

MMBasic for Linux

Linux port by Stephen Arnold, July 2013

MMBasic is an implementation of the BASIC language with floating point and string variables, long variable names, arrays of floats or strings with multiple dimensions and powerful string handling. It is generally compatible with Microsoft BASIC so it is easy to learn and run.

MMBasic was originally written for the Maximite; a small computer which included built in video and keyboard interfaces and is based on the PIC32 microcontroller from Microchip.

This manual covers the version of MMBasic which can run natively from the Linux console. The intention of this version is to provide developers, who are considering adopting MMBasic for an embedded platform, the opportunity to test the language.

This version can run quite large and complex programs so it is also useful for learning the BASIC language or running BASIC programs in a Linux environment.

If you are familiar with the Maximite please note that this version does not attempt to emulate the Maximite environment. This version does not support the full screen editor, graphics, sound, special keyboard keys or external input/output.

Linux vs DOS Verison

The Linux version of MMBasic is an adaption of the MS-DOS version. Some minor changes were made to the original DOS MMBasic source code so that it would compile properly using “gcc” (The GNU C-Compiler) and run natively on a Linux system. This ReadMe file is also an adaption of the original DOS MMBasic ReadMe manual.

The Linux version of MMBasic does provide for some basic enhancements over and above the functionality offered by the DOS version. These enhancements are:-

- In the Linux version a simple one line text editor has been provided. So in this version the EDIT command is enabled and will allow editing of a single specified line number. Providing that your program contains line numbers.
- A ten line last-command history buffer has been implemented. Pressing the Up and Down arrow keys within Linux MMBasic will scroll through previous commands in the order that they were entered. Commands in the history buffer can be edited and re-entered.
- Screen cursor control via the PRINT @(x,y) command has been implemented. Cursor positioning is the more traditional whole character position on the screen. Rather than a pixel position like the Maximite family of MMBasic.

The only other changes made to the DOS version were to tweak environment specific commands like CLS, FILES, and SYSTEM so that they would run as expected.

Downloads

You can download:

- The Linux version of MMBasic from <http://geoffg.net> when the final version has been released.
- The MMBasic Language Manual from <http://mmbasic.com>

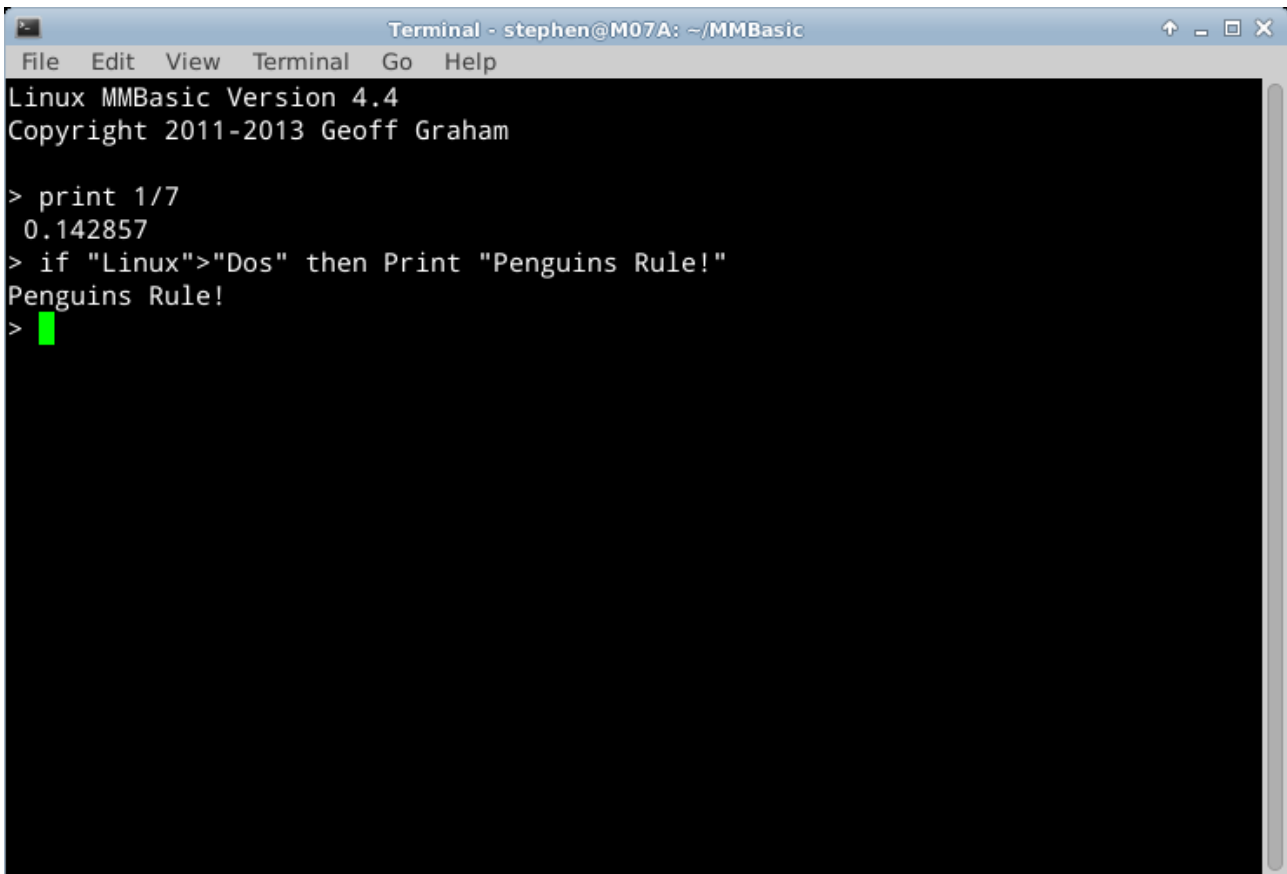
Installing and Running Linux MMBasic

The Linux version of MMBasic does not need any installation. All you need do is download the Linux MMBasic distribution archive. Extract the archive and copy the executable file (MMBasic_static) to the directory of your choice. The executable is a statically linked Intel i386 binary file. This file is fully self contained; there are no other libraries or other files required. This “should” run on a large number of current generation Linux systems that use a i386 family Microprocessor.

To run MMBasic just copy the executable to a directory of your choice and make sure that it has execute permissions. You may wish to rename it to just “MMBasic”. The following generalized sample commands assume that you have opened a terminal session and that the Linux_MMBasic.zip archive distribution file has been saved into your Linux home directory.

```
$cd ~
$unzip Linux_MMBasic.zip
$mv MMBasic_static MMBasic
$chmod u+x MMBasic
$./MMBasic
```

The last command above will start running the Linux MMBasic executable.



```
Terminal - stephen@M07A: ~/MMBasic
File Edit View Terminal Go Help
Linux MMBasic Version 4.4
Copyright 2011-2013 Geoff Graham
> print 1/7
0.142857
> if "Linux">"Dos" then Print "Penguins Rule!"
Penguins Rule!
> █
```

You can start MMBasic running a BASIC program by including the program's file name on the command line.

Developing Programs

If you are using line numbers you can use the traditional method of entering and editing programs in BASIC (ie, prefix the line with a number and use commands like EDIT, DELETE and LIST).

If you are not using line numbers you should use your favorite text editor to edit your program . Do not use a word processing editor like LibreOffice Writer as they will insert formatting commands in the file causing errors when run in MMBasic.

Differences to the Maximite Version of MMBasic

The main difference between the Linux version of MMBasic and the version running on the Maximite family (Maximite, mini Maximite, UBW32, CGMMSTICK1, DuinoMite and others) is that the Linux version does not support the specialised hardware of the Maximite.

This means that the following facilities are not supported:

- Graphics, fonts, special keyboard keys and the full screen editor
- External I/O, sound, interrupts and communications protocols (serial, I2C, SPI and 1-wire).
- The CONFIG command and the DIR\$() function.

Linux MMBasic has two extra commands:

- QUIT which will close MMBasic and return to the operating system.
- SYSTEM which will issue a command to the operating system shell.

For a full description of the commands and functions in the Linux version of MMBasic you should refer to the [MMBasic Language Manual](#) with particular reference to those commands listed as being available in the “DOS” version from which the Linux version was ported. This manual can be downloaded from <http://mmbasic.com>