

How to download MARS to a PC to create and test MIPS assembly programs.

Install

1. Make sure that java is installed on your computer.

2. Visit the Mars Website:

<http://courses.missouristate.edu/KenVollmar/MARS/download.htm>

Click on the icon "Download MARS" to obtain your own copy of Mars. it is a java archive file named **Mars.jar** .

Run and Debug your MIPS program with Mars

Run your program in the integrated development environment (IDE) provided by Mars

1. Save the jar file in some folder. Open a shell in that folder. Run MARS with the command
> **java -jar Mars.jar**

The Mars IDE window should be launched.

2. You can create a new assembly program by clicking the menu **File -> New (ctrl + N)** or

3. You can open a existing assembly program by clicking the menu **File -> Open (ctrl + O)**

To test Mars, you can get a *Sample MIPS assembly program* at:

<http://courses.missouristate.edu/KenVollmar/MARS/Fibonacci.asm>

4. Edit your program in the "Edit" window.

5. Assemble your program by clicking the menu **Run -> assemble (F3)**

The window will be switched from Edit to Execute automatically.

6. For debugging purposes, add *optional* breakpoints by checking the **Bkpt** column at the beginning of some lines in Execute window. Execution will pause at each breakpoint allowing you to examine MIPS register contents.

7. Run or resume execution of your program by clicking **Run -> go (f5)** to run to the next breakpoint if one exists or to the end of your program. You can also run in step by step mode, pausing after each executed MIPS instruction by clicking **Run -> Step (f7)**

8. The output from your program will be shown in **Run I/O** window.

A full tutorial of Mars can be found at

<http://courses.missouristate.edu/KenVollmar/MARS/CCSC-CP%20material/MARS%20Tutorial.doc>