

## LispWorks HOWTO

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For most of CS148, you will be programming in a language called Rex, which is implemented over Lisp. This handout will help you get started with LispWorks, a very nice Lisp programming environment which you will use to build your Rex programs.

### Starting LispWorks

- To start LispWorks from a shell prompt, type “lispworks.” Lisp will start up immediately, but it will take a moment for it to start the development environment. If the environment doesn’t start up, type (tools:start-lispworks) into the interpreter.
- The first window to come up will be a monitor. Put this window out of the way, as you won’t need it unless you create a really bad infinite loop and need to press its “Break Lisp” button.
- The second window to appear is the control window. This window allows you to open a Lisp listener, open editors, see a tutorial, get help, and so on.
- To exit from LispWorks, choose Exit from the Appl menu, or type (bye) in a Lisp listener.

### Using Lisp

From the Lisp menu on the control window, select the “Listener” option. This brings up a Listener, where you can evaluate Lisp expressions like (+ 2 3) or use any functions you have defined with defun.

### Editing Lisp forms

From the “Edit” menu, select either “File” to load a source file already in existence or “New Buffer” to create a new Lisp source file. Either option will bring up an editor window which uses the same controls as Emacs. You can type in Lisp function definitions or other expressions to be evaluated, and use the options under the editor’s File menu to save your file.

Once you have an expression to be evaluated, the menus on the editor will come in handy. Under File, you can load the whole file into the Listener, causing any functions it contains to be defined. Alternatively, using the Buffer, Region or Definition menus, you can have the Listener evaluate a single function definition or other Lisp expression without loading the entire file.

### Other Notes

- There are a manuals for LispWorks in the AILab, on the docs shelf (white binding, small red lettering). Feel free to take a look at these in the AILab, or to sign them out for a short time. In either case, please make sure that you get the books back to the same shelf in the same place and the same condition in which you found them.
- For more information on Lisp, refer to pointers on the course web page.. You can also look at *Common Lisp: The Language II* by Guy Steele, also in the AILab.
- To test your skills, your first lab will be to evaluate some Lisp expressions and write some simple Lisp functions. If you are new to Lisp, start early so you have time to get help.