

# Yet Another Matrix Calculator

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# 1 Introduction

`./CLI [ -hfv ] [ file ]`

This is an interpreter of a language that support some functions with interactive execution of statements. It has some similarities in the syntax to Octave (MATLAB) such as the declaration of matrix. Some of test file's commands are fully support by Octave (`test/100x100`).

## 1.1 Reporting Bugs

This project is still in developing, so you may find lots of issues. Email bug reports to `lzecheng98@gmail.com`.

When reporting a bug, please include the following information:

- The version number of Yet Another Matrix Calculator
- The machine and OS that it is running on `uname -a`
- A recipe for recreating the bug reliably (Your input)
- A fix for the bug if you have one!!!

## 1.2 Command Line Options

CLI takes the following options from the command line:

- `-h`            Print the usage and quit.
- `-f [ file ]`    Read from the **file** instead of **stdin** and then quit.
- `-v`            Print the version number and copyright, and then quit.

## 2 Building

### 2.1 On Unix-like environment

To avoid some common problems when building, please read through this section before you compile. For most people the easiest way to try this software is to download from Github release page.

This project relays on the GNU Autotools building system, so you must have installed the tools on you system.

If you do not have the readline, bison and flex already installed on your system, you can use your OS package manager to install if they are sufficiently recent versions. Alternative, go to the official website (as provided above) for more information.

#### 2.1.1 Configure

If you download the release tarball, run `./configure` from the root directory.

The files in the Github repository do not contain "configure". You must run `sh ./autogen.sh`, before `./configure`. This runs several autotools, so you must have those commands installed in order to do this.

People who downloaded source code are more likely to compile this TOY in their own way. And the usual way of changing defaults should be like this:

```
CC=clang CFLAGS='-O3 -Wall -g -pg' ./configure
```

This command specifies compiler and the flags it should run with.

For more information, see `./configure --help`

#### 2.1.2 Make

Once `./configure` has run, you can run `make`. This will build the project. So far, no test suit is provided.

`make`

`make all` Building programs, documentation (`MatCal.info`)

`make clean`

Erase files produced by `make all`, such as `*.o` and `CLI`.

`make pdf` Build the pdf version of documentation, but require TeX installed.

#### 2.1.3 Run

Simply issue `./src/CLI` at the root directory.

See Section 1.2 [Command Line Options], page 1.

### 2.2 On Windows

To make life easier, you can download from Github release page named by "CLI-x86\_64-windows..."

Or if you really want to compile it on Windows, Install Msys2, Open "MSYS2 MINGW64", install dev-environmental tools by issuing:

```
pacman -S mingw-w64-x86_64-autotools mingw-w64-x86_64-gcc mingw-w64-x86_64-readline autoconf-archive bison flex
```

And base on Msys2 shell, follow the instruction See Section 2.1 [On Unix-like environment], page 2.

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