

# MySQL Installation Guide (macOS)

## 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.

### MySQL Community Downloads

MySQL Community Server

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## MySQL Community Server 8.0.30

Select Operating System:

Select OS Version:

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Packages for Monterey (12) are compatible with Big Sur (11)

|                                                                                                               |        |        |                          |
|---------------------------------------------------------------------------------------------------------------|--------|--------|--------------------------|
| <b>macOS 12 (ARM, 64-bit), DMG Archive</b><br>(mysql-8.0.30-macos12-arm64.dmg)                                | 8.0.30 | 448.8M | <a href="#">Download</a> |
| MD5: 355ee1de7693416e711dfe24e1f1564d   <a href="#">Signature</a>                                             |        |        |                          |
| <b>macOS 12 (x86, 64-bit), DMG Archive</b><br>(mysql-8.0.30-macos12-x86_64.dmg)                               | 8.0.30 | 455.4M | <a href="#">Download</a> |
| MD5: f5cef6a0ef9219df9f6fa3869466a1a7   <a href="#">Signature</a>                                             |        |        |                          |
| <b>macOS 12 (ARM, 64-bit), Compressed TAR Archive</b><br>(mysql-8.0.30-macos12-arm64.tar.gz)                  | 8.0.30 | 167.8M | <a href="#">Download</a> |
| MD5: cea3722a8bc53df771c6b9434ad72bb9   <a href="#">Signature</a>                                             |        |        |                          |
| <b>macOS 12 (x86, 64-bit), Compressed TAR Archive</b><br>(mysql-8.0.30-macos12-x86_64.tar.gz)                 | 8.0.30 | 173.3M | <a href="#">Download</a> |
| MD5: 6dca88f61448a2e31a830073efe175bf   <a href="#">Signature</a>                                             |        |        |                          |
| <b>macOS 12 (ARM, 64-bit), Compressed TAR Archive Test Suite</b><br>(mysql-test-8.0.30-macos12-arm64.tar.gz)  | 8.0.30 | 280.3M | <a href="#">Download</a> |
| MD5: a25a0fa750161329ffde85a2eef56cd9   <a href="#">Signature</a>                                             |        |        |                          |
| <b>macOS 12 (x86, 64-bit), Compressed TAR Archive Test Suite</b><br>(mysql-test-8.0.30-macos12-x86_64.tar.gz) | 8.0.30 | 281.0M | <a href="#">Download</a> |
| MD5: 9b0f49b03b9d927a788f5f6dcf271ec7   <a href="#">Signature</a>                                             |        |        |                          |
| <b>macOS 12 (ARM, 64-bit), TAR</b><br>(mysql-8.0.30-macos12-arm64.tar)                                        | 8.0.30 | 464.4M | <a href="#">Download</a> |
| MD5: b10204062595156ad5e6f479202d3a00   <a href="#">Signature</a>                                             |        |        |                          |
| <b>macOS 12 (x86, 64-bit), TAR</b><br>(mysql-8.0.30-macos12-x86_64.tar)                                       | 8.0.30 | 471.9M | <a href="#">Download</a> |
| MD5: 5ab6535b56ca8f3e2092047db39cdebb   <a href="#">Signature</a>                                             |        |        |                          |

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

The following description is based on MySQL 8.0.30 for macOS 12 (x86, 64-bit).

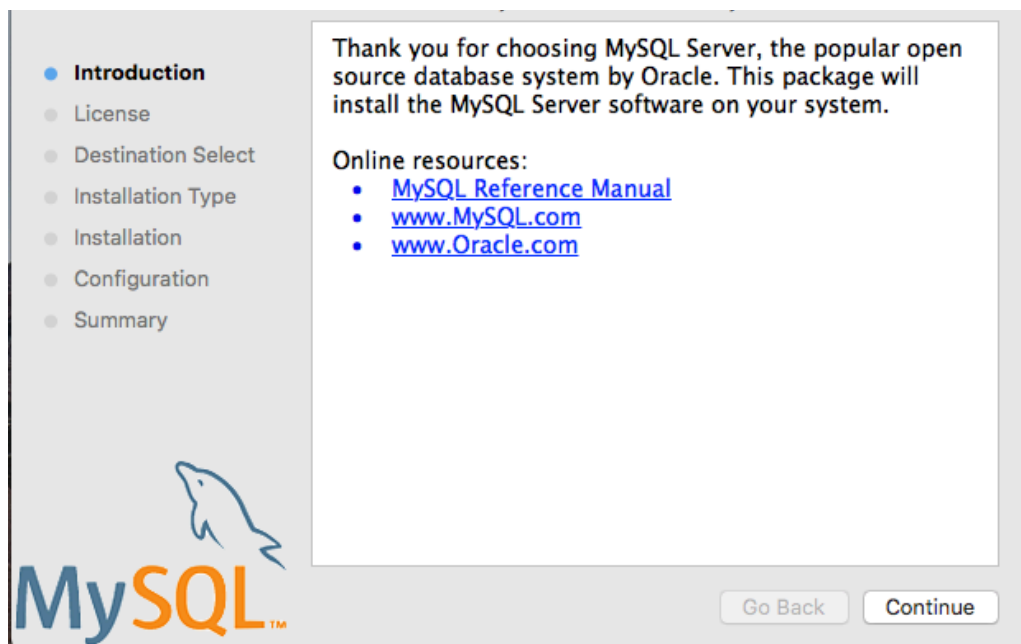
1. Open the downloaded image.

2. Double-click “mysql-8.0.30-macos10.15-x86\_64” to start the MySQL installation process. The default setting should be enough.

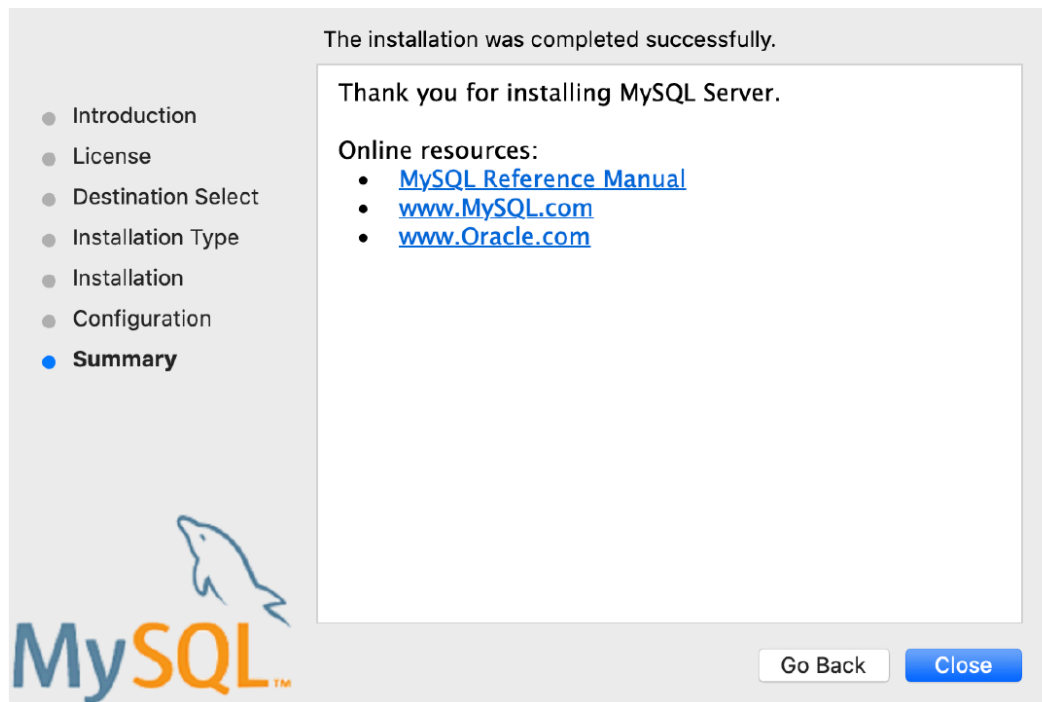
If you get a warning about the file being from an untrusted source, Ctrl+Click the file and click open from the menu.

For detailed information, refer to the following page.

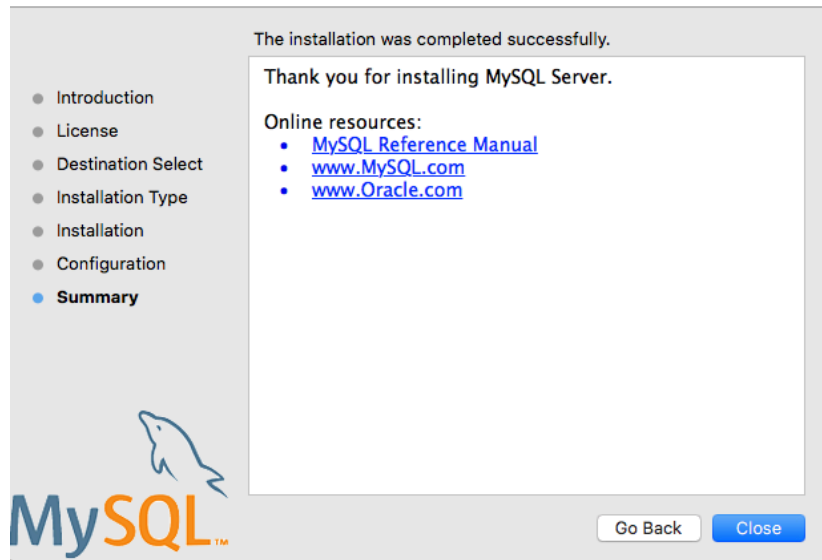
<https://dev.mysql.com/doc/refman/8.0/en/osx-installation-pkg.html>



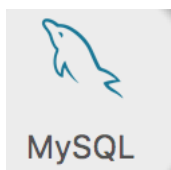
3. You need to select a password for the root user in one of the dialogue boxes during the installation. Please note it down before continuing to the rest of the installation. If you see the following pop-up, then also please write down the password information somewhere before continuing.



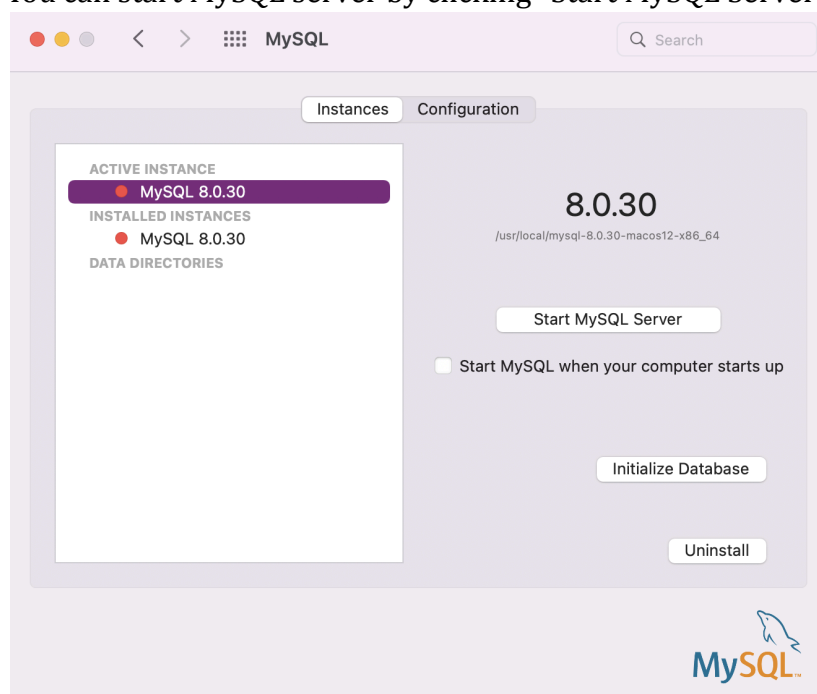
After successful installation, you will see the following dialog box.



4. Visit “System Preferences” and you will see “MySQL” at the very bottom of the window. Double click the icon. (It’s possible that you might need to reboot your system for this to work.)



You can start MySQL server by clicking “Start MySQL Server” button.



The status will change from “stopped” to “running”. Now, the MySQL Server instance is running. If you want to automatically start it whenever the machine is up, check “Automatically Start MySQL Server on Startup”.

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.

```
<Prompt>% mysql -u root -p
```

```
Enter password:
```

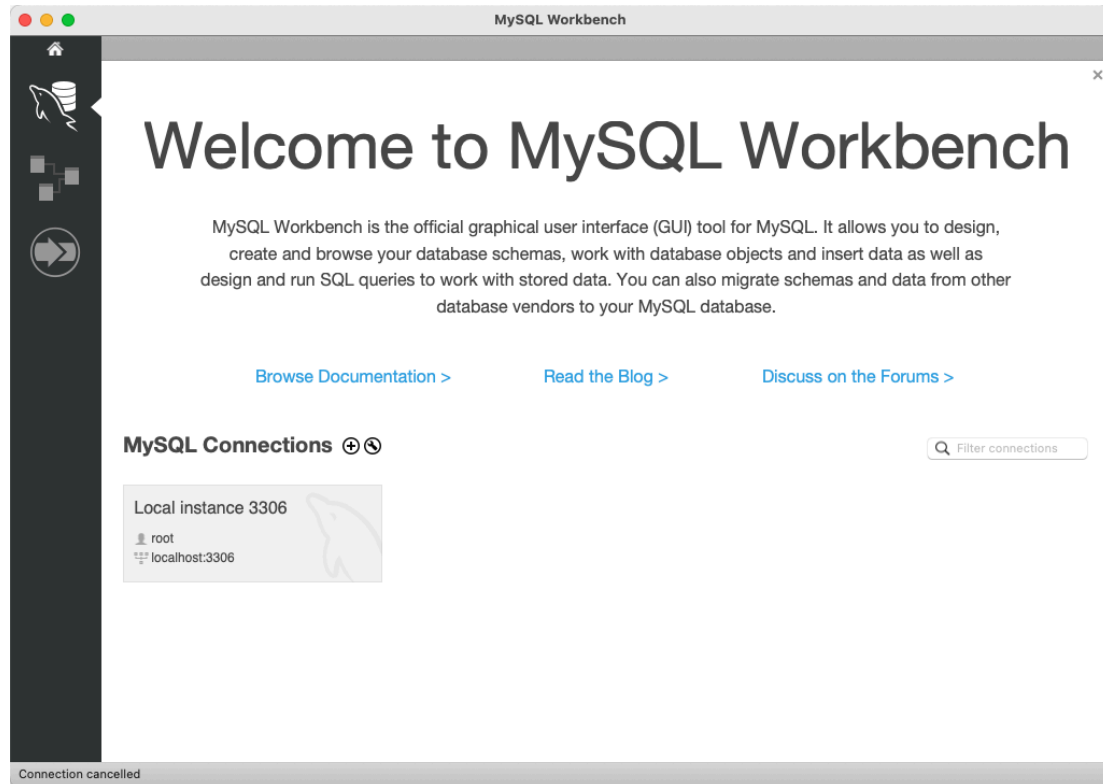
```
Welcome to the MySQL monitor.  Commands end with ; or \g.
```

```
Your MySQL connection id is 14
```

```
Server version: 8.0.23 Homebrew
```

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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>.

We have some other tools at our disposal to manipulate our databases and execute SQL queries.

## Step2- Install MySQL Workbench

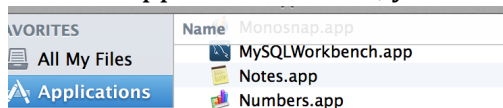
1. Download the MySQL workbench by visiting the download site (<http://dev.mysql.com/downloads/workbench/>). Download the DMG archive version. Select the correct installer based on your system.

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 MySQLWorkbench.app. Execute it.



5. The following window will appear. Click on the '+' sign next to "MySQL Connections" 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\_project). Put the root password if you have. If it is blank, then you don't need to provide the password.

Setup New Connection

Connection Name:  Type a name for the connection

Connection Method:  Method to use to connect to the RDBMS

Parameters SSL Advanced

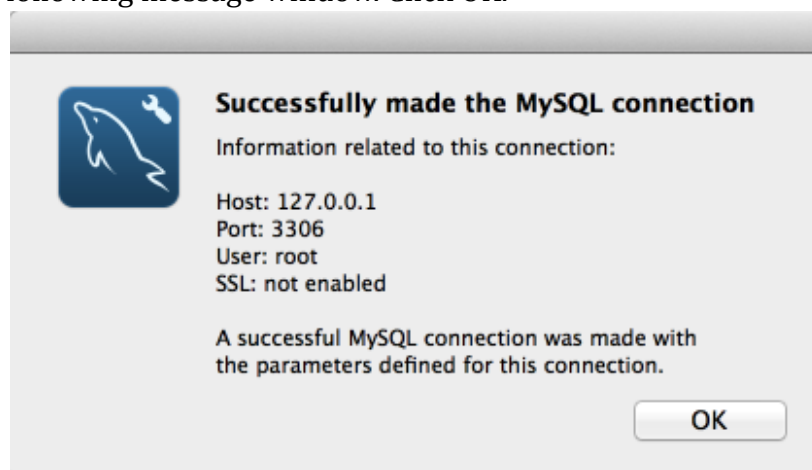
Hostname:  Port:  Name or IP address of the server host. - and TCP/IP port.

Username:  Name of the user to connect with.

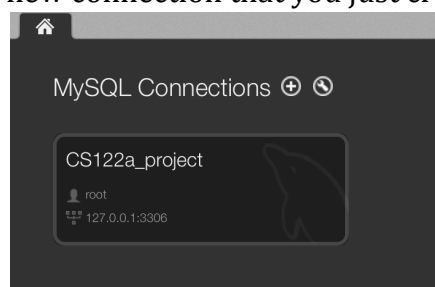
Password:   The user's password. Will be requested later if it's not set.

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

7. Click on “Test Connection” and type in your password. By default, the password is not set. Therefore, you do not need to provide any 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. Double 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 table. 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. Go to step 1 below to run this script in MySQL Workbench.

```
-- 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,
'1998-11-10'),(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,'2002-02-0
2');
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,
'1998-11-10'),(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;

```

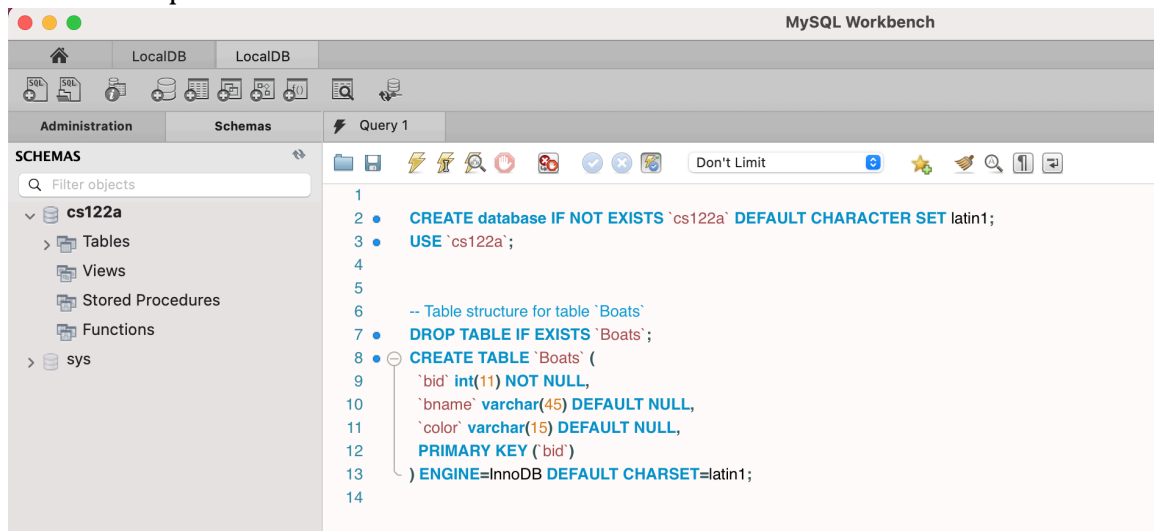
```
-- Table structure for table `Sailors`
DROP TABLE IF EXISTS `Sailors`;
CREATE TABLE `Sailors` (
  `sid` int(11) NOT NULL,
  `sname` varchar(45) NOT NULL,
  `rating` int(11) DEFAULT NULL,
  `age` decimal(5,1) DEFAULT NULL,
  PRIMARY KEY (`sid`)
) ENGINE=InnoDB DEFAULT CHARSET=latin1;
```

```
-- 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,'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);
ALTER TABLE `Sailors` ENABLE KEYS;
```

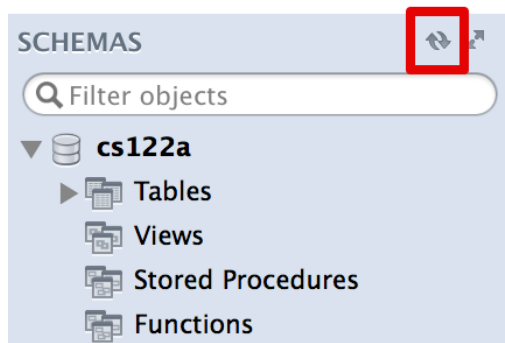
```
-- Table structure for table `Sailors2`
DROP TABLE IF EXISTS `Sailors2`;
CREATE TABLE `Sailors2` (
  `sid` int(11) NOT NULL,
  `sname` varchar(45) NOT NULL,
  `rating` int(11) DEFAULT NULL,
  `age` decimal(5,1) DEFAULT NULL,
  PRIMARY KEY (`sid`)
) ENGINE=InnoDB DEFAULT CHARSET=latin1;
```

```
-- 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',9,3
5.0),(85,'Art',4,25.5),(95,'Bob',3,63.5),(101,'Joan',3,NULL),(107,'Johannes',NULL,35.0),(108,'Sand
y',NULL,36.0),(109,'James',5,38.0);
ALTER TABLE `Sailors2` ENABLE KEYS;
-- The end of the script
```

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

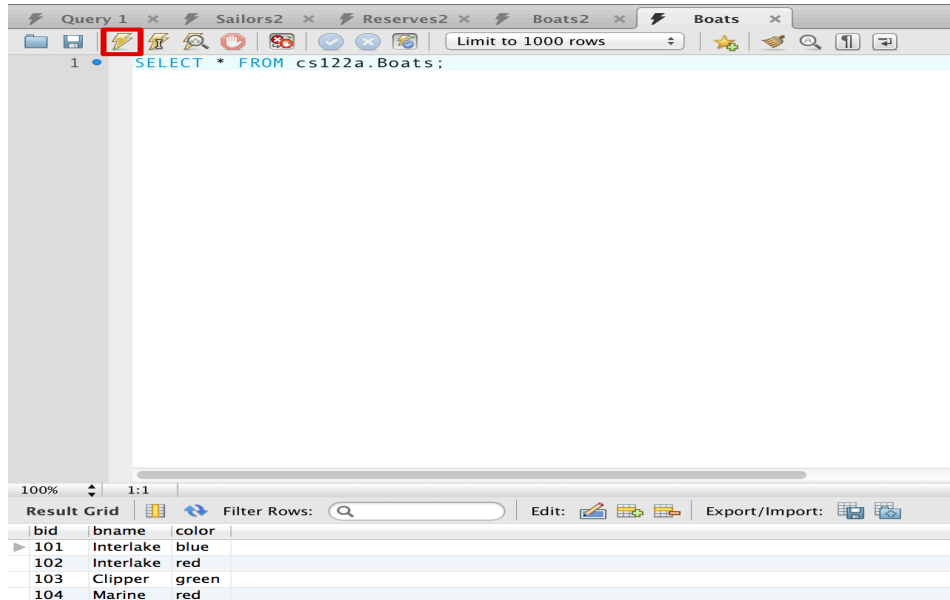


2. In the left pane, click "Refresh" button and you will see the "cs122a" schema and its Tables.



## 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. You can export the result into a CSV file.

