

Test Report

Category A

HalsteadLengthCheck.java

Coverage

- **Line Coverage:** 38/38 (100%)
- **Branch Coverage:** N/a (No branches)

Tests

- **testGetTokens(): passed** (Assert return value of 3 methods: getDefaultTokens(), getAcceptableTokens(), and getRequiredTokens())
- **testVisitToken(): passed** (verify if the method visitToken() executed)
- **testBeginTree(): passed** (verify if the method beginTree() executed)
- **testFinishTree(): passed** (call visitToken() 5 times and assert the “count” variable passed in log() method)

HalsteadVocabularyCheck.java

Coverage

- **Line Coverage:** 39/39 (100%)
- **Branch Coverage:** N/a (No branches)

Tests

- **testGetTokens(): passed** (Assert return value of 3 methods: getDefaultTokens(), getAcceptableTokens(), and getRequiredTokens())
- **testVisitToken(): passed** (verify if the method visitToken() executed)
- **testBeginTree(): passed** (verify if the method beginTree() executed)
- **testFinishTree(): passed** (call visitToken() 5 times with 4 tokens ('+', '+', '-', 'sort', 'b') and assert the “count” variable passed in log() method)

HalsteadVolumeCheck.java

Coverage

- **Line Coverage:** 50/50 (100%)
- **Branch Coverage:** N/a (No branches)

Tests

- **testGetTokens(): passed** (Assert return value of 3 methods: getDefaultTokens(), getAcceptableTokens(), and getRequiredTokens())
- **testVisitToken(): passed** (verify if the method visitToken() executed)
- **testBeginTree(): passed** (verify if the method beginTree() executed)

- **testFinishTree(): passed** (call visitToken() 5 times with 4 tokens ('+', '+', '-', 'sort', 'b') and assert the result variable passed in log() method)

HalsteadDifficultyCheck.java

Coverage

- **Line Coverage:** 58/58 (100%)
- **Branch Coverage:** 29T 34F, 29F 34T (100%)

Tests

- **testGetTokens(): passed** (Assert return value of 3 methods: getDefaultTokens(), getAcceptableTokens(), and getRequiredTokens())
- **testVisitToken(): passed** (verify if the method visitToken() executed with an operand and an operator for branch coverage)
- **testBeginTree(): passed** (verify if the method beginTree() executed)
- **testFinishTree(): passed** (call visitToken() 7 times with 4 operator tokens ('+', '+', '-', '-', 'int', '(', '(') + 6 times with 3 operand tokens ('sort', 'sort', 'a', 'a', '5', '5') then assert the result passed in log() method)

HalsteadEffortCheck.java

Coverage

- **Line Coverage:** 73/73 (100%)
- **Branch Coverage:** 42T 47F, 42F 47T (100%)

Tests

- **testGetTokens(): passed** (Assert return value of 3 methods: getDefaultTokens(), getAcceptableTokens(), and getRequiredTokens())
- **testVisitToken(): passed** (verify if the method visitToken() executed with an operand and an operator for branch coverage)
- **testBeginTree(): passed** (verify if the method beginTree() executed)
- **testFinishTree(): passed** (call visitToken() 7 times with 4 operator tokens ('+', '+', '-', '-', 'int', '(', '(') + 6 times with 3 operand tokens ('sort', 'sort', 'a', 'a', '5', '5') then assert the result passed in log() method)

Category B

CommentsCountCheck.java

Coverage

- **Line Coverage:** 41/41 (100%)
- **Branch Coverage:** N/a (No branches)

Tests

- **testGetTokens(): passed** (Assert return value of 3 methods: getDefaultTokens(), getAcceptableTokens(), and getRequiredTokens())
- **testVisitToken(): passed** (verify if the method visitToken() executed)
- **testIsCommentNodeRequired(): passed** (assert if the method returns true when called)
- **testBeginTree(): passed** (verify if the method beginTree() executed)
- **testFinishTree(): passed** (call visitToken() 5 times and assert the “count” variable passed in log() method)

LineOfCommentCountCheck.java

Coverage

- **Line Coverage:** 55/55 (100%)
- **Branch Coverage:** 32T 36F 40F, 32F 36T 40F, 32F 36F 40T (100%)

Tests

- **testGetTokens(): passed** (Assert return value of 3 methods: getDefaultTokens(), getAcceptableTokens(), and getRequiredTokens())
- **testVisitToken(): passed** (verify if the method visitToken() executed with three types of tokens (BLOCK_COMMENT_BEGIN, BLOCK_COMMENT_END, and SINGLE_LINE_COMMENT) for branch coverage)
- **testIsCommentNodeRequired(): passed** (assert if the method returns true when called)
- **testBeginTree(): passed** (verify if the method beginTree() executed)
- **testFinishTree(): passed** (call visitToken() with 1 multi-line block comment, 1 single-line block comment, and 2 single-line comment then assert the “count” variable passed in log() method)

LoopStatementCountCheck.java

Coverage

- **Line Coverage:** 39/39 (100%)
- **Branch Coverage:** N/a (No branches)

Tests

- **testGetTokens(): passed** (Assert return value of 3 methods: getDefaultTokens(), getAcceptableTokens(), and getRequiredTokens())
- **testVisitToken(): passed** (verify if the method visitToken() executed)
- **testBeginTree(): passed** (verify if the method beginTree() executed)
- **testFinishTree(): passed** (call visitToken() 5 times and assert the “count” variable passed in log() method)

OperatorsCountCheck.java

Coverage

- **Line Coverage:** 38/38 (100%)
- **Branch Coverage:** N/a (No branches)

Tests

- **testGetTokens(): passed** (Assert return value of 3 methods: getDefaultTokens(), getAcceptableTokens(), and getRequiredTokens())
- **testVisitToken(): passed** (verify if the method visitToken() executed)
- **testBeginTree(): passed** (verify if the method beginTree() executed)
- **testFinishTree(): passed** (call visitToken() 5 times and assert the “count” variable passed in log() method)

OperandsCountCheck.java

Coverage

- **Line Coverage:** 38/38 (100%)
- **Branch Coverage:** N/a (No branches)

Tests

- **testGetTokens(): passed** (Assert return value of 3 methods: getDefaultTokens(), getAcceptableTokens(), and getRequiredTokens())
- **testVisitToken(): passed** (verify if the method visitToken() executed)
- **testBeginTree(): passed** (verify if the method beginTree() executed)
- **testFinishTree(): passed** (call visitToken() 5 times and assert the “count” variable passed in log() method)

ExpressionCountCheck.java

Coverage

- **Line Coverage:** 37/37 (100%)
- **Branch Coverage:** N/a (No branches)

Tests

- **testGetTokens(): passed** (Assert return value of 3 methods: getDefaultTokens(), getAcceptableTokens(), and getRequiredTokens())
- **testVisitToken(): passed** (verify if the method visitToken() executed)
- **testBeginTree(): passed** (verify if the method beginTree() executed)
- **testFinishTree(): passed** (call visitToken() 5 times and assert the “count” variable passed in log() method)