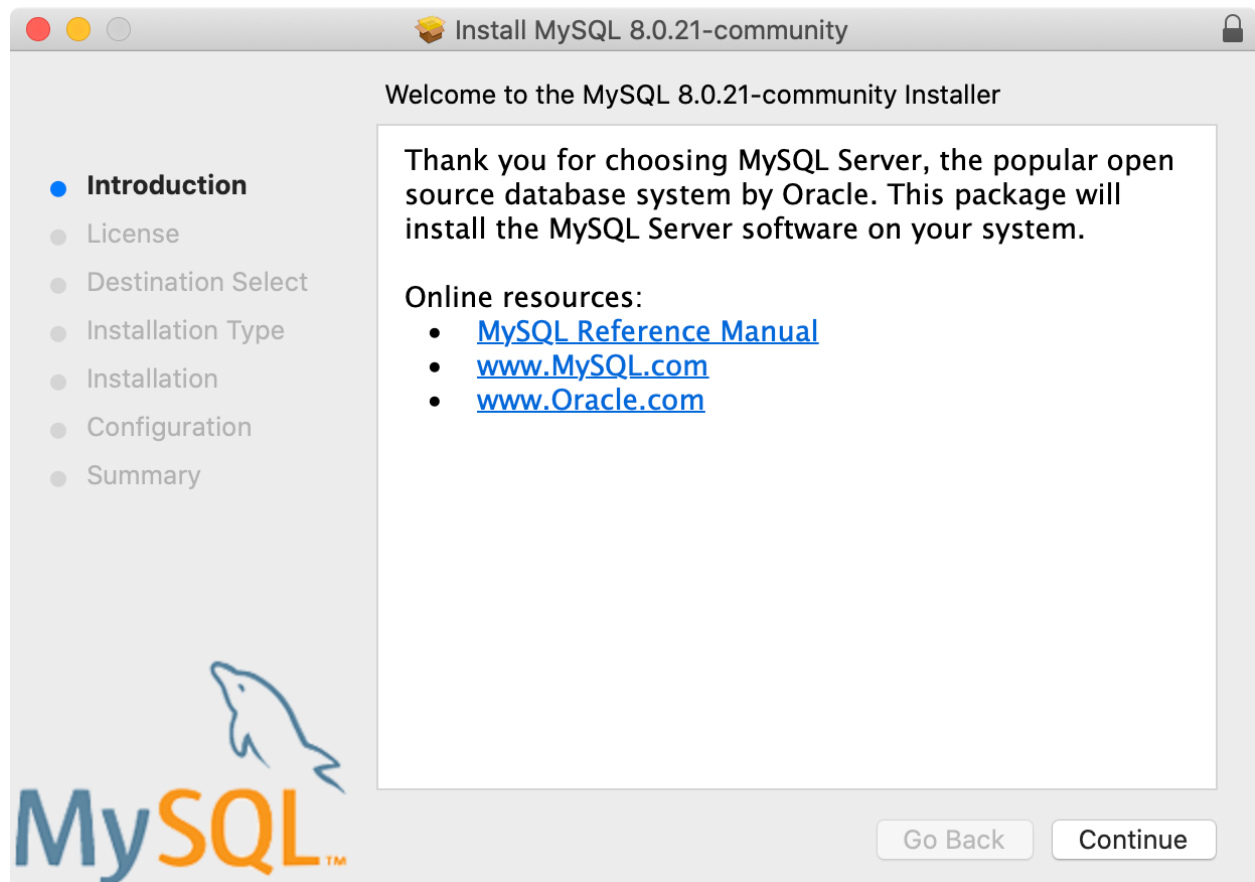
1. Open the downloaded image.



2. Double click the file and install mysql. Using the default setting in the installation process.

For detailed information, refer to the following page.

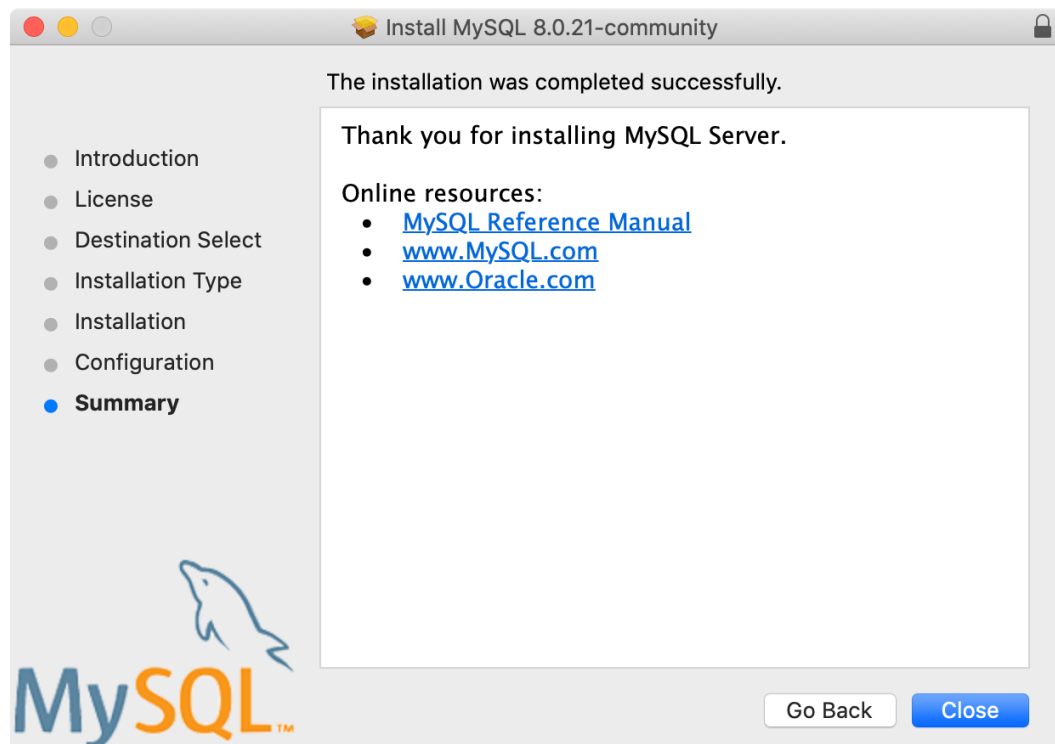
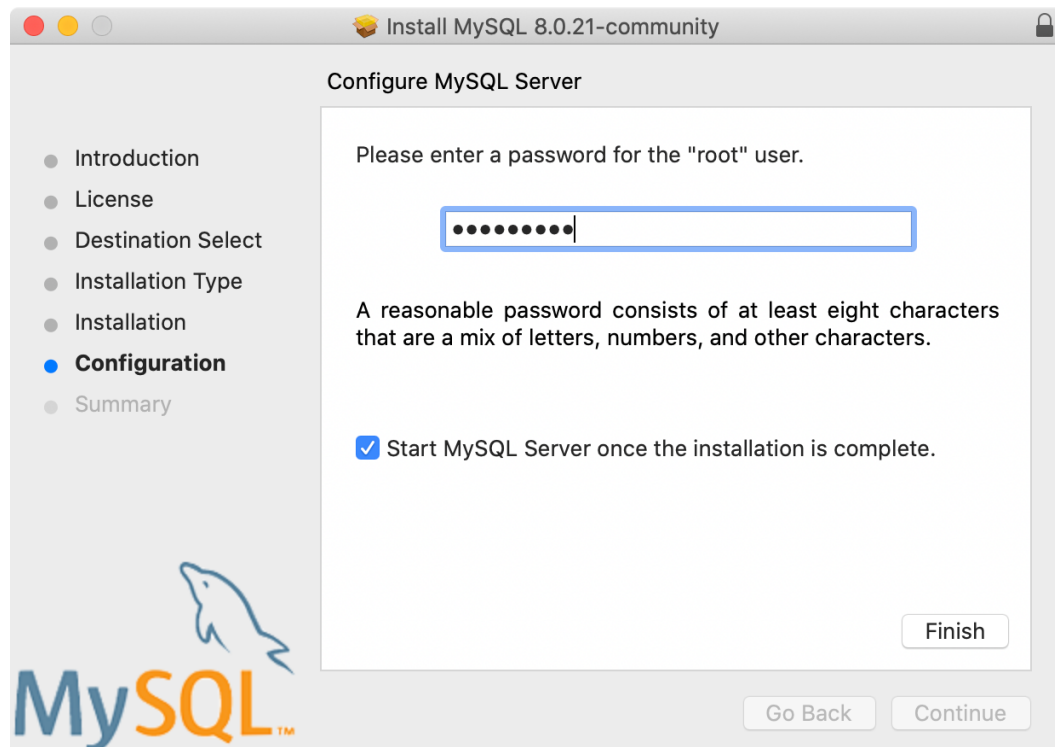
<http://dev.mysql.com/doc/refman/8.0/en/osx-installation-pkg.html>



3. MySQL introduced a stronger authentication method. For new MySQL users, you may choose the 1st option. **If you are on High Sierra, you should choose the 2nd.**



4. When you see the following pop-up, **please write down root password somewhere while you're creating one**. You need to create a root password and make sure that you keep track of this password.

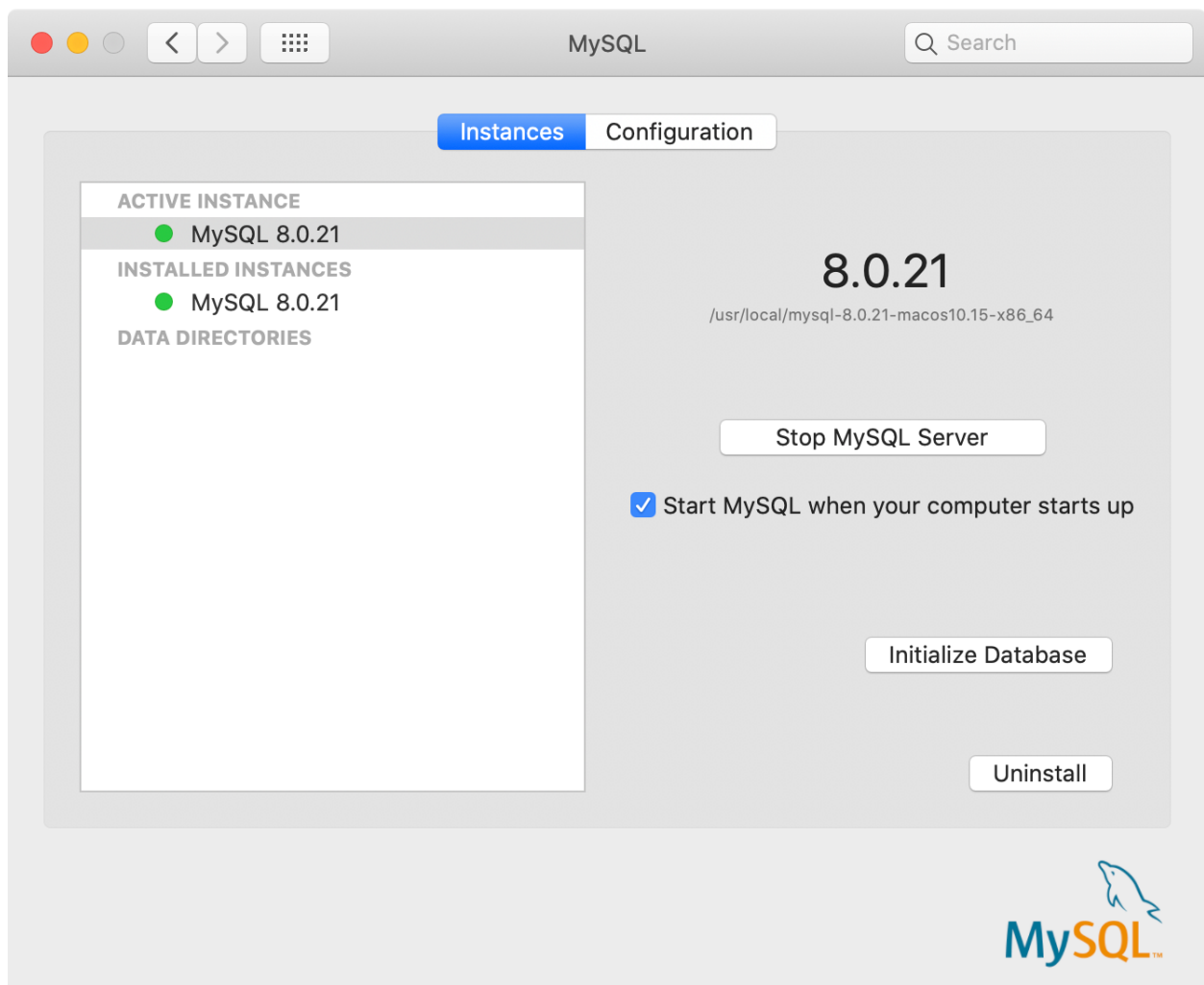


4. After the installation is finished, you can see the MySQL icon in '**System Preferences**'.



It will be running once it is installed successfully.

If you want to automatically start it whenever the machine is up, check **“Start MySQL when your computer starts up”**.



5. To verify that you have installed MySQL successfully, try to enter the following command in your command line.

mysql -u root -p

If your terminal cannot recognize command 'mysql', try the following command:

/usr/local/mysql/bin/mysql -u root -p

Enter password: **type your password here and press Enter**. If you see the following screen, that means MySQL is installed successfully.

```
lyh@bogon ~ % /usr/local/mysql/bin/mysql -u root -p
Enter password:
Welcome to the MySQL monitor.  Commands end with ; or \g.
Your MySQL connection id is 9
Server version: 8.0.21 MySQL Community Server - GPL

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affiliates. Other names may be trademarks of their respective
owners.

Type 'help;' or '\h' for help. Type '\c' to clear the current input statement.

mysql> █
```

After connecting to mysql, you can use this terminal to dive into your databases and there are several command lines you might want to use: <https://dev.mysql.com/doc/refman/8.0/en/mysql-commands.html>. But usually we will use other tools to manipulate our databases and execute sqls. Terminal is not the best way to use databases.

Step2- Install MySQL Workbench


1. Download the MySQL workbench by visiting the download site (<http://dev.mysql.com/downloads/workbench/>). Download the DMG archive version.

Select the correct installer **based on your system** and download it.

MySQL Workbench 8.0.19

Select Operating System:

macOS

 Packages for Catalina (10.15) are compatible with Mojave (10.14)

macOS (x86, 64-bit), DMG Archive	8.0.19	108.9M	Download
(mysql-workbench-community-8.0.19-macos-x86_64.dmg)	MD5: 5940eba3112256d7e6b36ea9edaac830 Signature		

 We suggest that you use the [MD5 checksums](#) and [GnuPG signatures](#) to verify the integrity of the packages you download.

If your system is not the latest version, for example, High Sierra, then the latest version doesn't support your system. You probably need to download an older version.

(1) Click Archives on the top.

General Availability (GA) Releases

Archives



MySQL Workbench 8.0.21

Select Operating System:

macOS

 Packages for Catalina (10.15) are compatible with Mojave (10.14)

macOS (x86, 64-bit), DMG Archive	8.0.21	106.2M	Download
(mysql-workbench-community-8.0.21-macos-x86_64.dmg)	MD5: 4d43349a6a69c601b5fb5131fdd12274 Signature		

 We suggest that you use the [MD5 checksums](#) and [GnuPG signatures](#) to verify the integrity of the packages you download.

(2) Try to use the version of 6.3.10.

Product Version:

Operating System:

Product Version	Release Date	Size	Action
macOS (x86, 64-bit), DMG Archive	Nov 9, 2017	97.5M	Download

mysql-workbench-community-6.3.10-macos-x86_64.dmg MD5: 4ad59ce1e00ab51fe33e23131cda29ce | [Signature](#)

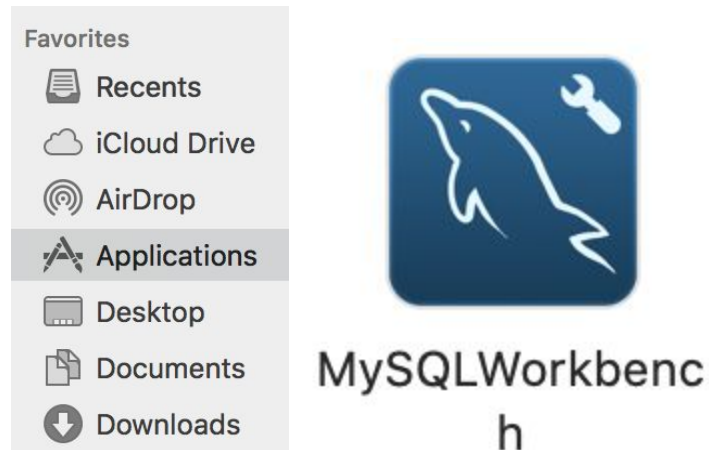
We suggest that you use the [MD5 checksums](#) and [GnuPG signatures](#) to verify the integrity of the packages you download.

MySQL open source software is provided under the [GPL License](#).

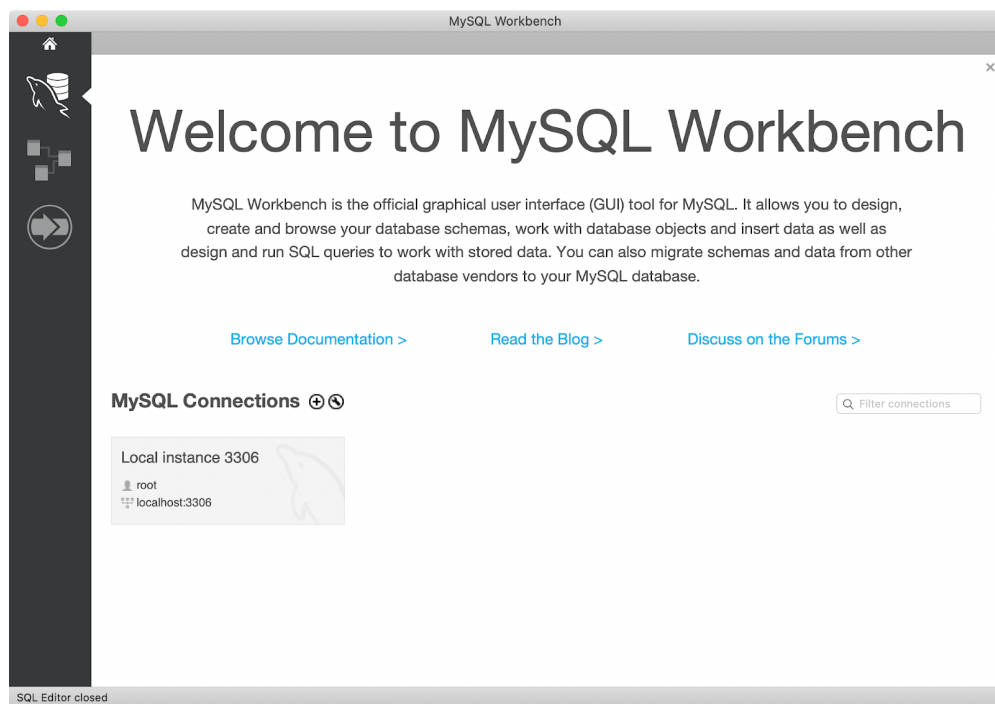
2. Open the image that you just downloaded. You will see the following.



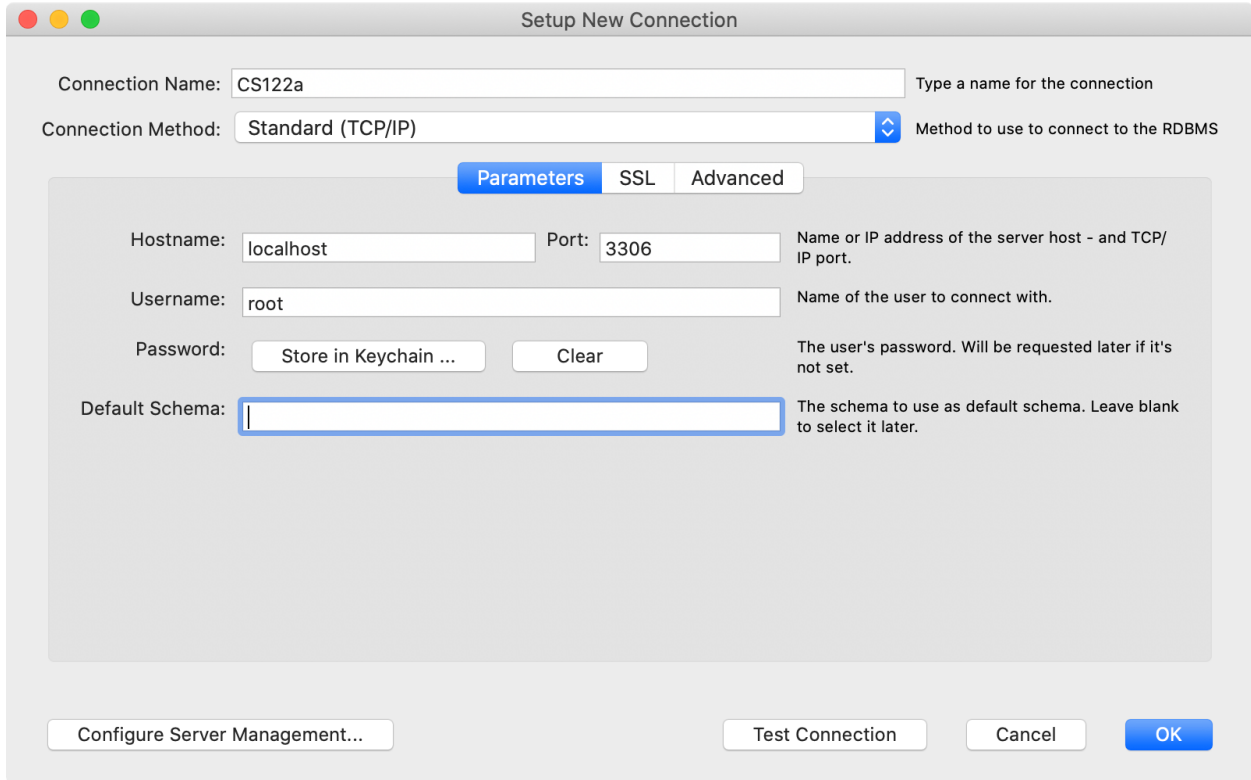
3. Drag the MySQL Workbench icon to the Applications folder.
4. In the Applications folder, you can see the MySQL Workbench. Execute it.



5. The following window will appear. Click on the '+' sign to set up a new connection. If you can see the default connection, you can use it instead of creating a new one.



6. Give the connection a name (e.g., cs122a). Click the “Store in Keychain...” button to put the root password.



The screenshot shows the 'Setup New Connection' dialog box. At the top, the title bar reads 'Setup New Connection'. Below it, there are two main sections. The first section contains 'Connection Name' with the text 'CS122a' and a placeholder 'Type a name for the connection', and 'Connection Method' set to 'Standard (TCP/IP)' with a placeholder 'Method to use to connect to the RDBMS'. Below these are three tabs: 'Parameters' (selected), 'SSL', and 'Advanced'. The 'Parameters' tab contains four fields: 'Hostname' with 'localhost', 'Port' with '3306', 'Username' with 'root', and 'Password' with a 'Store in Keychain ...' button and a 'Clear' button. To the right of these fields are explanatory text labels. At the bottom of the dialog are four buttons: 'Configure Server Management...', 'Test Connection', 'Cancel', and 'OK'.

Connection Name: CS122a Type a name for the connection

Connection Method: Standard (TCP/IP) Method to use to connect to the RDBMS

Parameters SSL Advanced

Hostname: localhost Port: 3306 Name or IP address of the server host - and TCP/IP port.

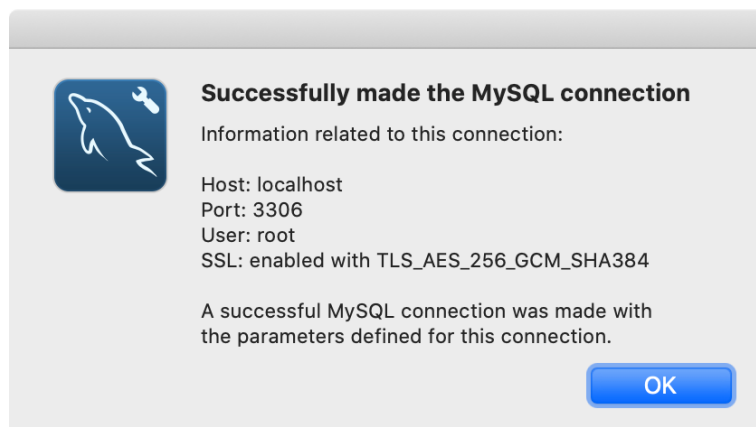
Username: root Name of the user to connect with.

Password: Store in Keychain ... Clear The user's password. Will be requested later if it's not set.

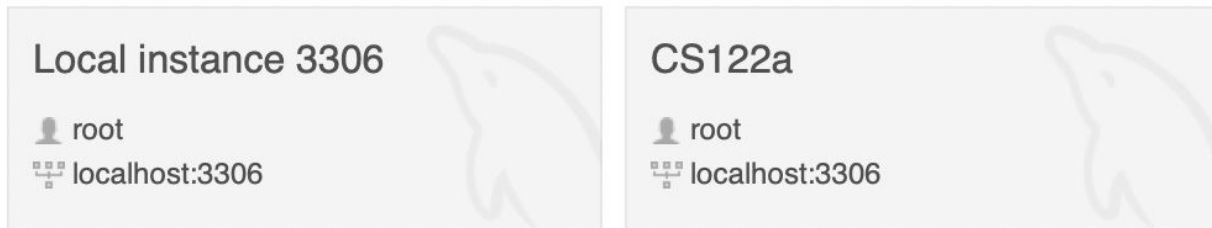
Default Schema: The schema to use as default schema. Leave blank to select it later.

Configure Server Management... Test Connection Cancel OK

7. Click on “Test Connection” and type in your password. You will see the following message window. Click OK.



8. Click OK to close the “Setup New Connection” window. Now, you should see the new connection that you just created. Click it to start.



Step3- Create a Database and Tables, and Insert tuples

Given below is the schema for the example data. There are three tables.

- Boats (bid, bname, color)
- Reserves (sid, bid, date)
- Sailors (sid, sname, rating, age)

The field types are as follows:

bid: INTEGER, bname: VARCHAR, color: VARCHAR,

sid: INTEGER, bid: INTEGER, date: date,

sname: VARCHAR, rating: INTEGER, age: DECIMAL

Also, there are Boats2, Reserves2, and Sailors2 tables. These will contain slightly different data on the same schema to help you to practice SQL statements.

The following scripts will be used to create the schema named “cs122a”, three tables, and populate some data. **The script is also available on the class Web page. So do not copy and paste the following code since copying a text from this PDF file may not work well.**

```
-- The Begin of the script
CREATE DATABASE IF NOT EXISTS `cs122a` DEFAULT CHARACTER SET latin1;
USE `cs122a`;
```

```
-- Table structure for table `Boats`
DROP TABLE IF EXISTS `Boats`;
CREATE TABLE `Boats` (
  `bid` int(11) NOT NULL,
  `bname` varchar(45) DEFAULT NULL,
```

```
`color` varchar(15) DEFAULT NULL,  
PRIMARY KEY (`bid`)  
) ENGINE=InnoDB DEFAULT CHARSET=latin1;
```

```
-- Dumping data for table `Boats`  
ALTER TABLE `Boats` DISABLE KEYS;  
INSERT INTO `Boats` VALUES  
(101,'Interlake','blue'),(102,'Interlake','red'),(103,'Clipper','green'),(104,'Marine','red');  
ALTER TABLE `Boats` ENABLE KEYS;
```

```
-- Table structure for table `Boats2`  
DROP TABLE IF EXISTS `Boats2`;  
CREATE TABLE `Boats2` (  
  `bid` int(11) NOT NULL,  
  `bname` varchar(45) DEFAULT NULL,  
  `color` varchar(15) DEFAULT NULL,  
  PRIMARY KEY (`bid`)  
) ENGINE=InnoDB DEFAULT CHARSET=latin1;
```

```
-- Dumping data for table `Boats2`  
ALTER TABLE `Boats2` DISABLE KEYS;  
INSERT INTO `Boats2` VALUES  
(103,'Clipper','green'),(104,'Marine','red'),(105,'InterClipper','blue'),(106,'InterMarine','red');  
ALTER TABLE `Boats2` ENABLE KEYS;
```

```
-- Table structure for table `Reserves`  
DROP TABLE IF EXISTS `Reserves`;  
CREATE TABLE `Reserves` (  
  `sid` int(11) DEFAULT NULL,  
  `bid` int(11) DEFAULT NULL,  
  `date` date DEFAULT NULL  
) ENGINE=InnoDB DEFAULT CHARSET=latin1;
```

```
-- Dumping data for table `Reserves`  
ALTER TABLE `Reserves` DISABLE KEYS;  
INSERT INTO `Reserves` VALUES  
(22,101,'1998-10-10'),(22,102,'1998-10-10'),(22,103,'1998-10-08'),(22,104,'1998-10-07'),(31,102,'1998-10-10'),(31,103,'1998-11-06'),(31,104,'1998-11-12'),(64,101,'1998-09-05'),(64,102,'1998-09-08'),(74,103,'1998-09-08'),(NULL,103,'1998-09-09'),(1,NULL,'2001-01-11'),(1,NULL,'2002-02-02');  
ALTER TABLE `Reserves` ENABLE KEYS;
```

```
-- Table structure for table `Reserves`  
DROP TABLE IF EXISTS `Reserves2`;  
CREATE TABLE `Reserves2` (  
  `sid` int(11) DEFAULT NULL,  
  `bid` int(11) DEFAULT NULL,  
  `date` date DEFAULT NULL
```

```
) ENGINE=InnoDB DEFAULT CHARSET=latin1;
```

```
-- Dumping data for table `Reserves2`  
ALTER TABLE `Reserves2` DISABLE KEYS;  
INSERT INTO `Reserves2` VALUES  
(22,103,'1998-10-10'),(22,104,'1998-10-10'),(22,105,'1998-10-08'),(22,106,'1998-10-07'),(31,103,'1998-1  
1-10'),(31,104,'1998-11-06'),(31,105,'1998-11-12'),(64,104,'1998-09-05'),(64,105,'1998-09-08'),(74,105,'  
1998-09-08'),(NULL,104,'1998-09-09'),(108,NULL,'2001-01-11'),(108,NULL,'2002-02-02');  
ALTER TABLE `Reserves2` ENABLE KEYS;
```

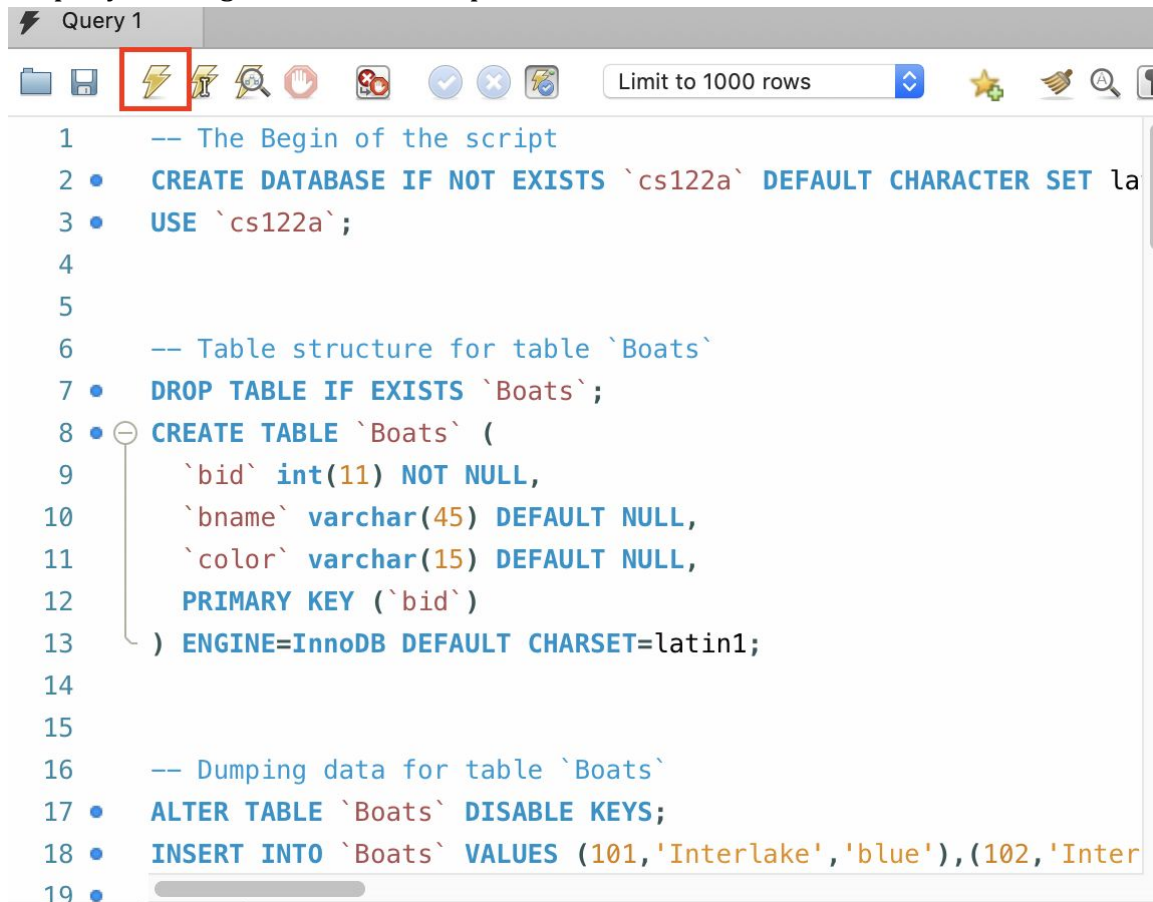
```
-- Table structure for table `Sailors`  
DROP TABLE IF EXISTS `Sailors` ;  
CREATE TABLE `Sailors` (  
  `sid` int(11) NOT NULL,  
  `sname` varchar(45) NOT NULL,  
  `rating` int(11) DEFAULT NULL,  
  `age` decimal(5,1) DEFAULT NULL,  
  PRIMARY KEY (`sid`)  
) ENGINE=InnoDB DEFAULT CHARSET=latin1;
```

```
-- Dumping data for table `Sailors`  
ALTER TABLE `Sailors` DISABLE KEYS;  
INSERT INTO `Sailors` VALUES  
(22,'Dustin',7,45.0),(29,'Brutus',1,33.0),(31,'Lubber',8,55.5),(32,'Andy',8,25.5),(58,'Rusty',10,35.0),(64,'H  
oratio',7,35.0),(71,'Zorba',10,16.0),(74,'Horatio',9,35.0),(85,'Art',4,25.5),(95,'Bob',3,63.5),(101,'Joan',3,N  
ULL),(107,'Johannes',NULL,35.0);  
ALTER TABLE `Sailors` ENABLE KEYS;
```

```
-- Table structure for table `Sailors2`  
DROP TABLE IF EXISTS `Sailors2` ;  
CREATE TABLE `Sailors2` (  
  `sid` int(11) NOT NULL,  
  `sname` varchar(45) NOT NULL,  
  `rating` int(11) DEFAULT NULL,  
  `age` decimal(5,1) DEFAULT NULL,  
  PRIMARY KEY (`sid`)  
) ENGINE=InnoDB DEFAULT CHARSET=latin1;
```

```
-- Dumping data for table `Sailors2`  
ALTER TABLE `Sailors2` DISABLE KEYS;  
INSERT INTO `Sailors2` VALUES  
(22,'Dustin',7,45.0),(31,'Lubber',8,55.5),(64,'Horatio',7,35.0),(71,'Zorba',10,16.0),(74,'Horatio',9,35.0),(85  
,,'Art',4,25.5),(95,'Bob',3,63.5),(101,'Joan',3,NULL),(107,'Johannes',NULL,35.0),(108,'Sandy',NULL,36.0),(1  
09,'James',5,38.0);  
ALTER TABLE `Sailors2` ENABLE KEYS;  
-- The end of the script
```

1. In Query 1, download the above script and copy and paste the content from the file. If you can't see the "Query 1" tab, create one by clicking File -> New Query Tab. Execute the script by clicking "the thunder shaped icon".



```
1  -- The Begin of the script
2  • CREATE DATABASE IF NOT EXISTS `cs122a` DEFAULT CHARACTER SET latin1;
3  • USE `cs122a`;
4
5
6  -- Table structure for table `Boats`
7  • DROP TABLE IF EXISTS `Boats`;
8  • CREATE TABLE `Boats` (
9      `bid` int(11) NOT NULL,
10     `bname` varchar(45) DEFAULT NULL,
11     `color` varchar(15) DEFAULT NULL,
12     PRIMARY KEY (`bid`)
13 ) ENGINE=InnoDB DEFAULT CHARSET=latin1;
14
15
16 -- Dumping data for table `Boats`
17 • ALTER TABLE `Boats` DISABLE KEYS;
18 • INSERT INTO `Boats` VALUES (101,'Interlake','blue'),(102,'Interlake','blue');
19 •
```

2. Go to the "schemas" panel on the left. Click the "Refresh" button and you will see the "cs122a" schema and its Tables.

cs122a_project

Administration Schemas Query 1

SCHEMAS

Filter objects

- ▼ cs122a
 - ▶ Tables
 - Views
 - Stored Procedures
 - Functions
- ▶ sys

```
1  -- The Begin o
2  • CREATE DATABAS
3  • USE `cs122a`;
4
5
6  -- Table struc
7  • DROP TABLE IF
8  • CREATE TABLE `
9      `bid` int(11
10     `bname` varc
```


cs122a_project

Administration Schemas Query 1

SCHEMAS

Filter objects

cs122a

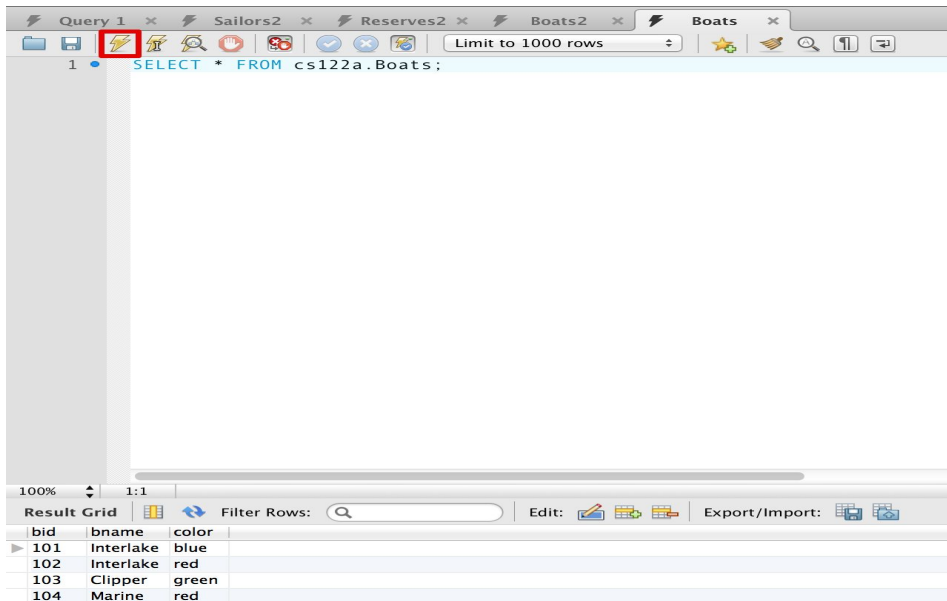
- Tables
- Views
- Stored Procedures
- Functions

sys

```
1 -- The Begin of the script
2 • CREATE DATABASE IF NOT EXISTS `cs122a`;
3 • USE `cs122a`;
4
5
6 -- Table structure for table `Boats`
7 • DROP TABLE IF EXISTS `Boats`;
8 • CREATE TABLE `Boats` (
9     `bid` int(11) NOT NULL,
10    `bname` varchar(45) DEFAULT NULL,
11    `color` varchar(15) DEFAULT NULL,
12    PRIMARY KEY (`bid`)
```

Step4- SQL queries

1. In order to form queries, type in the query in the 'Query' tab and click on the thunder shaped icon. You can execute the following query by choosing "File" -> "New Query Tab", type "SELECT * FROM cs122a.Boats;", and then click on the thunder shaped icon. You will see your results in the box below.



2. (optional) You can export the result into a CSV file.

