

Readme

So how the code works for the black box testing is that I have a black box testing engine called TreeWalker. TreeWalker takes in a check class object and a file path to the file that will be checked.

You then call TreeWalker to do the actual testing and then the check asserts that the values came out properly.

Metrics

So in the readme of my github repo there is a list of all the operators and operands that I used, and what tests I implemented (which was all of them).

Report

Fault Models were written under each of the checklist item below, I did not want to spend time doing test that were more function specific because I do not have the time to dedicate to that with personal life things and how many more school projects that I have to do / contribute to.

A good thing to note is that I had an issue where counting the token IDENT as an operand is not a good thing as it was over counting the operands in each test that used them, so if there are any lists that I have not switched to the global constants operand list then they might miscount things.

Fault Model

A fault model is something that directs and could be a potential fault with a class or method that you would be testing for in a program. These are mostly used in black box testing.

What I would have done if I was asked to apply Class Testing on this project.

Well if I would have to implement Class testing I would need less test cases because instead of testing each method I am testing each class individually and making sure that it outputs the proper results when given a known input.

Checklist of features

Black Box Testing

- ✓ Black Box Testing Engine
- ✓ Screenshot of working test in (DEL3)

Counting Checks

- ✓ Comment Count Check
 - ✓ Fault no comments
 - ✓ Fault one comment
 - ✓ Fault Mixed multiline and inline comments
 - ✓ Fault just multiline comments
 - ✓ Fault just inline comments
- ✓ Comment Line Count Check
 - ✓ Fault no comments
 - ✓ Fault one comment
 - ✓ Fault Mixed multiline and inline comments
 - ✓ Fault just multiline comments
 - ✓ Fault just inline comments
- ✓ Expression Count Check
 - ✓ Fault no Expressions
 - ✓ Fault one Expressions
 - ✓ Fault lots of Expressions
- ✓ Looping Count Check
 - ✓ Fault no loops
 - ✓ Fault just for loop
 - ✓ Fault just while loop
 - ✓ Fault mixed loops
- ✓ Operand Count Check
 - ✓ Fault no operands
 - ✓ Fault multi operands
- ✓ Operator Count Check
 - ✓ Fault no operators
 - ✓ Fault nested operators

- ✓ Fault lots of operators

Halstead Checks

- ✓ Halstead Difficulty
 - ✓ None
 - ✓ All Unique
- ✓ Halstead Effort
 - ✓ None
 - ✓ Actual Inputs
- ✓ Halstead Length
 - ✓ None
 - ✓ Something
- ✓ Halstead Vocabulary
 - ✓ None
 - ✓ Unique
- ✓ Halstead Volume
 - ✓ None