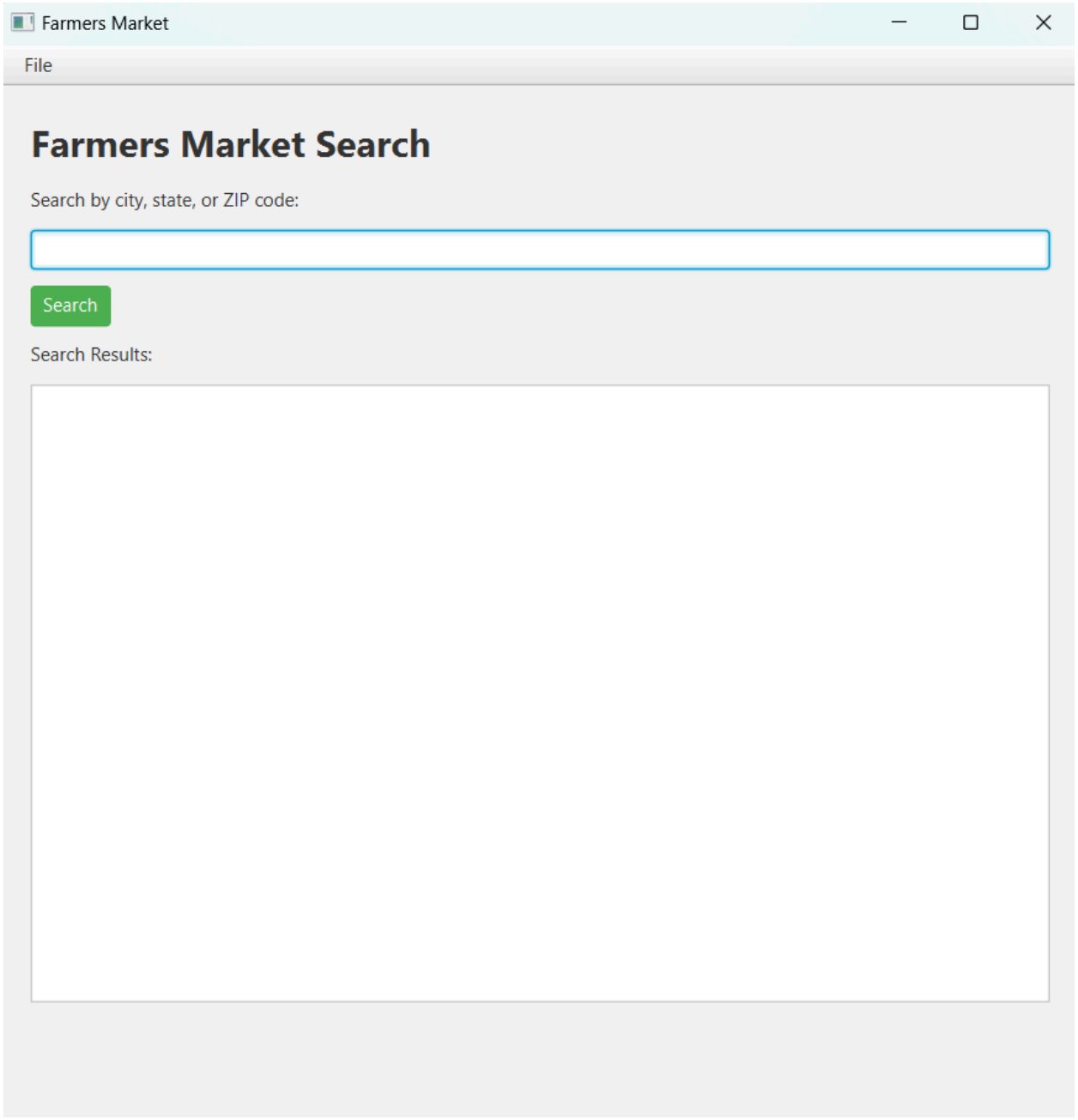
User Manual for Farmers Market



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Introduction

This is the user manual for an implementation of searching in the list of farmers markets around the country. The main goal of the manual is to provide a comprehensive guide on how the program works and how to use the program at different steps. It includes a detailed explanation of the features and common errors that you may encounter.

Starting the Application

Prerequisites:

- Java Development Kit (JDK) installed on your system.
- JavaFX SDK installed.

Setting up the Database:

This program requires a MySQL server to act as the database backend. During development mysql Ver 8.0.39-0ubuntu0.24.04.1 for Linux on x86_64 ((Ubuntu)) was used. Follow the guide to install MySQL from their documentation site.

The following commands were used on Ubuntu 24.04 to set up for the development environment. Change the root password as needed.

```
$ sudo apt-get update
$ sudo apt-get install mysql-server
$ mysql_secure_installation
```

Notice, mysql_secure_installation will ask a series of questions related to the security of the database. For testing, password validation can be disabled but not recommended for production. Changing the root password is optional, if it is changed keep track of the password. Removal of the anonymous user is recommended. Disable root login remotely is recommended to be yes however to testing it can be set to no making it more convenient. Removal of the test database is recommended to be yes. At the end reloading privilege tables is yes to take effect now.

Next create a table and a user to access said table. First login to the MySQL server and then run the following commands changing the database name, user name, and password as needed. Here the user is named user001 and the database is named db001.

```
$ mysql -u root -p
CREATE DATABASE db001;
CREATE USER ‘user001‘@'%' IDENTIFIED BY 'USER_PASSWORD_HERE';
GRANT Alter ON db001.* TO 'user001'@'%';
GRANT Create ON db001.* TO 'user001'@'%';
GRANT Create view ON db001.* TO 'user001'@'%';
GRANT Delete ON db001.* TO 'user001'@'%';
GRANT Drop ON db001.* TO 'user001'@'%' WITH GRANT OPTION;
GRANT Index ON db001.* TO 'user001'@'%';
GRANT Insert ON db001.* TO 'user001'@'%';
GRANT References ON db001.* TO 'user001'@'%';
GRANT Select ON db001.* TO 'user001'@'%';
GRANT Show view ON db001.* TO 'user001'@'%';
```

```
GRANT Trigger ON db001.* TO 'user001'@'%';
GRANT Update ON db001.* TO 'user001'@'%';
```

The program is able to automatically fill in the database on the first launch, this is the recommended method. A dump is also provided at ./dump/db001.sql for manually importing. Copy the dump file to the database server and change the terminal working directory to the dump file. Then run the following command.

```
$ mysql -u user001 -p db001 < db001.sql
```

Config File

Users must set up a config file in the resources directory to access the database

```
db.url=link
db.user=username
db.password=password
```

Note: do NOT commit the config file when uploading code to any online source

Running the Program:

1. **Navigate to the Source Directory**.
2. **Compile the Java files**: Use the `javac` command to compile all Java files in the specified package directory.
3. **Run the JavaFX Application**: Use the `java` command to run the main application class. Ensure that you specify the fully qualified class name, including the package.

Notes:

JavaFX Modules: Since JavaFX is not included in the JDK by default, ensure you have the JavaFX SDK installed and properly configured. If you are using Java 11 or later, you might need to add the JavaFX modules explicitly:

```
java --module-path /path/to/javafx-sdk/lib --add-modules
javafx.controls,javafx.fxml
edu.rpi.cs.csci4963.u24.kims35.hw05.farmersmarket.FarketApplication.java
```

Summary:

To start the Farmers Market Search application:

1. Ensure you have Java and JavaFX installed on your system.
2. Compile and run the `FarketApplication` class.
3. The main statistics page of the application will appear.

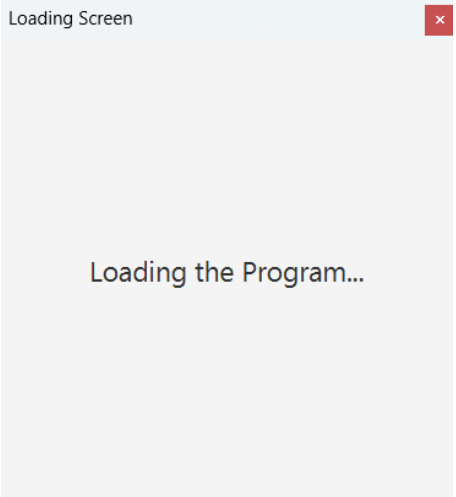
Running the Program

The application should look like this:
INSERT PIC HERE

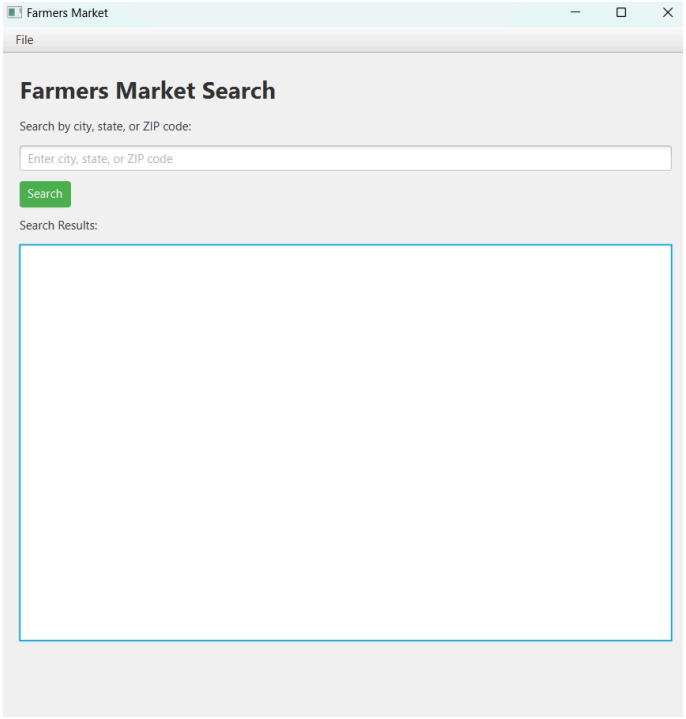
Main Step

Short explanation of main step

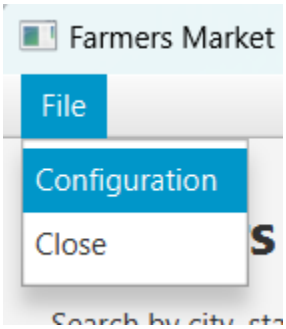
1. Launch the FarketApplication.java program. You may choose to do this by running the script. You should get a loading screen that looks like this:



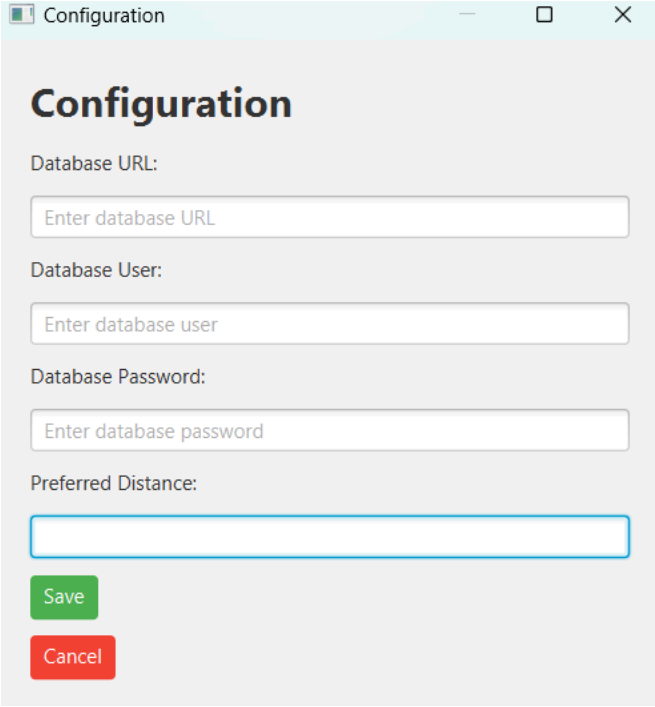
2. Once the program loads, the loading screen should automatically disappear. You should get something like this:



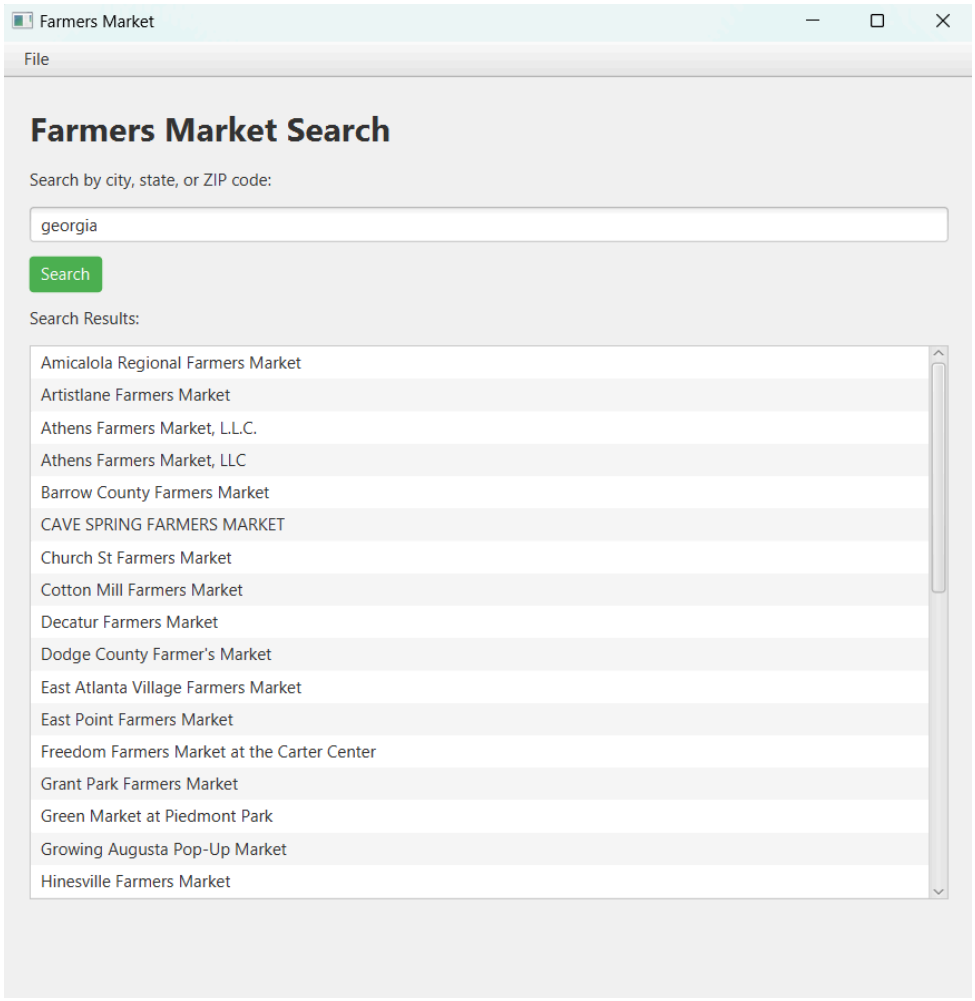
3. On the upper left side, click on File and go to the configuration panel.



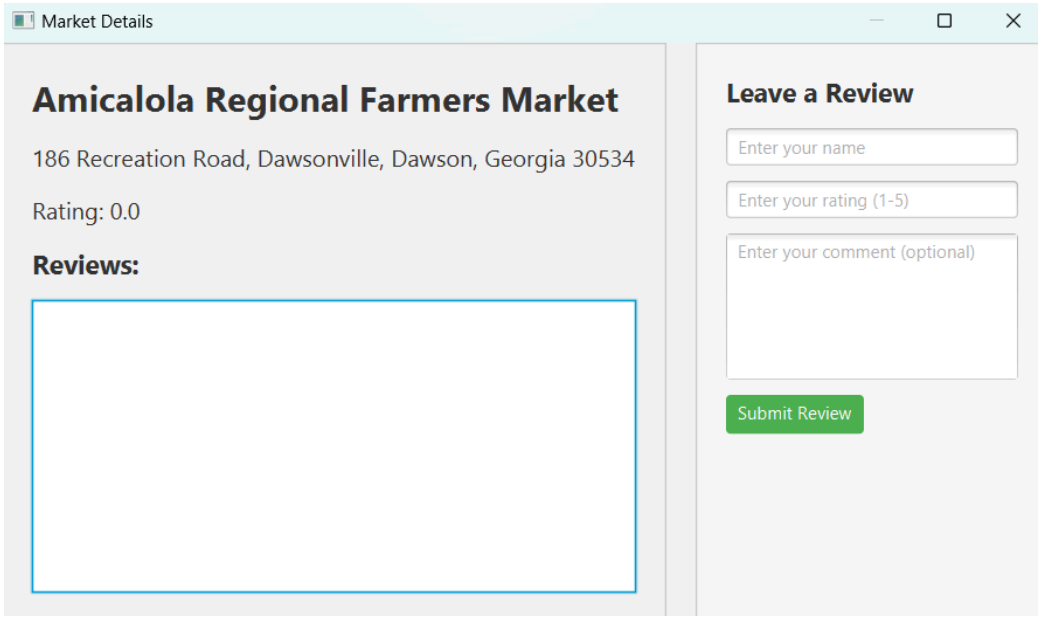
4. Users can choose to change the database url, username, password, and limit the search results by their preferred distance in miles, though the initial configurations should be recorded in the configuration.properties file.

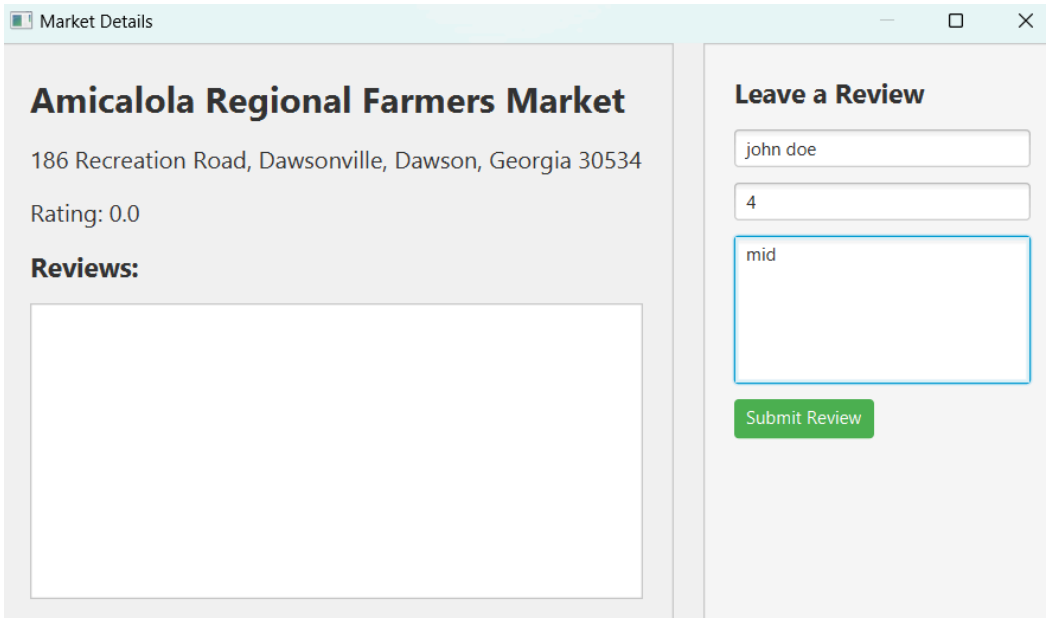


5. Users can search by city, state, or zip code. If the program finds enough results, a scroll bar will appear on the right side with results appearing in alphanumerical order.

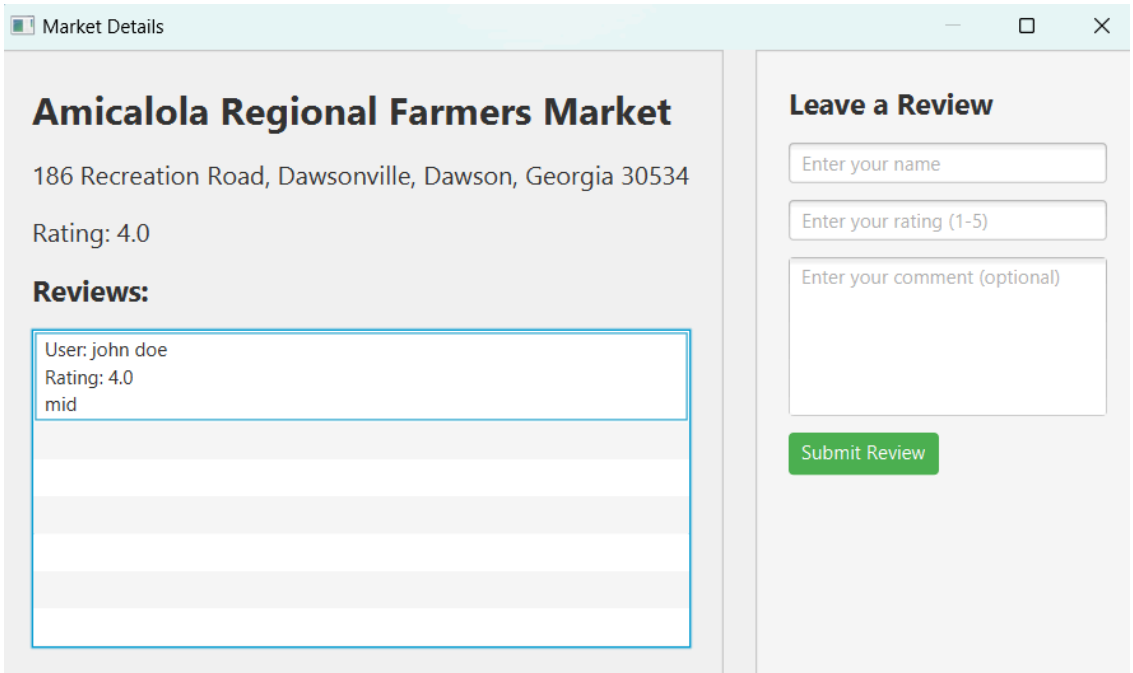


6. Double clicking on one of the results will open up a detailed view that displays the market name, address, rating, reviews, and an option to leave their own review.



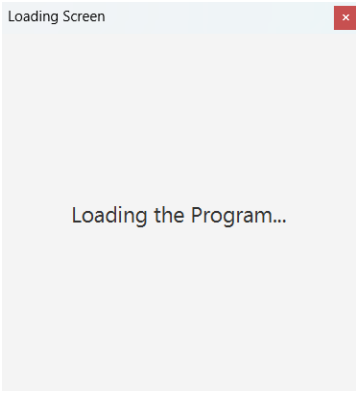


7. Reopening the detailed view will display reviews left with the username, rating, and the optional comment.



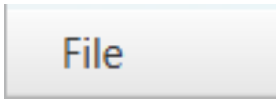
UI Features:

Loading Screen:



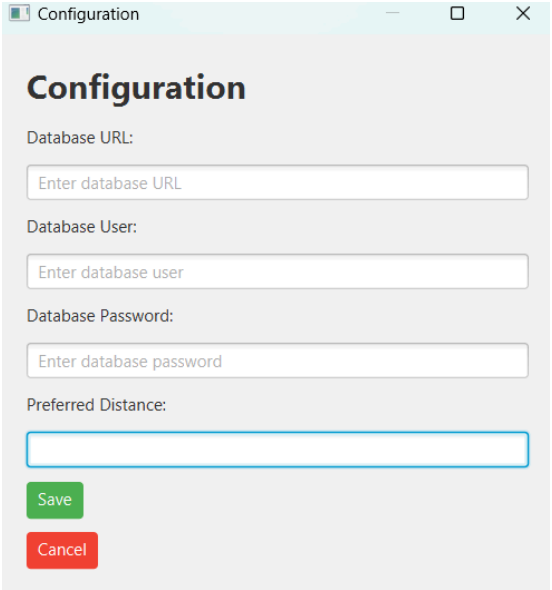
Stays open while csv files load. Automatically closes once the main screen loads in.

Menu Bar:



File-> Configuration - opens up the configuration window
File -> Close - closes the program

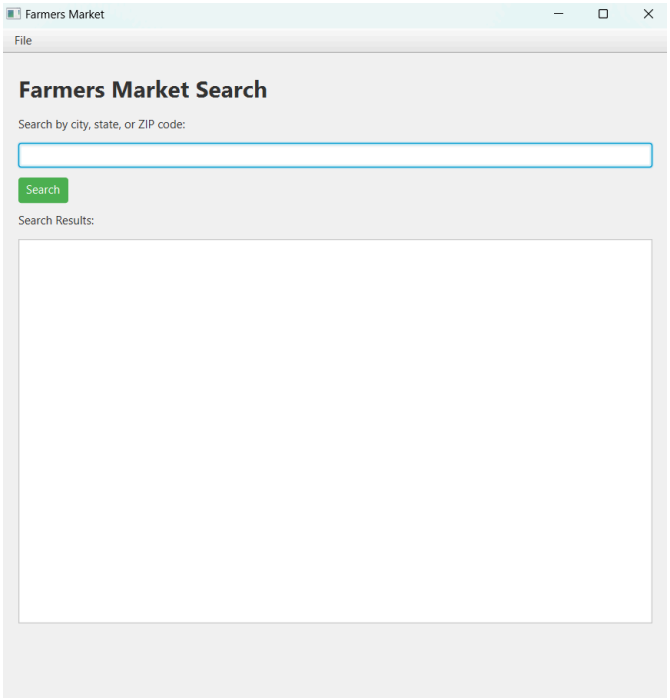
Configuration Window:



Database URL - users can enter the database URL
Database User - users can enter the database username

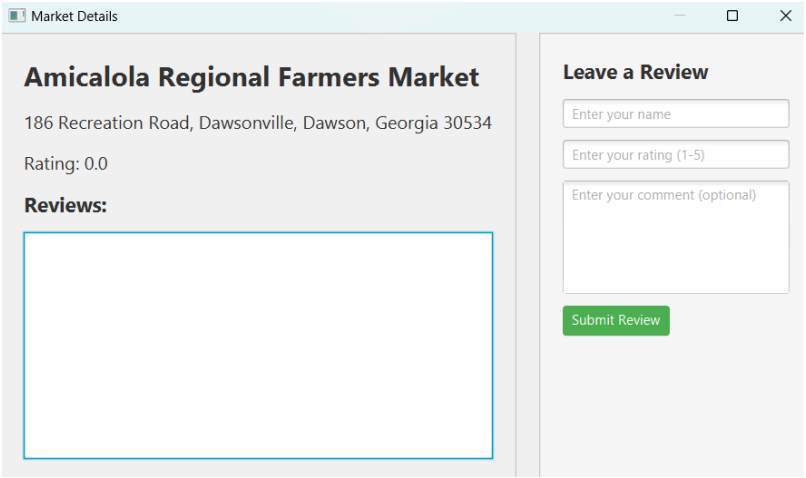
Database Password - users can enter the database password
Preferred Distance - users can enter the preferred distance to filter the search result
Note: Database configurations should be done through the configuration.properties file.

Main Window:



Search Bar - Users can search by city, state, or zip code to look up markets around the country based on the csv file.
Search Result Window - Displays all markets within the preferred distance of the search result.

Detailed Window:



Displays market name, full address, total rating, submitted reviews (username, rating, optional comment), and an option to leave a review to be added to the database.