

# Read Me

## Opening the Program

1. Download the zip file from the Github Repository, and unzip the files to a location of your choice. Project has been written in Java, there should be no additional tools needed to allow the program to obtain full functionality.
2. Running from a User Interface
  - a. Click on the .exe file to open the stopwatch program, this will open the User Interface window for the program. This window will display information regarding the following: Start Timer Button, Stop Timer Button, and a running total of the elapsed time that has occurred between the action of hitting the Start Timer Button and the Stop Timer Button.
  - b. If you would like to save the results of your previous running tests you will need to have a LocalDB.txt file, if this is not implemented it will simply run the timer over and over without any record of the times that have been ran so far. To have this data save to a localized database for an easy of accessibility and having the ability to reference the recorded previous results you can do either of the following:
    - i. Create a local database file in a .txt format names "LocalDB.txt" located in the same folder and the program should have the ability to write the results to this document. (or)
    - ii. Allow the program to create the LocalDB.txt file on its own, and this will be allocated to the same folder.
3. You can also run the program through an IDE console as well, however this will have a bit different functionality, as this will not display the User Interface. But you can direct the console to start and end the timer with the Start Timer and Stop Timer commands respectively. This console will also provide a view of the recorded times so far, as well as a running counter of the elapsed time between actions.

## Operating the Program

1. Open the application, in whichever your desired view is (via the User Interface or the Command Line).
2. Once the program has been opened, you will be able to activate the Start Timer and End Timer functions. Once the Start Timer button has been activated, this will trigger the timer to start counting the elapsed time since you have hit the button (recorded in seconds) and this running timer will continue to count the time in seconds that has passed until you have utilized the Stop Timer function.
  - a. Once this has been activated, if the database files have been set up this will write the data to the localized database file for review at a later time.
3. Reading the LocalDB.txt data
  - a. The data written to the .txt file will contain the following information

- i. Start Timer: When the “Start Timer” Button was activated
- ii. Stop Timer: When the “Stop Timer” Button was activated
- iii. Elapsed Timer: Displays the difference in time between actions, displayed in seconds (See below for example)

|    | StartTimer          | StopTimer           | ElapsedTime |
|----|---------------------|---------------------|-------------|
| 1  | 2021-04-03 01:22:36 | 2021-04-03 01:22:42 | 09          |
| 2  | 2021-04-03 01:24:15 | 2021-04-03 01:25:15 | 60          |
| 3  | 2021-04-03 01:25:30 | 2021-04-03 01:25:41 | 11          |
| 4  | 2021-04-03 01:26:06 | 2021-04-03 01:26:08 | 02          |
| 5  | 2021-04-03 01:32:01 | 2021-04-03 01:32:44 | 43          |
| 6  | 2021-04-03 01:48:36 | 2021-04-03 01:51:36 | 180         |
| 7  | 2021-04-03 01:54:19 | 2021-04-03 01:56:19 | 120         |
| 8  | 2021-04-03 02:00:22 | 2021-04-03 02:01:18 | 56          |
| 9  | 2021-04-03 02:05:20 | 2021-04-03 02:05:34 | 14          |
| 10 | 2021-04-03 02:10:01 | 2021-04-03 02:13:02 | 91          |
| 11 |                     |                     |             |

### **Files Required for Operation**

1. All files have been included inside of the attached GitHub Repository files to operate the program successfully, if you would like to save data for later use you will need to implement the database file manually (as directed above), no real advantage here as the location of the file is required to be inside of the folder containing the program files and the name is required to be LocalDB.txt, in this case it is often easier to allow the program to create the LocalDB.txt file on its own if the data is required.
  - a. Either solution will work, but unless you are familiar with these types of files and can be sure that the location is correct it is not recommended to manually create this file.
2. If you want to save the database file as another name, or in a separate location on your system even, once the file has been written you are able to rename and move the file to a name or destination of your choice.