Project Documentation

Overview

The `MainWindow` class is a part of the project, responsible for managing the main window interface and handling user interactions. It inherits from the `QMainWindow` class provided by the Qt framework.

Functionality

The `MainWindow` class provides the following functionality:

- Displaying the main window interface with push buttons.
- Handling user interactions with the push buttons.
- Establishing and managing a connection to a SQL database.

Dependencies

The project depends on the following libraries and frameworks:

- Qt framework: Provides GUI components and SQL database functionality.
- Qt Test module: Used for writing and executing unit tests.

Project Structure

- The project consists of the following components:
  `MainWindow.h`: Header file containing the declaration of the `MainWindow` class.
- Other source files (not provided): Implementation files (.cpp) for the `MainWindow` class and other classes used in the project.
- Qt framework libraries: Required libraries for compiling and running the project.
- Test files (not provided): Files containing unit tests for the `MainWindow` class and other classes.

Usage

- To use the `MainWindow` class in your project:
- Include the `MainWindow.h` header file in your source code.
- Create an instance of the `MainWindow` class.
- Optionally, connect signals and slots to handle user interactions with the main window interface.
- Compile your project using a suitable build system (e.g., qmake, CMake).
- Run the compiled executable to launch the application.

Testing

The project includes unit tests to ensure the correctness of the `MainWindow` class and its functionality. These tests cover various scenarios, including button clicks and database interactions. To run the tests:

- Compile the test files along with the project source code.
- Execute the compiled test executable to run the unit tests.
- Review the test results to ensure that all tests pass.

Additional Notes

The `MainWindow` class includes member variables (`forTestCheck_1`, `forTestCheck_2`, etc.) used for testing purposes. These variables can be set to control the behavior of the class during testing.

For detailed documentation of class members and methods, refer to the comments in the `MainWindow.h` header file