MJava测试方案及测试报告

**文档描述：**

本篇文档主要给出MJava语言语法分析程序的测试方案整体思路以及具体的测试用例以及最终的测试结果。

**测试方案：**

本测试方案主要是针对相应的语法分析程序，结合MJava的语法规则和给出的抽象语法树同时参考老师提供的测试文件来设计测试用例，测试用例主要包括正向和反向测试用例。

**测试文件目录结构描述：**

测试文件目录下包含了所有的非终结符测试文件的文件夹，每个非终结符测试文件夹下按照具体的产生式规则来分类（如果对应多个产生式的话），最终每类测试文件分为反向测试文件（单独的文件夹）以及正向测试文件（与反向测试文件夹同目录）。在反向测试文件夹下列出了所有的反向测试文件，按照“test1.txt”来命名，同时给出了测试文件对应的词法分析结果，按照“tokenOut1.txt”来命名。正向测试文件按照顺序命名为“test`n`.txt”，同时也给出了相应的词法分析输出文件，还有对应的语法分析结果—抽象语法树结构并以“SyntaxOut.txt”命名。

**测试用例列表：(表中的测试文件以及输出文件都以超链接的形式给出)**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| 编号 | 测试点 | 正反向 | 测试输入 | 预期输出 | 实际输出 | 是否通过 |
| TC-1 | MainClass | 反 | [test1](测试文件/MainClass/反向测试文件/test1.txt) | ERROR: expect: CLASS but it is: IDENTIFIER at line: 1 near: Class | ERROR: expect: CLASS but it is: IDENTIFIER at line: 1 near: Class | 是 |
| TC-2 | MainClass | 反 | [test2](测试文件/MainClass/反向测试文件/test2.txt) | ERROR: expect: STATIC but it is: IDENTIFIER at line: 2 near: statics | ERROR: expect: STATIC but it is: IDENTIFIER at line: 2 near: statics | 是 |
| TC-3 | MainClass | 反 | [test3](测试文件/MainClass/反向测试文件/test3.txt) | ERROR: expect: STRING but it is: INT at line: 2 near: int | ERROR: expect: STRING but it is: INT at line: 2 near: int | 是 |
| TC-4 | MainClass | 反 | [test4](测试文件/MainClass/反向测试文件/test4.txt) | ERROR: expect: MAIN but it is: INTEGERLITERAL at line: 2 near: 789 | ERROR: expect: MAIN but it is: INTEGERLITERAL at line: 2 near: 789 | 是 |
| TC-5 | MainClass | 反 | [test5](测试文件/MainClass/反向测试文件/test5.txt) | ERROR: expect: LBRACKET but it is: IDENTIFIER at line: 3 near: mc | ERROR: expect: LBRACKET but it is: IDENTIFIER at line: 3 near: mc | 是 |
| TC-6 | MainClass | 正 | [test6](测试文件/MainClass/test6.txt) | Success | [SyntaxOut.txt](测试文件/MainClass/SyntaxOut.txt) | 是 |
| TC-7 | Type | 反 | [test1](测试文件/Type/反向测试文件/test1.txt) | ERROR: expect: RBRACKET but it is: IDENTIFIER at line: 12 near: messagelist | ERROR: expect: RBRACKET but it is: IDENTIFIER at line: 12 near: messagelist | 是 |
| TC-8 | Type | 正 | [test2](测试文件/Type/test2.txt) | Success | [SyntaxOut.txt](测试文件/Type/SyntaxOut.txt) | 是 |
| TC-9 | VarDeclaration | 反 | [test1](测试文件/VarDeclaration/反向测试文件/test1.txt) | ERROR: expect: IDENTIFIER but it is: INTEGERLITERAL at line: 11 near: 1542 | ERROR: expect: IDENTIFIER but it is: INTEGERLITERAL at line: 11 near: 1542 | 是 |
| TC-10 | VarDeclaration | 反 | [test2](测试文件/VarDeclaration/反向测试文件/test2.txt) | ERROR: expect: SEMI but it is: INT at line: 13 near: int | ERROR: expect: SEMI but it is: INT at line: 13 near: int | 是 |
| TC-11 | VarDeclaration | 正 | [test3](测试文件/VarDeclaration/test3.txt) | Success | [SyntaxOut.txt](测试文件/VarDeclaration/SyntaxOut.txt) | 是 |
| TC-12 | If\_Statement | 反 | [test1](测试文件/Statement/If_Statement/反向测试文件/test1.txt) | Error: expect: expression! at line: 3 near: ) | Error: expect: expression! at line: 3 near: ) | 是 |
| TC-13 | If\_Statement | 反 | [test2](测试文件/Statement/If_Statement/反向测试文件/test2.txt) | Error: expect: statement at line: 4 near: else | Error: expect: statement at line: 4 near: else | 是 |
| TC-14 | If\_Statement | 反 | [test3](测试文件/Statement/If_Statement/反向测试文件/test3.txt) | ERROR: expect: ELSE but it is: IDENTIFIER at line: 7 near: eLse | ERROR: expect: ELSE but it is: IDENTIFIER at line: 7 near: eLse | 是 |
| TC-15 | If\_Statement | 反 | [test4](测试文件/Statement/If_Statement/反向测试文件/test4.txt) | Error: expect: statement at line: 7 near: ; | Error: expect: statement at line: 7 near: ; | 是 |
| TC-16 | If\_Statement | 正 | [test5](测试文件/Statement/If_Statement/test5.txt) | Success | [SyntaxOut.txt](测试文件/Statement/If_Statement/SyntaxOut.txt) | 是 |
| TC-17 | While\_State | 反 | [test1](测试文件/Statement/While_State/反向测试文件/test1.txt) | Error: expect: expression! at line: 3 near: ) | Error: expect: expression! at line: 3 near: ) | 是 |
| TC-18 | While\_State | 反 | [test2](测试文件/Statement/While_State/反向测试文件/test2.txt) | Error: expect: statement at line: 3 near: ; | Error: expect: statement at line: 3 near: ; | 是 |
| TC-19 | While\_State | 正 | [test3](测试文件/Statement/While_State/test3.txt) | Success | [SyntaxOut.txt](测试文件/Statement/While_State/SyntaxOut.txt) | 是 |
| TC-20 | SystemOutState | 反 | [test1](测试文件/Statement/System_out_State/反向测试文件/test1.txt) | ERROR: expect: LPAREN but it is: INTEGERLITERAL at line: 3 near: 1 | ERROR: expect: LPAREN but it is: INTEGERLITERAL at line: 3 near: 1 | 是 |
| TC-21 | SystemOutState | 反 | [test2](测试文件/Statement/System_out_State/反向测试文件/test2.txt) | Error: expect: expression! at line: 3 near: ) | Error: expect: expression! at line: 3 near: ) | 是 |
| TC-22 | SystemOutState | 反 | [test3](测试文件/Statement/System_out_State/反向测试文件/test3.txt) | ERROR: expect: SEMI but it is: RBRACE at line: 4 near: } | ERROR: expect: SEMI but it is: RBRACE at line: 4 near: } | 是 |
| TC-23 | SystemOutState | 正 | [test4](测试文件/Statement/System_out_State/test4.txt) | Success | [SyntaxOut.txt](测试文件/Statement/System_out_State/SyntaxOut.txt) | 是 |
| TC-24 | AssignState | 反 | [test1](测试文件/Statement/AssignState/反向测试文件/test1.txt) | Error: expect: expression! at line: 4 near: = | Error: expect: expression! at line: 4 near: = | 是 |
| TC-25 | AssignState | 反 | [test2](测试文件/Statement/AssignState/反向测试文件/test2.txt) | Error: expect: expression! at line: 5 near: ; | Error: expect: expression! at line: 5 near: ; | 是 |
| TC-26 | AssignState | 反 | [test3](测试文件/Statement/AssignState/反向测试文件/test3.txt) | ERROR: expect: SEMI but it is: IDENTIFIER at line: 7 near: out | ERROR: expect: SEMI but it is: IDENTIFIER at line: 7 near: out | 是 |
| TC-27 | AssignState | 反 | [test4](测试文件/Statement/AssignState/反向测试文件/test4.txt) | ERROR: expect: SEMI but it is: RBRACKET at line: 8 near: ] | ERROR: expect: SEMI but it is: RBRACKET at line: 8 near: ] | 是 |
| TC-28 | AssignState | 反 | [test5](测试文件/Statement/AssignState/反向测试文件/test5.txt) | Error: expect: expression! at line: 8 near: ] | Error: expect: expression! at line: 8 near: ] | 是 |
| TC-29 | AssignState | 反 | [test6](测试文件/Statement/AssignState/反向测试文件/test6.txt) | ERROR: expect: RBRACKET but it is: EQ at line: 8 near: = | ERROR: expect: RBRACKET but it is: EQ at line: 8 near: = | 是 |
| TC-30 | AssignState | 正 | [test7](测试文件/Statement/AssignState/test7.txt) | Success | [SyntaxOut.txt](测试文件/Statement/AssignState/SyntaxOut.txt) | 是 |
| TC-31 | TerminalExpre | 正 | [test1](测试文件/Expression/TerminalExpre/test1.txt) | Success | [SyntaxOut.txt](测试文件/Expression/TerminalExpre/SyntaxOut.txt) | 是 |
| TC-32 | NewExpre | 反 | [test1](测试文件/Expression/NewExpre/反向测试文件/test1.txt) | ERROR: expect: IDENTIFIER but it is: INTEGERLITERAL at line: 4 near: 4895 | ERROR: expect: IDENTIFIER but it is: INTEGERLITERAL at line: 4 near: 4895 | 是 |
| TC-33 | NewExpre | 反 | [test2](测试文件/Expression/NewExpre/反向测试文件/test2.txt) | ERROR: expect: LPAREN but it is: RBRACKET at line: 4 near: ] | ERROR: expect: LPAREN but it is: RBRACKET at line: 4 near: ] | 是 |
| TC-34 | NewExpre | 反 | [test3](测试文件/Expression/NewExpre/反向测试文件/test3.txt) | ERROR: expect: RBRACKET but it is: SEMI at line: 4 near: ; | ERROR: expect: RBRACKET but it is: SEMI at line: 4 near: ; | 是 |
| TC-35 | NewExpre | 反 | [test4](测试文件/Expression/NewExpre/反向测试文件/test4.txt) | ERROR: expect: LPAREN but it is: RPAREN at line: 5 near: ) | ERROR: expect: LPAREN but it is: RPAREN at line: 5 near: ) | 是 |
| TC-36 | NewExpre | 正 | [test5](测试文件/Expression/NewExpre/test5.txt) | Success | [SyntaxOut.txt](测试文件/Expression/NewExpre/SyntaxOut.txt) | 是 |
| TC-37 | NoneExpre | 正 | [test1](测试文件/Expression/NoneExpre/test1.txt) | Success | [SyntaxOut1.txt](测试文件/Expression/NoneExpre/SyntaxOut1.txt) | 是 |
| TC-38 | NoneExpre | 正 | [test2](测试文件/Expression/NoneExpre/test2.txt) | Success | [SyntaxOut2.txt](测试文件/Expression/NoneExpre/SyntaxOut2.txt) | 是 |
| TC-39 | PriorityExpre | 反 | [test1](测试文件/Expression/PriorityExpre/反向测试文件/test1.txt) | Error: expect: expression! at line: 3 near: ) | Error: expect: expression! at line: 3 near: ) | 是 |
| TC-40 | PriorityExpre | 反 | [test2](测试文件/Expression/PriorityExpre/反向测试文件/test2.txt) | ERROR: expect: RPAREN but it is: LBRACE at line: 3 near: { | ERROR: expect: RPAREN but it is: LBRACE at line: 3 near: { | 是 |
| TC-41 | PriorityExpre | 正 | [test3](测试文件/Expression/PriorityExpre/test3.txt) | Success | [SyntaxOut.txt](测试文件/Expression/PriorityExpre/SyntaxOut.txt) | 是 |
| TC-42 | OperaExpre | 反 | [test1](测试文件/Expression/OperaExpre/反向测试文件/test1.txt) | Error: expect: expression! at line: 18 near: < | Error: expect: expression! at line: 18 near: < | 是 |
| TC-43 | OperaExpre | 反 | [test2](测试文件/Expression/OperaExpre/反向测试文件/test2.txt) | Error: expect: expression! at line: 19 near: + | Error: expect: expression! at line: 19 near: + | 是 |
| TC-44 | OperaExpre | 反 | [test3](测试文件/Expression/OperaExpre/反向测试文件/test3.txt) | ERROR: expect: SEMI but it is: EQ at line: 22 near: = | ERROR: expect: SEMI but it is: EQ at line: 22 near: = | 是 |
| TC-45 | OperaExpre | 反 | [test4](测试文件/Expression/OperaExpre/反向测试文件/test4.txt) | Error: expect: expression! at line: 24 near: \* | Error: expect: expression! at line: 24 near: \* | 是 |
| TC-46 | OperaExpre | 正 | [test5](测试文件/Expression/OperaExpre/test5.txt) | Success | [SyntaxOut.tx](测试文件/Expression/OperaExpre/SyntaxOut.txt)t | 是 |
| TC-47 | ArrayExpre | 反 | [test1](测试文件/Expression/ArrayExpre/反向测试文件/test1.txt) | Error: expect: expression! at line: 4 near: ] | Error: expect: expression! at line: 4 near: ] | 是 |
| TC-48 | ArrayExpre | 反 | [test2](测试文件/Expression/ArrayExpre/反向测试文件/test2.txt) | ERROR: expect: RBRACKET but it is: SEMI at line: 5 near: ; | ERROR: expect: RBRACKET but it is: SEMI at line: 5 near: ; | 是 |
| TC-49 | ArrayExpre | 正 | [test3](测试文件/Expression/ArrayExpre/test3.txt) | Success | [SyntaxOut.txt](测试文件/Expression/ArrayExpre/SyntaxOut.txt) | 是 |
| TC-50 | LengthExpre | 正 | [test1](测试文件/Expression/LengthExpre/test1.txt) | Success | [SyntaxOut.txt](测试文件/Expression/LengthExpre/SyntaxOut.txt) | 是 |
| TC-51 | CallExpre | 反 | [test1](测试文件/Expression/CallExpre/反向测试文件/test1.txt) | ERROR: expect: RPAREN but it is: INTEGERLITERAL at line: 4 near: 10 | ERROR: expect: RPAREN but it is: INTEGERLITERAL at line: 4 near: 10 | 是 |
| TC-52 | CallExpre | 反 | [test2](测试文件/Expression/CallExpre/反向测试文件/test2.txt) | ERROR: expect: LPAREN but it is: COMMA at line: 4 near: , | ERROR: expect: LPAREN but it is: COMMA at line: 4 near: , | 是 |
| TC-53 | CallExpre | 反 | [test3](测试文件/Expression/CallExpre/反向测试文件/test3.txt) | Error: expect: expression! at line: 4 near: ) | Error: expect: expression! at line: 4 near: ) | 是 |
| TC-54 | CallExpre | 反 | [test4](测试文件/Expression/CallExpre/反向测试文件/test4.txt) | ERROR: expect: RPAREN but it is: SEMI at line: 4 near: ; | ERROR: expect: RPAREN but it is: SEMI at line: 4 near: ; | 是 |
| TC-55 | CallExpre | 反 | [test5](测试文件/Expression/CallExpre/反向测试文件/test5.txt) | ERROR: expect: LPAREN but it is: RPAREN at line: 5 near: ) | ERROR: expect: LPAREN but it is: RPAREN at line: 5 near: ) | 是 |
| TC-6 | CallExpre | 正 | [test6](测试文件/Expression/CallExpre/test6.txt) | Success | [SyntaxOut.txt](测试文件/Expression/CallExpre/SyntaxOut.txt) | 是 |
| TC-57 | MethodDeclaration | 反 | [test1](测试文件/MethodDeclaration/反向测试文件/test1.txt) | ERROR: expect: IDENTIFIER but it is: LPAREN at line: 14 near: ( | ERROR: expect: IDENTIFIER but it is: LPAREN at line: 14 near: ( | 是 |
| TC-58 | MethodDeclaration | 反 | [test2](测试文件/MethodDeclaration/反向测试文件/test2.txt) | Error: expect: type at line: 14 near: return | Error: expect: type at line: 14 near: return | 是 |
| TC-59 | MethodDeclaration | 反 | [test3](测试文件/MethodDeclaration/反向测试文件/test3.txt) | ERROR: expect: IDENTIFIER but it is: INTEGERLITERAL at line: 14 near: 79849 | ERROR: expect: IDENTIFIER but it is: INTEGERLITERAL at line: 14 near: 79849 | 是 |
| TC-60 | MethodDeclaration | 反 | [test4](测试文件/MethodDeclaration/反向测试文件/test4.txt) | ERROR: expect: RPAREN but it is: BOOLEAN at line: 14 near: boolean | ERROR: expect: RPAREN but it is: BOOLEAN at line: 14 near: boolean | 是 |
| TC-61 | MethodDeclaration | 反 | [test5](测试文件/MethodDeclaration/反向测试文件/test5.txt) | ERROR: expect: RPAREN but it is: LBRACE at line: 14 near: { | ERROR: expect: RPAREN but it is: LBRACE at line: 14 near: { | 是 |
| TC-62 | MethodDeclaration | 反 | [test6](测试文件/MethodDeclaration/反向测试文件/test6.txt) | ERROR: expect: LBRACE but it is: IDENTIFIER at line: 15 near: index | ERROR: expect: LBRACE but it is: IDENTIFIER at line: 15 near: index | 是 |
| TC-63 | MethodDeclaration | 反 | [test7](测试文件/MethodDeclaration/反向测试文件/test7.txt) | ERROR: expect: RETURN but it is: RBRACE at line: 19 near: } | ERROR: expect: RETURN but it is: RBRACE at line: 19 near: } | 是 |
| TC-64 | MethodDeclaration | 反 | [test8](测试文件/MethodDeclaration/反向测试文件/test8.txt) | ERROR: expect: SEMI but it is: RBRACE at line: 20 near: } | ERROR: expect: SEMI but it is: RBRACE at line: 20 near: } | 是 |
| TC-65 | MethodDeclaration | 反 | [test9](测试文件/MethodDeclaration/反向测试文件/test9.txt) | ERROR: expect: } at line: 20 | ERROR: expect: } at line: 20 | 是 |
| TC-66 | MethodDeclaration | 正 | [test10](测试文件/MethodDeclaration/test10.txt) | Success | [SyntaxOut.txt](测试文件/MethodDeclaration/SyntaxOut.txt) | 是 |
| TC-67 | ClassDeclaration | 反 | [test1](测试文件/ClassDeclaration/反向测试文件/test1.txt) | ERROR: expect: LBRACE but it is: INT at line: 10 near: int | ERROR: expect: LBRACE but it is: INT at line: 10 near: int | 是 |
| TC-68 | ClassDeclaration | 反 | [test2](测试文件/ClassDeclaration/反向测试文件/test2.txt) | ERROR: expect: IDENTIFIER but it is: LBRACE at line: 13 near: { | ERROR: expect: IDENTIFIER but it is: LBRACE at line: 13 near: { | 是 |
| TC-69 | ClassDeclaration | 反 | [test3](测试文件/ClassDeclaration/反向测试文件/test3.txt) | ERROR: expect: LBRACE but it is: IDENTIFIER at line: 13 near: extend | ERROR: expect: LBRACE but it is: IDENTIFIER at line: 13 near: extend | 是 |
| TC-70 | ClassDeclaration | 反 | [test4](测试文件/ClassDeclaration/反向测试文件/test4.txt) | ERROR: expect: IDENTIFIER but it is: INTEGERLITERAL at line: 9 near: 6546464 | ERROR: expect: IDENTIFIER but it is: INTEGERLITERAL at line: 9 near: 6546464 | 是 |
| TC-71 | ClassDeclaration | 反 | [test5](测试文件/ClassDeclaration/反向测试文件/test5.txt) | ERROR: expect: IDENTIFIER but it is: THIS at line: 13 near: this | ERROR: expect: IDENTIFIER but it is: THIS at line: 13 near: this | 是 |
| TC-72 | ClassDeclaration | 反 | [test6](测试文件/ClassDeclaration/反向测试文件/test6.txt) | ERROR: expect: } at line: 19 | ERROR: expect: } at line: 19 | 是 |
| TC-73 | ClassDeclaration | 正 | [test7](测试文件/ClassDeclaration/test7.txt) | Success | [SyntaxOut.txt](测试文件/ClassDeclaration/SyntaxOut.txt) | 是 |
| TC-74 | Goal | 反 | [test1](测试文件/Goal/反向测试文件/test1.txt) | RROR: expect: PUBLIC but it is: INT at line: 2 near: int | RROR: expect: PUBLIC but it is: INT at line: 2 near: int | 是 |
| TC-75 | Goal | 反 | [test2](测试文件/Goal/反向测试文件/test2.txt) | Error: expect: type at line: 10 near: static | Error: expect: type at line: 10 near: static | 是 |
| TC-76 | Goal | 正 | [test3](测试文件/Goal/test3.txt) | Success | [SyntaxOut.txt](测试文件/Goal/SyntaxOut.txt) | 是 |