

Debugging Perl

- Print statement debugging
- Perl Debugger
- Profiling

Debugging with Print Statements

- Print statements can be used when debugging code
- Debugging statements can be triggered via argument processing or environment variables
 - use constant `DEBUG => $ENV{DEBUG};`
- Logs are your friends
- `Data::Dumper` for arrays, hashes, and objects
 - Joel said to look at `Data::Printer p()` too.
- `Devel::Peek` for looking at flags on strings such as `utf8` or `readonly` settings

Perl Debugger 101

- `perl -d script.pl`
- Getting help -- 'h'
- Navigating
 - 'n' -- stepping to the next line of code
 - 's' -- stepping into the next line of code
 - very tedious stepping process
- Breakpoints
 - Adding a breakpoint by hand
 - 'b 500' -- adds a breakpoint at line 500 in your code temporarily
 - c -- continues to the breakpoint if it's called
 - 'h b' shows many other ways to setup breakpoints
 - `$DB::single = 1; # Add a breakpoint to your code in your code`

Perl Debugger 101 Part 2

- Now that you are at your line of code what can you do there?
- Dump the stack - 'T'
- Turn tracing on - 't' -- this shows you what lines of code are being called and is very verbose
- View values for variables with print, or 'p', 'x'
- On objects find out what methods exist on the object - 'm'.

Perl Debugger 101 Part 3

- Complications that make the perl debugger a challenge
 - fork - if you've got a well built perl for your OS, you should get a new xterm window for each forked child that is it's own perl debugger prompt
 - disassociated terminals - log files may be a better choice, but if you have access to the disassociation code, you can do a condition around it to turn off the disassociation when running the perl debugger
 - web apps - I've not done any perl debugging in web apps after the CGI era, and back then it included me running my CGI scripts by hand. This is not ideal. Logging may be a better option. Though hopefully Joel has some ideas to express here.
 - threads - I've not attempted to use the perl debugger on a piece of threaded perl. I'd expect interesting results, so you may need to use logging instead.

Profiling Perl

- What is profiling?
- Why profile?
- What's a good profiler? -- Devel::NYTProf
- `perl -d:NYTProf script.pl`
- `nytprofhtml`
- `firefox nytprof/index.html`