

Perl Debugging 101

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Bugs

What is a bug?

- Behavior you didn't intend
- Behavior that deviates from the requirements

Finding Bugs

How are bugs found?

- People Based
 - Code review
 - Pair programming
 - Manual programmer testing
 - Manual CSR (testers) testing
- Machine Based
 - Automated unit tests
 - Automated system tests

Cost of Bugs

What do bugs cost?

- Early/Limited scope (cheap)
 - Automated unit tests
 - Code review
 - Pair programming
 - Manual programmer testing
- Late/Larger scope (expensive)
 - Manual CSR (testers) testing
 - More complicated
- Too Late
 - End users

Preventing Bugs

Best techniques

- Clear requirements
 - Ask questions
- Use
 - strict
 - warnings
- Small routines
- Small scopes
- Limited side effects
- Automated tests

Dealing with Bugs

Standalone script

- Prints
- Warns
- Data::Dumper
- perl's debugger
- OptiPerl debugger

Dealing with Bugs

Web Applications (CGI)

- Prints
- Warns
- Data::Dumper
- ~~perl's debugger~~
- ~~OptiPerl debugger~~

Dealing with Bugs

Print

- Before and after calling a routine
- Standalone scripts
 - Will see output
- CGI web app
 - May not see output
- Combine with Data::Dumper
 - Visualize complex data structures
- Goes to STDOUT

Dealing with Bugs

Warn

- Before and after calling a routine
- Standalone scripts
 - Will see output
- CGI web app
 - May not see output
- Combine with Data::Dumper
 - Visualize complex data structures
- Add “\n” to get rid of the line number
- Goes to STDERR not STDOUT

Dealing with Bugs

Warn

- Can be overridden
 - `$main::SIG{__WARN__} = \&warn;`
- Output could be in the log file
 - Typically: `I:/CGILogs/`
 - IMT specific (could be anywhere)
 - Depends on web server configuration

Dealing with Bugs

CGI Web App

- Sessions
 - I:/sessions
 - View source on your page to get session id

Questions

Specific questions?

Examples?