Iteration3

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Contents

1 Hierarchical Index **1**

1.1 Class Hierarchy 1

2 Class Index **3**

2.1 Class List 3

3 Class Documentation **5**

3.1 AstTestSuite Class Reference 5

3.2 CharConstToken Class Reference 5

3.3 DashToken Class Reference 6

3.4 EndOfFileToken Class Reference 6

3.5 ExtToken Class Reference 7

3.6 FalseKwdToken Class Reference 8

3.7 FloatConstToken Class Reference 8

3.8 ForwardSlashToken Class Reference 9

3.9 IfToken Class Reference 9

3.10 IntConstToken Class Reference 10

3.11 LeftParenToken Class Reference 10

3.12 LetToken Class Reference 10

3.13 NotOpToken Class Reference 11

3.14 Parser Class Reference 11

3.15 ParseResult Class Reference 12

3.16 ParserTestSuite Class Reference 13

3.17 PlusSignToken Class Reference 13

3.18 RegexTestSuite Class Reference 14

3.19 RelationalOpToken Class Reference 14

3.20 Scanner Class Reference 15

3.21 ScannerTestSuite Class Reference 15

3.22 StarToken Class Reference 16

3.23 StringConstToken Class Reference 17

3.24 Token Class Reference 17

3.25 TrueKwdToken Class Reference 18

3.26 VariableNameToken Class Reference 18

Index **19**

Chapter 1

Hierarchical Index

1.1 Class Hierarchy

This inheritance list is sorted roughly, but not completely, alphabetically:

- ExtToken . . . 7
  - CharConstToken . . . 5
  - DashToken . . . 6
  - EndOfFileToken . . . 6
  - FalseKwdToken . . . 8
  - FloatConstToken . . . 8
  - ForwardSlashToken . . . 9
  - IfToken . . . 9
  - IntConstToken . . . 10
  - LeftParenToken . . . 10
  - LetToken . . . 10
  - NotOpToken . . . 11
  - PlusSignToken . . . 13
  - RelationalOpToken . . . 14
  - StarToken . . . 16
  - StringConstToken . . . 17
  - TrueKwdToken . . . 18
  - VariableNameToken . . . 18
- Parser . . . 11
- ParseResult . . . 12
- Scanner . . . 15
- TestSuite
  - AstTestSuite . . . 5
  - ParserTestSuite . . . 13
  - RegexTestSuite . . . 14
  - ScannerTestSuite . . . 15
- Token . . . 17

Chapter 2

Class Index

2.1 Class List

Here are the classes, structs, unions and interfaces with brief descriptions:

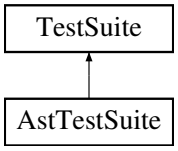
AstTestSuite 5
CharConstToken 5
DashToken 6
EndOfFileToken 6
ExtToken 7
FalseKwdToken 8
FloatConstToken 8
ForwardSlashToken 9
IfToken 9
IntConstToken 10
LeftParenToken 10
LetToken 10
NotOpToken 11
Parser 11
ParseResult 12
ParserTestSuite 13
PlusSignToken 13
RegexTestSuite 14
RelationalOpToken 14
Scanner 15
ScannerTestSuite 15
StarToken 16
StringConstToken 17
Token 17
TrueKwdToken 18
VariableNameToken 18

Chapter 3

Class Documentation

3.1 AstTestSuite Class Reference

Inheritance diagram for AstTestSuite:



Public Member Functions

- char ∗∗ **makeArgs** (const char ∗a0, const char ∗a1)
- void **writeFile** (const string text, const string filename)
- char ∗ **readFile** (const char ∗fn)
- void **unparse_tests** (string file)
- void **test_sample_1** (void)
- void **test_sample_2** (void)
- void **test_sample_3** (void)
- void **test_sample_4** (void)
- void **test_sample_5** (void)
- void **test_mysample** (void)
- void **test_forest_loss** (void)

Public Attributes

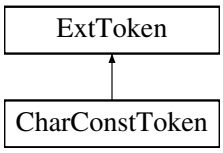
- Parser **p**
- ParseResult **pr**

The documentation for this class was generated from the following file:

- ast_tests.h

3.2 CharConstToken Class Reference

Inheritance diagram for CharConstToken:



Public Member Functions

- **CharConstToken** (Parser *p, Token *t)
- ParseResult **nud** ()
- std::string **description** ()

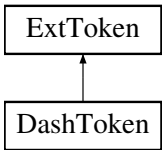
Additional Inherited Members

The documentation for this class was generated from the following file:

- extToken.h

3.3 DashToken Class Reference

Inheritance diagram for DashToken:



Public Member Functions

- **DashToken** (Parser *p, Token *t)
- ParseResult **led** (ParseResult left)
- std::string **description** ()
- int **lbp** ()

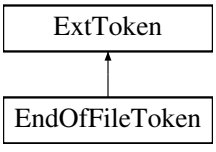
Additional Inherited Members

The documentation for this class was generated from the following file:

- extToken.h

3.4 EndOfFileToken Class Reference

Inheritance diagram for EndOfFileToken:



Public Member Functions

- **EndOfFileToken** (Parser ∗p, Token ∗t)
- std::string **description** ()

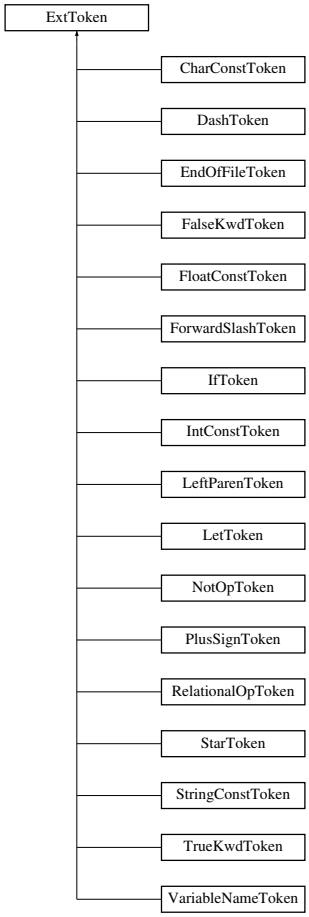
Additional Inherited Members

The documentation for this class was generated from the following file:

- extToken.h

3.5 ExtToken Class Reference

Inheritance diagram for ExtToken:



Public Member Functions

- **ExtToken** (Parser ∗p, Token ∗t)
- **ExtToken** (Parser ∗p, Token ∗t, std::string d)
- virtual ParseResult **nud** ()
- virtual ParseResult **led** (ParseResult left)
- virtual int **lbp** ()
- virtual std::string **description** ()

Public Attributes

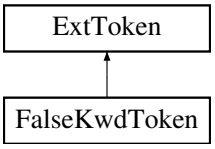
- std::string **lexeme**
- tokenType **terminal**
- ExtToken * **next**
- Parser * **parser**

The documentation for this class was generated from the following file:

- extToken.h

3.6 FalseKwdToken Class Reference

Inheritance diagram for FalseKwdToken:



Public Member Functions

- **FalseKwdToken** (Parser *p, Token *t)
- ParseResult **nud** ()
- std::string **description** ()

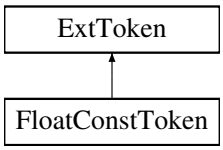
Additional Inherited Members

The documentation for this class was generated from the following file:

- extToken.h

3.7 FloatConstToken Class Reference

Inheritance diagram for FloatConstToken:



Public Member Functions

- **FloatConstToken** (Parser *p, Token *t)
- ParseResult **nud** ()
- std::string **description** ()

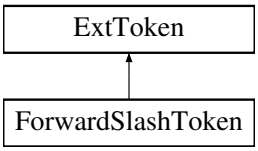
Additional Inherited Members

The documentation for this class was generated from the following file:

- extToken.h

3.8 ForwardSlashToken Class Reference

Inheritance diagram for ForwardSlashToken:



Public Member Functions

- **ForwardSlashToken** (Parser ∗p, Token ∗t)
- ParseResult **led** (ParseResult left)
- std::string **description** ()
- int **lbp** ()

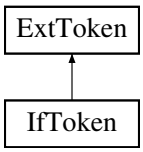
Additional Inherited Members

The documentation for this class was generated from the following file:

- extToken.h

3.9 IfToken Class Reference

Inheritance diagram for IfToken:



Public Member Functions

- **IfToken** (Parser ∗p, Token ∗t)
- ParseResult **nud** ()
- std::string **description** ()
- int **lbp** ()

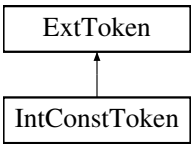
Additional Inherited Members

The documentation for this class was generated from the following file:

- extToken.h

3.10 IntConstToken Class Reference

Inheritance diagram for IntConstToken:



Public Member Functions

- **IntConstToken** (Parser ∗p, Token ∗t)
- ParseResult **nud** ()
- std::string **description** ()

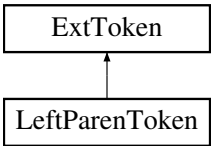
Additional Inherited Members

The documentation for this class was generated from the following file:

- extToken.h

3.11 LeftParenToken Class Reference

Inheritance diagram for LeftParenToken:



Public Member Functions

- **LeftParenToken** (Parser ∗p, Token ∗t)
- ParseResult **nud** ()
- std::string **description** ()
- int **lbp** ()

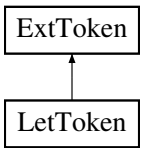
Additional Inherited Members

The documentation for this class was generated from the following file:

- extToken.h

3.12 LetToken Class Reference

Inheritance diagram for LetToken:



Public Member Functions

- **LetToken** (Parser ∗p, Token ∗t)
- ParseResult **nud** ()
- std::string **description** ()
- int **lbp** ()

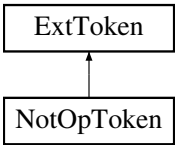
Additional Inherited Members

The documentation for this class was generated from the following file:

- extToken.h

3.13 NotOpToken Class Reference

Inheritance diagram for NotOpToken:



Public Member Functions

- **NotOpToken** (Parser ∗p, Token ∗t)
- ParseResult **nud** ()
- std::string **description** ()

Additional Inherited Members

The documentation for this class was generated from the following file:

- extToken.h

3.14 Parser Class Reference

Public Member Functions

- ParseResult **parse** (const char ∗text)
- ParseResult **parseProgram** ()
- ParseResult **parseDecl** ()
- ParseResult **parseStandardDecl** ()

- ParseResult **parseMatrixDecl** ()
- ParseResult **parseStmts** ()
- ParseResult **parseStmt** ()
- ParseResult **parseExpr** (int rbp)
- ParseResult **parseTrueKwd** ()
- ParseResult **parseFalseKwd** ()
- ParseResult **parseIntConst** ()
- ParseResult **parseFloatConst** ()
- ParseResult **parseStringConst** ()
- ParseResult **parseCharConst** ()
- ParseResult **parseVariableName** ()
- ParseResult **parseNestedExpr** ()
- ParseResult **parseNotExpr** ()
- ParseResult **parseLetExpr** ()
- ParseResult **parseIfExpr** ()
- ParseResult **parseAddition** (ParseResult left)
- ParseResult **parseMultiplication** (ParseResult left)
- ParseResult **parseSubtraction** (ParseResult left)
- ParseResult **parseDivision** (ParseResult left)
- ParseResult **parseRelationalExpr** (ParseResult left)
- void **match** (tokenType tt)
- bool **attemptMatch** (tokenType tt)
- bool **nextIs** (tokenType tt)
- void **nextToken** ()
- std::string **terminalDescription** (tokenType terminal)
- std::string **makeErrorMsg** (tokenType terminal)
- std::string **makeErrorMsgExpected** (tokenType terminal)
- std::string **makeErrorMsg** (const char ∗msg)

Public Attributes

- ExtToken ∗ **tokens**
- ExtToken ∗ **currToken**
- ExtToken ∗ **prevToken**
- Token ∗ **stokens**
- Scanner ∗ **s**

The documentation for this class was generated from the following files:

- parser.h
- parser.cpp

3.15 ParseResult Class Reference

Public Attributes

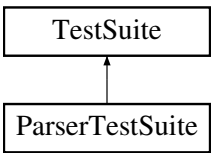
- std::string **errors**
- Node ∗ **ast**
- bool **ok**

The documentation for this class was generated from the following files:

- parseResult.h
- parseResult.cpp

3.16 ParserTestSuite Class Reference

Inheritance diagram for ParserTestSuite:



Public Member Functions

- void **test_setup_code** ()
- void **test_parse_bad_syntax** ()
- void **test_parse_sample_1** ()
- void **test_parse_sample_2** ()
- void **test_parse_sample_3** ()
- void **test_parse_sample_4** ()
- void **test_parse_sample_5** ()
- void **test_parse_mysample** ()
- void **test_parse_forestLossV2** ()

Public Attributes

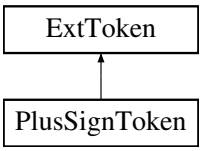
- Scanner * **s**
- Parser * **p**

The documentation for this class was generated from the following file:

- parser_tests.h

3.17 PlusSignToken Class Reference

Inheritance diagram for PlusSignToken:



Public Member Functions

- **PlusSignToken** (Parser *p, Token *t)
- ParseResult **led** (ParseResult left)
- std::string **description** ()
- int **lbp** ()

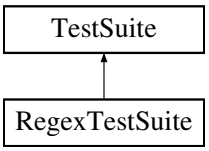
Additional Inherited Members

The documentation for this class was generated from the following file:

- extToken.h

3.18 RegexTestSuite Class Reference

Inheritance diagram for RegexTestSuite:



Public Member Functions

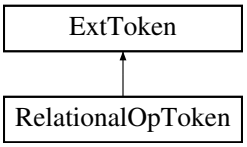
- void **test_make_matchRegex_match** (void)
- void **test_make_matchRegex_no_match** (void)
- void **test_make_matchRegex_match_string_copy** (void)

The documentation for this class was generated from the following file:

- regex_tests.h

3.19 RelationalOpToken Class Reference

Inheritance diagram for RelationalOpToken:



Public Member Functions

- **RelationalOpToken** (Parser ∗p, Token ∗t, std::string d)
- ParseResult **led** (ParseResult left)
- int **lbp** ()

Additional Inherited Members

The documentation for this class was generated from the following file:

- extToken.h

3.20 Scanner Class Reference

Public Member Functions

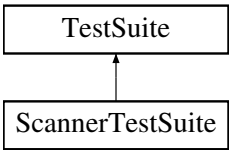
- Token * **scan** (const char *text)

The documentation for this class was generated from the following files:

- scanner.h
- scanner.cpp

3.21 ScannerTestSuite Class Reference

Inheritance diagram for ScannerTestSuite:



Public Member Functions

- void **test_setup_code** ()
- void **test_terminal_whileKwd** ()
- void **test_terminal_boolKwd** ()
- void **test_terminal_trueKwd** ()
- void **test_terminal_falseKwd** ()
- void **test_terminal_intKwd** ()
- void **test_terminal_floatKwd** ()
- void **test_terminal_stringKwd** ()
- void **test_terminal_matrixKwd** ()
- void **test_terminal_letKwd** ()
- void **test_terminal_inKwd** ()
- void **test_terminal_endKwd** ()
- void **test_terminal_ifKwd** ()
- void **test_terminal_thenKwd** ()
- void **test_terminal_elseKwd** ()
- void **test_terminal_repeatKwd** ()
- void **test_terminal_printKwd** ()
- void **test_terminal_toKwd** ()
- void **test_terminal_intConst** ()
- void **test_terminal_floatConst** ()
- void **test_terminal_stringConst** ()
- void **test_terminal_variableName** ()
- void **test_terminal_leftParen** ()
- void **test_terminal_rightParen** ()
- void **test_terminal_leftCurly** ()
- void **test_terminal_rightCurly** ()
- void **test_terminal_leftSquare** ()
- void **test_terminal_rightSquare** ()
- void **test_terminal_colon** ()

- void **test_terminal_semiColon** ()
- void **test_terminal_assign** ()
- void **test_terminal_plusSign** ()
- void **test_terminal_star** ()
- void **test_terminal_dash** ()
- void **test_terminal_forwardSlash** ()
- void **test_terminal_lessThan** ()
- void **test_terminal_lessThanEqual** ()
- void **test_terminal_greaterThan** ()
- void **test_terminal_greaterThanEqual** ()
- void **test_terminal_equalsEquals** ()
- void **test_terminal_notEquals** ()
- void **test_terminal_andOp** ()
- void **test_terminal_orOp** ()
- void **test_terminal_notOp** ()
- void **test_terminal_endOfFile** ()
- void **test_terminal_lexicalErrors** ()
- bool **noLexicalErrors** (Token ∗tks)
- void **scanFileNoLexicalErrors** (const char ∗filename)
- bool **sameTerminals** (Token ∗tks, int numTerms, tokenType ∗ts)
- void **test_scan_empty** ()
- void **test_scan_empty_comment** ()
- void **test_scan_lexicalErrors** ()
- void **test_scan_nums_vars** ()
- void **test_scan_bad_syntax_good_tokens** ()
- void **test_scan_sample_forestLoss** ()

Public Attributes

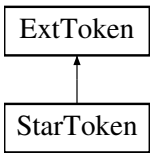
- Scanner ∗ **s**

The documentation for this class was generated from the following file:

- scanner_tests.h

3.22 StarToken Class Reference

Inheritance diagram for StarToken:



Public Member Functions

- **StarToken** (Parser ∗p, Token ∗t)
- ParseResult **led** (ParseResult left)
- std::string **description** ()
- int **lbp** ()

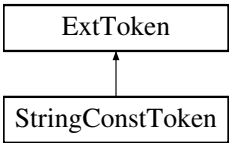
Additional Inherited Members

The documentation for this class was generated from the following file:

- extToken.h

3.23 StringConstToken Class Reference

Inheritance diagram for StringConstToken:



Public Member Functions

- **StringConstToken** (Parser ∗p, Token ∗t)
- ParseResult **nud** ()
- std::string **description** ()

Additional Inherited Members

The documentation for this class was generated from the following file:

- extToken.h

3.24 Token Class Reference

Public Member Functions

- **Token** (tokenType token, std::string str, int num)
- **Token** (std::string str, tokenType token, int num)

Public Attributes

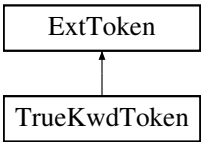
- tokenType **terminal**
- std::string **lexeme**
- Token ∗ **next**

The documentation for this class was generated from the following file:

- scanner.h

3.25 TrueKwdToken Class Reference

Inheritance diagram for TrueKwdToken:



Public Member Functions

- **TrueKwdToken** (Parser ∗p, Token ∗t)
- ParseResult **nud** ()
- std::string **description** ()

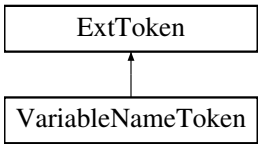
Additional Inherited Members

The documentation for this class was generated from the following file:

- extToken.h

3.26 VariableNameToken Class Reference

Inheritance diagram for VariableNameToken:



Public Member Functions

- **VariableNameToken** (Parser ∗p, Token ∗t)
- ParseResult **nud** ()
- std::string **description** ()

Additional Inherited Members

The documentation for this class was generated from the following file:

- extToken.h

Index

AstTestSuite, 5

CharConstToken, 5

DashToken, 6

EndOfFileToken, 6
ExtToken, 7

FalseKwdToken, 8
FloatConstToken, 8
ForwardSlashToken, 9

IfToken, 9
IntConstToken, 10

LeftParenToken, 10
LetToken, 10

NotOpToken, 11

ParseResult, 12
Parser, 11
ParserTestSuite, 13
PlusSignToken, 13

RegexTestSuite, 14
RelationalOpToken, 14

Scanner, 15
ScannerTestSuite, 15
StarToken, 16
StringConstToken, 17

Token, 17
TrueKwdToken, 18

VariableNameToken, 18