Getting Started with `spim`

The simple version of SPIM is called `spim` on Windows and Unix. It can be run from any console or by another program. Although `spim` may be more difficult to learn, it operates just like `PCSpim` and `xspim` and provides the same functionality.

The `spim` terminal interface provides the following commands:

`exit`	Exit the simulator.
`read "file"`	Read *file* of assembly language into SPIM. If the file has already been read into SPIM, the system must be cleared (see `reinitialize`, below) or global labels will be multiply defined.
`load "file"`	Synonym for `read`.
`execute "a.out"`	Read the MIPS executable file *a.out* into SPIM. This command is only available when SPIM runs on a system containing a MIPS processor.
`run <addr>`	Start running a program. If the optional address *addr* is provided, the program starts at that address. Otherwise, the program starts at the global label `__start`, which is usually the default start-up code that calls the routine at the global label `main`.
`step <N>`	Step the program for *N* (default: 1) instructions. Print instructions as they execute.
`continue`	Continue program execution without stepping.
`print $N`	Print register *N*.
`print $fN`	Print floating-point register *N*.
`print_all_regs`	Print all registers.
`print_all_regs hex`	Print all registers in hexadecimal.
`print addr`	Print the contents of memory at address *addr*.
`print_sym`	Print the names and addresses of the global labels known to SPIM. Labels are local by default and become global only when declared in a `.globl` assembler directive (see "Assembler Syntax" section on page A-46).
`reinitialize`	Clear the memory and registers.

`breakpoint addr`	Set a breakpoint at address *addr*. *addr* can be either a memory address or symbolic label.
`delete addr`	Delete all breakpoints at address *addr*.
`list`	List all breakpoints.
.	Rest of line is an assembly instruction that is stored in memory.
`<nl>`	A newline reexecutes previous command.
`?`	Print a help message.

Most commands can be abbreviated to their unique prefix (e.g., `ex`, `re`, `l`, `ru`, `s`, `p`). More dangerous commands, such as `reinitialize`, require a longer prefix.