

Test suite development

- Assume we've implemented the TesterII script that runs and evaluates a single test case for our program under test
- Assume we've implemented the TestCollection script that processes directories of test description files
- Each test description file contains exactly the arguments to be passed to one run of the TesterII script
- We need to create the actual test description files, the actual test data files that they make use of, organize it all into directories, and document it all

Test description files

- Want each file named intuitively (reflects test case)
- Each file is supposed to represent a string of command line args for TesterII, but we also want it easily human-readable
- Perhaps use the line continuation `\` to lay out like

`-f ~/bin/myprogx \`

`-o ~/tests/output/someoutputfile \`

`-r ~/tests/returns/somereturnfile`

Directories of test description files

- Probably want one master directory of test description files for our program under test, divided into subdirectories based on more specific categories of test
- Might have a subdirectory for 'normal' behaviour tests, another for user-input errors, another for permission/file errors, etc (so we can test specific aspects)
- Might have some directories of tests we run during different stages of development that are not appropriate for final product

Actual test data files

- For each test case (and hence each test description file) we need to make sure all the files it references actually exist in the right places
- Files to be used for stdin, for command line args, for expected return values, expected stdout, expected stderr, setup scripts to be run, checking scripts to be run, etc
- Need to decide how to store all these in a way that makes sense to the tester, and makes it easy to add/alter tests

Possible data organization

- Perhaps for each test case we create a directory someplace that has all the files for that one test case, ... but if the same file (e.g. same setup script or same input file) is used in lots of test cases then we're making lots of copies of it (bad news if we decide to alter it later)
- Perhaps we create a separate directory for each type of file, e.g. one directory containing all the setup scripts, one directory containing all the files of command line args, ... but when creating test case it might be easy to pick wrong one out of one of the directories

Documentation

- Need a scheme suitable for your team and project, document it, make sure everyone understands/follows it
- Documentation on which files are found where, which directories contain which suites of tests etc, an up-to-date index of all the test cases and files they reference
- Documentation and examples on how to run test suites and evaluate results
- Documentation and examples on how to add/alter a test case