

Requirements

- 1) MATLAB: Our program is written Matlab; therefore most of the computers with Matlab will be enough to run our program.

If you have MATLAB Compiler Runtime (MCR) is installed and ensured that you have installed version 8.1 (R2013a), after setting ODBC connection and/or database, you can use executable or can run program from the Matlab

If the MCR is not installed, enter *mcrinstaller* at MATLAB prompt. The MCRINSTALLER command displays the location of the MCR Installer.

- 2) MYSQL-DATABASE (OPTIONAL) : we have used MySQL database to store user accounts, heart-rate, sleep-patterns and sleep-suggestions. To store data, we first choose publicly available database servers but especially heart rate data is too big to handle in a remote server, based on our experiments we can say, YOU SHOULD INSTALL A MYSQL SERVER into your machine. If you don't want to install YOU CAN ALSO USE OUR FREE DATABASE. But as we expressed before, uploading/downloading heart-rate data from database will be quite painful.

If you decided to use local database, after you installed MySQL create user account with following name and password

Name : cagdas password : ru_sweCagdas

Also create a table with following SQL statement

CREATE DATABASE `ruswe` /*!40100 DEFAULT CHARACTER SET utf8 */;

Finally import Dump20131214.sql file in the *data* folder

- 3) MYSQL CONNECTORS

Independent of you choose using online database or your local database, you should install MySQL connectors to have a connection with any MySQL database

Run time parameters

- 1) To import heart-rate data from MotoActv website; the program first downloads archive of heart rates from MotoActv website, then extract heart rate files and finally uploads them to program's database. Downloading heart rate data from MotoActv website might take up to 30 minutes (depending on the amount of data accumulated in servers).

For demo purposes we disabled this option in our program. When the user clicks download from MotoActv website button, software will import one of already downloaded files (Please see section : Getting MotoActv data). If you want to enable download functionality, explicitly run the program

>>sqa.exe 1 in windows

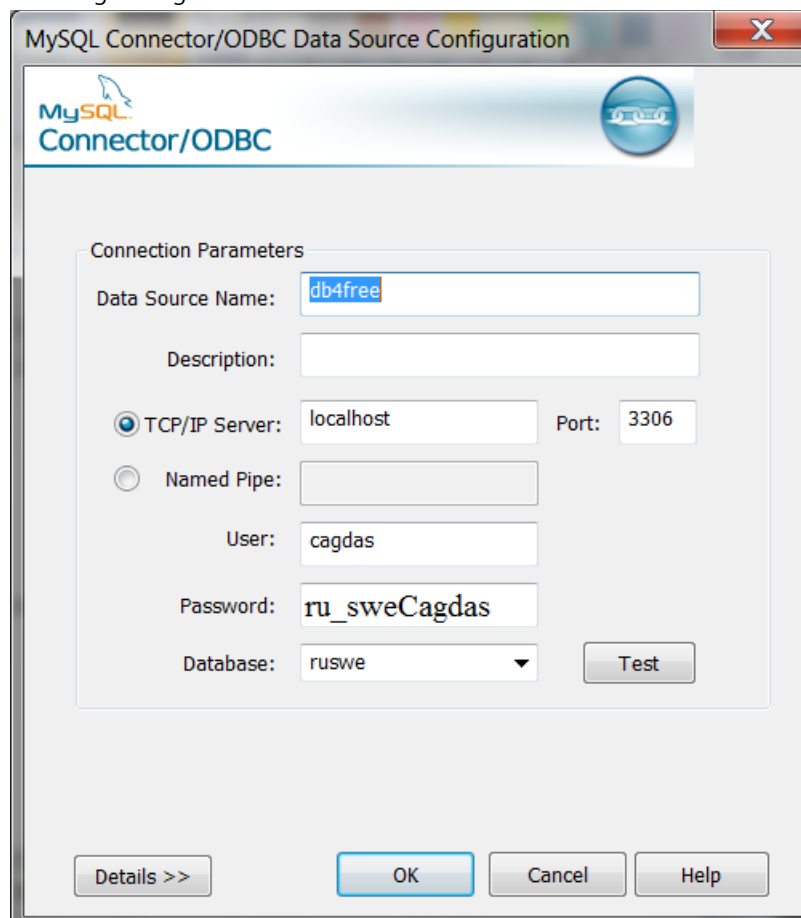
Or

>> Controller(1) in matlab

And if you enable it, please be patient.

Installation

- 1) To install program, you should create an ODBC connection in your windows machine. Please run *ODBCad32.exe*. in the UserDSN tab -> click Add and choose MySQL ODBC Unicode Driver. If you can't see this option in the list, please install mysql ODBC connector first. If you are going to use local machine use following settings

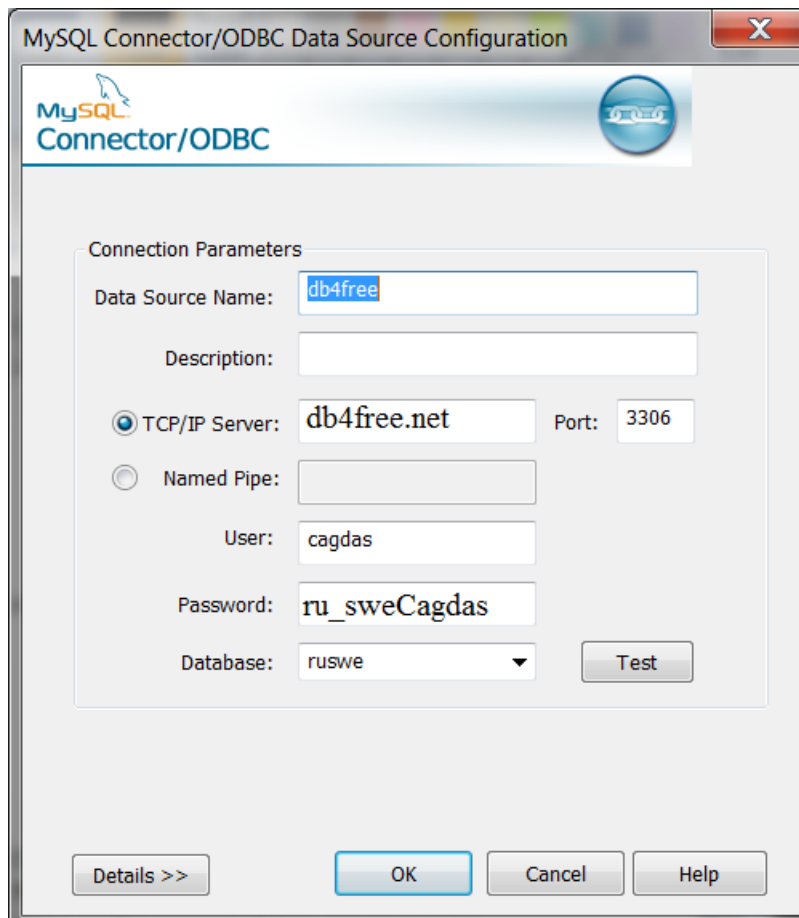


The screenshot shows the 'MySQL Connector/ODBC Data Source Configuration' window. The 'Connection Parameters' section is active, displaying the following fields and values:

- Data Source Name: db4free
- Description: (empty)
- ☒ TCP/IP Server: localhost, Port: 3306
- ☐ Named Pipe: (empty)
- User: cagdas
- Password: ru_sweCagdas
- Database: ruswe (dropdown menu)

At the bottom right of the parameter section is a 'Test' button. At the bottom of the window are four buttons: 'Details >>', 'OK', 'Cancel', and 'Help'.

Please be sure that port number is matching with your configuration. If you want to use remote database use following settings



After setting ODBC, you can enjoy the program buy simply running SQA.exe or can run >>Controller in file src folder.

Compiling

Although, you don't really need to compile matlab code, if you want to get an executable, simply open SQA.prj file in src folder from Matlab.

Authorization

Program comes with a couple of predefined user names and passwords.

You can test the program with following accounts

High level account : cagdash **Password** : 12345

Low level account : cagdas **Password** : 12345

Getting CSV files from MyZeo

MyZeo tool can talk with an Android phone with MyZeo app from Google Play. But this app doesn't allow us get the data directly to get this data we need to use another app called *zeo-sleep-csv*. Most of this app is developed by online community. We are both providing the android source code in *code* directory and apk in *exec* folder.

Also we have provided sample data for MyZeo in *data/MyZeo* folder. You can use example MyZeo files from there.

Getting MotoActv data

Normally getting MotoActv data is an automated process : it downloads MyZeo data archives from MyZeo website, extracts data from archives and uploads them to database. As we mentioned before downloading archives is a long process. By putting example files to *workoutdata\CSV* in executable directory, you can skip downloading and extraction phases. "*Workout_Sun_October 13, 2013 03_04_49_UTC.CSV*" file is already provided as an example in *workoutdata\CSV* folder. You can find more example files in *data/MotoActv* folder.