Stack . LexToken(CLASS, 'class', 1, 0) CLASS . LexToken(ID, 'Zoo', 1,6) CLASS ID . LexToken(EXTENDS, 'extends', 1, 10) CLASS ID EXTENDS. LexToken(ID, 'AnimalKingdom', 1, 18) CLASS ID EXTENDS ID . LexToken(IMPLEMENTS, 'implements', 1, 32) CLASS ID EXTENDS ID IMPLEMENTS. LexToken(ID, 'a', 1, 43) CLASS ID EXTENDS ID IMPLEMENTS ID . LexToken(COMMA,',',1,44) CLASS ID EXTENDS ID IMPLEMENTS ID COMMA. LexToken(ID, 'b', 1,46) CLASS ID EXTENDS ID IMPLEMENTS ID COMMA ID . LexToken(COMMA, ', ', 1, 47) CLASS ID EXTENDS ID IMPLEMENTS ID COMMA ID COMMA . LexToken(ID,'c',1,49) CLASS ID EXTENDS ID IMPLEMENTS ID COMMA ID COMMA ID . LexToken(LEFTBRACE, \(\frac{1}{2}, 1,51 \) CLASS ID EXTENDS ID IMPLEMENTS ID COMMA ID COMMA IdList . LexToken (LEFTBRACE, \(\frac{1}{7}, 1, 51 \) CLASS ID EXTENDS ID IMPLEMENTS ID COMMA IdList . LexToken(LEFTBRACE, '{',1,51) CLASS ID EXTENDS ID IMPLEMENTS IdList . LexToken(LEFTBRACE, '{',1,51) CLASS ID EXTENDS ID IMPLEMENTS IdList LEFTBRACE. LexToken(BOOLEAN, 'boolean', 1,54) CLASS ID EXTENDS ID IMPLEMENTS IdList LEFTBRACE BOOLEAN . LexToken(ID, 'isGorilla',1,62) CLASS ID EXTENDS ID IMPLEMENTS IdList LEFTBRACE Type. LexToken(ID, 'isGorilla', 1, 62) CLASS ID EXTENDS ID IMPLEMENTS IdList LEFTBRACE Type ID . LexToken(LEFTPAREN, '(',1,71) CLASS ID EXTENDS ID IMPLEMENTS IdList LEFTBRACE Type ID LEFTPAREN. LexToken(ID, 'Animal', 1, 73) CLASS ID EXTENDS ID IMPLEMENTS IdList LEFTBRACE Type ID LEFTPAREN ID . LexToken(ID, 'animal', 1,80) CLASS ID EXTENDS ID IMPLEMENTS IdList LEFTBRACE Type ID LEFTPAREN ID ID . LexToken(RIGHTPAREN,')',1,86) CLASS ID EXTENDS ID IMPLEMENTS IdList LEFTBRACE Type ID LEFTPAREN Variable . LexToken (RIGHTPAREN,')', 1,86) CLASS ID EXTENDS ID IMPLEMENTS IdList LEFTBRACE Type ID LEFTPAREN Formals . LexToken(RIGHTPAREN,')', 1,86) CLASS ID EXTENDS ID IMPLEMENTS IdList LEFTBRACE Type ID LEFTPAREN Formals RIGHTPAREN. LexToken(LEFTBRACE, '{',1,i'} CLASS ID EXTENDS ID IMPLEMENTS IdList LEFTBRACE Type ID LEFTPAREN Formals RIGHTPAREN LEFTBRACE . LexToken(IF,'if' CLASS ID EXTENDS ID IMPLEMENTS IdList LEFTBRACE Type ID LEFTPAREN Formals RIGHTPAREN LEFTBRACE IF. LexToken(LE CLASS ID EXTENDS ID IMPLEMENTS IdList LEFTBRACE Type ID LEFTPAREN Formals RIGHTPAREN LEFTBRACE IF LEFTPAREN . L CLASS ID EXTENDS ID IMPLEMENTS IdList LEFTBRACE Type ID LEFTPAREN Formals RIGHTPAREN LEFTBRACE IF LEFTPAREN ID CLASS ID EXTENDS ID IMPLEMENTS IdList LEFTBRACE Type ID LEFTPAREN Formals RIGHTPAREN LEFTBRACE IF LEFTPAREN L\ CLASS ID EXTENDS ID IMPLEMENTS IdList LEFTBRACE Type ID LEFTPAREN Formals RIGHTPAREN LEFTBRACE IF LEFTPAREN EX CLASS ID EXTENDS ID IMPLEMENTS IdList LEFTBRACE Type ID LEFTPAREN Formals RIGHTPAREN LEFTBRACE IF LEFTPAREN EX CLASS ID EXTENDS ID IMPLEMENTS IdList LEFTBRACE Type ID LEFTPAREN Formals RIGHTPAREN LEFTBRACE IF LEFTPAREN EX CLASS ID EXTENDS ID IMPLEMENTS IdList LEFTBRACE Type ID LEFTPAREN Formals RIGHTPAREN LEFTBRACE IF LEFTPAREN EX CLASS ID EXTENDS ID IMPLEMENTS IdList LEFTBRACE Type ID LEFTPAREN Formals RIGHTPAREN LEFTBRACE IF LEFTPAREN EX CLASS ID EXTENDS ID IMPLEMENTS IdList LEFTBRACE Type ID LEFTPAREN Formals RIGHTPAREN LEFTBRACE IF LEFTPAREN EX CLASS ID EXTENDS ID IMPLEMENTS IdList LEFTBRACE Type ID LEFTPAREN Formals RIGHTPAREN LEFTBRACE IF LEFTPAREN EX CLASS ID EXTENDS ID IMPLEMENTS IdList LEFTBRACE Type ID LEFTPAREN Formals RIGHTPAREN LEFTBRACE IF LEFTPAREN EX CLASS ID EXTENDS ID IMPLEMENTS IdList LEFTBRACE Type ID LEFTPAREN Formals RIGHTPAREN LEFTBRACE IF LEFTPAREN EX CLASS ID EXTENDS ID IMPLEMENTS IdList LEFTBRACE Type ID LEFTPAREN Formals RIGHTPAREN LEFTBRACE IF LEFTPAREN EX CLASS ID EXTENDS ID IMPLEMENTS IdList LEFTBRACE Type ID LEFTPAREN Formals RIGHTPAREN LEFTBRACE IF LEFTPAREN EX CLASS ID EXTENDS ID IMPLEMENTS IdList LEFTBRACE Type ID LEFTPAREN Formals RIGHTPAREN LEFTBRACE IF LEFTPAREN EX CLASS ID EXTENDS ID IMPLEMENTS IdList LEFTBRACE Type ID LEFTPAREN Formals RIGHTPAREN LEFTBRACE IF LEFTPAREN EX CLASS ID EXTENDS ID IMPLEMENTS IdList LEFTBRACE Type ID LEFTPAREN Formals RIGHTPAREN LEFTBRACE IF LEFTPAREN EX

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CLASS ID EXTENDS ID IMPLEMENTS IdList LEFTBRACE Fields . LexToken(RIGHTBRACE,'},1,154)

CLASS ID EXTENDS ID IMPLEMENTS IdList LEFTBRACE Fields RIGHTBRACE. Send

ClassDeclaration . \$end

Declaration . \$end

Program . \$end

```
Action
Shift and goto state 11
Shift and goto state 24
Shift and goto state 31
Shift and goto state 44
Shift and goto state 69
Shift and goto state 50
Shift and goto state 72
Shift and goto state 50
Shift and goto state 72
Shift and goto state 50
Reduce rule [IdList -> ID] with ['c'] and goto state 123
Reduce rule [IdList -> ID COMMA IdList] with ['b',',', None] and goto state 123
Reduce rule [IdList -> ID COMMA IdList] with ['a',',', None] and goto state 122
Shift and goto state 172
Shift and goto state 15
Reduce rule [Type -> BOOLEAN] with ['boolean'] and goto state 8
Shift and goto state 19
Shift and goto state 26
Shift and goto state 36
Shift and goto state 59
Reduce rule [Variable -> ID ID] with ['Animal', 'animal'] and goto state 39
Reduce rule [Formals -> Variable] with [None] and goto state 37
Shift and goto state 60
Shift and goto state 62
Shift and goto state 106
Shift and goto state 163
Shift and goto state 131
Reduce rule [LValue -> ID] with ['animal'] and goto state 95
Reduce rule [Expression -> LValue] with [None] and goto state 198
Shift and goto state 148
Reduce rule [CompareOperator -> EQUAL] with ['=='] and goto state 137
Shift and goto state 131
Reduce rule [LValue -> ID] with ['gorilla'] and goto state 95
Reduce rule [Expression -> LValue] with [None] and goto state 183
Reduce rule [Expression -> Expression CompareOperator Expression] with [None, None, None] and goto state 198
Shift and goto state 219
Shift and goto state 110
Shift and goto state 114
Reduce rule [Constant -> BOOLEANCONSTANT] with ['true'] and goto state 96
Reduce rule [Expression -> Constant] with [None] and goto state 167
Shift and goto state 202
Reduce rule [ReturnStatement -> RETURN Expression SEMICOLON] with ['return', None, ';'] and goto state 91
Reduce rule [Statement -> ReturnStatement] with [None] and goto state 233
Shift and goto state 241
```

Shift and goto state 110

Shift and goto state 114

Reduce rule [Constant -> BOOLEANCONSTANT] with ['false'] and goto state 96

Reduce rule [Expression -> Constant] with [None] and goto state 167

Shift and goto state 202

Reduce rule [ReturnStatement -> RETURN Expression SEMICOLON] with ['return',None,';'] and goto state 91

Reduce rule [Statement -> ReturnStatement] with [None] and goto state 245

Reduce rule [IfStatement -> IF LEFTPAREN Expression RIGHTPAREN Statement ELSE Statement] with ['if', '(', None, ')', None, 'el

Reduce rule [Statement -> IfStatement] with [None] and goto state 84

Reduce rule [Statements -> Statement] with [None] and goto state 81

Shift and goto state 132

Reduce rule [StatementBlock -> LEFTBRACE Statements RIGHTBRACE] with ['{',None,'}'] and goto state 79

Reduce rule [FunctionDeclaration -> Type ID LEFTPAREN Formals RIGHTPAREN StatementBlock] with [None, 'isGorilla', '(', N

Reduce rule [Field -> FunctionDeclaration] with [None] and goto state 47

Reduce rule [Fields -> Field] with [None] and goto state 204

Shift and goto state 224

Reduce rule [ClassDeclaration -> CLASS ID EXTENDS ID IMPLEMENTS IdList LEFTBRACE Fields RIGHTBRACE] with ['class','Zoo

Reduce rule [Declaration -> ClassDeclaration] with [None] and goto state 2

Reduce rule [Program -> Declaration] with [None] and goto state 1