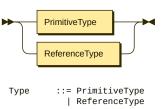
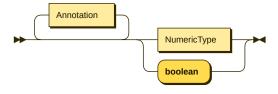
Type:



no references

PrimitiveType:

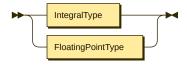


```
PrimitiveType ::= Annotation* ( NumericType | 'boolean' )
```

referenced by:

- <u>ArrayCreationExpression</u>
- ArrayType
 CastExpression
- <u>Type</u>

NumericType:

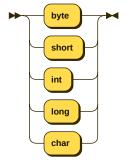


NumericType ::= IntegralType | FloatingPointType

referenced by:

- ClassLiteral
- <u>PrimitiveType</u>
- <u>UnannPrimitiveType</u>

IntegralType:

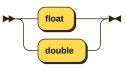


```
IntegralType
                'byte'
                 'short'
                 'long'
'char'
```

referenced by:

• NumericType

FloatingPointType:

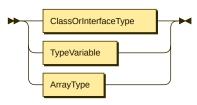


```
FloatingPointType
::= 'float'
               | 'double'
```

referenced by:

NumericType

ReferenceType:



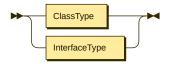
ReferenceType

::= ClassOrInterfaceType | TypeVariable ArrayType

referenced by:

- <u>CastExpression</u><u>EqualityExpression</u><u>MethodReference</u>
- <u>Type</u><u>TypeArgument</u>
- WildcardBounds

ClassOrInterfaceType:

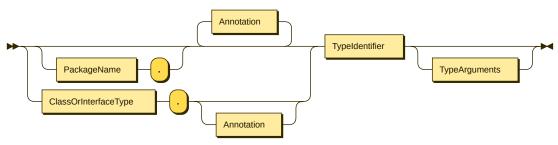


ClassOrInterfaceType ::= ClassType | InterfaceType

referenced by:

- ArrayCreationExpression
- <u>ArrayType</u>
- <u>ClassType</u>
- ReferenceType
- TypeBound

ClassType:



ClassType

::= ((PackageName '.')? Annotation* | ClassOrInterfaceType '.' Annotation?) TypeIdentifier TypeArguments?

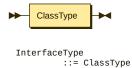
referenced by:

• CatchType

- <u>ClassOrInterfaceType</u>

- <u>ExceptionType</u> <u>InterfaceType</u> <u>MethodReference</u>
- Superclass

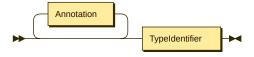
InterfaceType:



referenced by:

- ClassOrInterfaceType
- InterfaceTypeList
- TypeBound

TypeVariable:

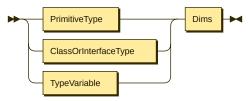


TypeVariable ::= Annotation* TypeIdentifier

referenced by:

- <u>ArrayType</u><u>ExceptionType</u>
- ReferenceType
- TypeBound

ArrayType:



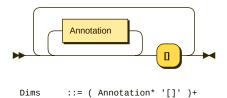
ArrayType

::= (PrimitiveType | ClassOrInterfaceType | TypeVariable) Dims

referenced by:

- MethodReference
- ReferenceType

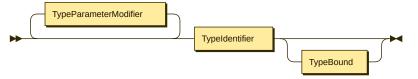
Dims:



referenced by:

- <u>AnnotationTypeElementDeclaration</u>
- ArrayCreationExpression
- <u>ArrayType</u>
- MethodDeclarator
 UnannArrayType
- VariableDeclaratorId

TypeParameter:



TypeParameter

::= TypeParameterModifier* TypeIdentifier TypeBound?

referenced by:

• TypeParameterList

TypeParameterModifier:

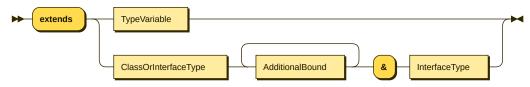


TypeParameterModifier ::= Annotation

referenced by:

• <u>TypeParameter</u>

TypeBound:



TypeBound

::= 'extends' (TypeVariable | ClassOrInterfaceType AdditionalBound+ '&' InterfaceType)

referenced by:

TypeParameter

TypeArguments:

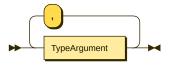


TypeArguments
 ::= '<' TypeArgumentList '>'

referenced by:

- ClassType
- ExplicitConstructorInvocation MethodInvocation
- MethodReference
- **TypeArgumentsOrDiamond**
- <u>UnannClassType</u>
- <u>UnqualifiedClassInstanceCreationExpression</u>

TypeArgumentList:

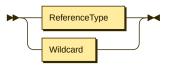


TypeArgumentList $::= \ \, \mathsf{TypeArgument} \ \, (\ \, ',' \ \, \mathsf{TypeArgument} \ \,) \, {}^*$

referenced by:

• TypeArguments

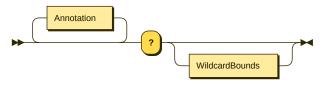
TypeArgument:



referenced by:

• TypeArgumentList

Wildcard:

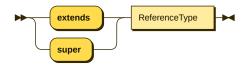


Wildcard ::= Annotation* '?' WildcardBounds?

referenced by:

• TypeArgument

WildcardBounds:

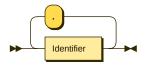


WildcardBounds
::= ('extends' | 'super') ReferenceType

referenced by:

• Wildcard

ModuleName:

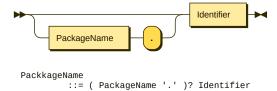


 $\label{eq:ModuleName} \begin{tabular}{ll} \b$

referenced by:

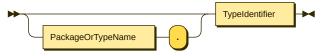
• ModuleDirective

PackkageName:



no references

TypeName:

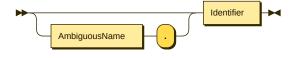


TypeName ::= (PackageOrTypeName '.')? TypeIdentifier

referenced by:

- ClassLiteral
- FieldAccess MarkerAnnotation
- MethodInvocation
- MethodReference
- ModuleDirective
- NormalAnnotation
- <u>PrimaryNoNewArray</u>
- <u>SingleElementAnnotation</u>
- SingleStaticImportDeclaration
- SingleTypeImportDeclaration StaticImportOnDemandDeclaration

ExpressionName:



ExpressionName

::= (AmbiguousName '.')? Identifier

referenced by:

- <u>ArrayAccess</u>
- ClassInstanceCreationExpression ExplicitConstructorInvocation
- <u>LeftHandSide</u>
- MethodInvocation
- MethodReference

MethodName:



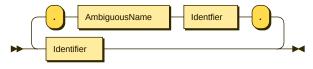
MethodName

::= Identifier

referenced by:

• MethodInvocation

PackageOrTypeName:



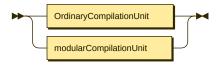
PackageOrTypeName

::= Identifier ('.' Identfier AmbiguousName '.' Identifier)*

referenced by:

- <u>TypeImportOnDemandDeclaration</u>
- TypeName

CompilationUnit:



CompilationUnit

::= OrdinaryCompilationUnit | modularCompilationUnit

no references

OrdinaryCompilationUnit:

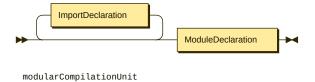


OrdinaryCompilationUnit ::= PackageDeclaration? ImportDeclaration* TypeDeclaration*

referenced by:

• CompilationUnit

modular Compilation Unit:



::= ImportDeclaration* ModuleDeclaration

referenced by:

• CompilationUnit

PackageDeclaration:



PackageDeclaration

::= PackageModifier* 'package' Identifier ('.' Identifier)* ';'

referenced by:

• OrdinaryCompilationUnit

PackageModifier:



PackageModifier

::= Annotation

referenced by:

• PackageDeclaration

ImportDeclaration:

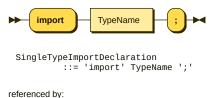


```
ImportDeclaration
         ::= SingleTypeImportDeclaration
            TypeImportOnDemandDeclaration
             SingleStaticImportDeclaration
            StaticImportOnDemandDeclaration
```

referenced by:

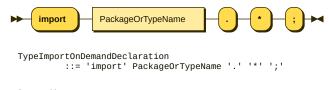
- OrdinaryCompilationUnit modularCompilationUnit

SingleTypeImportDeclaration:



• ImportDeclaration

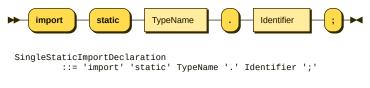
TypeImportOnDemandDeclaration:



referenced by:

• ImportDeclaration

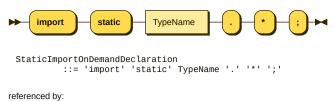
SingleStaticImportDeclaration:



referenced by:

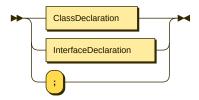
• ImportDeclaration

StaticImportOnDemandDeclaration:



• ImportDeclaration

TypeDeclaration:

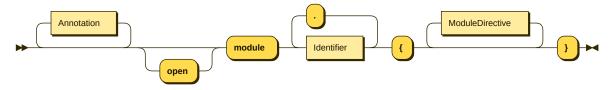


```
TypeDeclaration
         ::= ClassDeclaration
            InterfaceDeclaration
```

referenced by:

• OrdinaryCompilationUnit

ModuleDeclaration:

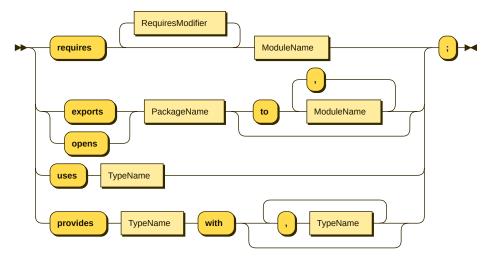


ModuleDeclaration
::= Annotation* 'open'? 'module' Identifier ('.' Identifier)* '{' ModuleDirective* '}'

referenced by:

• modularCompilationUnit

ModuleDirective:



ModuleDirective
::= ('requires' RequiresModifier* ModuleName | ('exports' | 'opens') PackageName ('to' ModuleName (',' ModuleName)*)? |
'uses' TypeName | 'provides' TypeName 'with' (',' TypeName)*) ';'

referenced by:

• ModuleDeclaration

RequiresModifier:



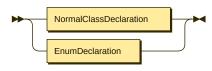
RequiresModifier

::= 'transitive' 'static'

referenced by:

ModuleDirective

ClassDeclaration:



 ${\tt ClassDeclaration}$

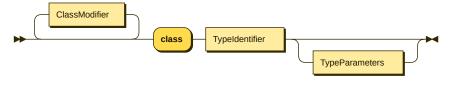
::= NormalClassDeclaration

| EnumDeclaration

referenced by:

- AnnotationTypeBody
- BlockStatement
 ClassMemberDeclaration
- InterfaceMemberDeclaration
- TypeDeclaration

NormalClassDeclaration:



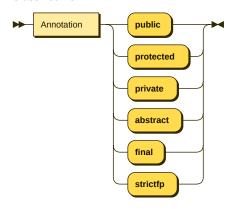
 ${\tt NormalClassDeclaration}$

::= ClassModifier* 'class' TypeIdentifier TypeParameters?

referenced by:

• ClassDeclaration

ClassModifier:



ClassModifier
::= Annotation ('public' | 'protected' | 'private' | 'abstract' | 'final' | 'strictfp')

referenced by:

- EnumDeclaration
 NormalClassDeclaration

TypeParameters:



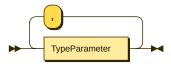
TypeParameters

::= '<' TypeParameterList '>'

referenced by:

- ConstructorDeclarator
- MethodHeader
- NormalClassDeclaration

TypeParameterList:

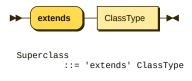


TypeParameterList ::= TypeParameter (',' TypeParameter)*

referenced by:

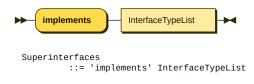
• TypeParameters

Superclass:



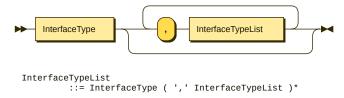
Superinterfaces:

no references



no references

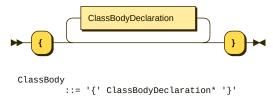
InterfaceTypeList:



referenced by:

- ExtendsInterfaces
- InterfaceTypeList
- Superinterfaces

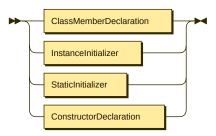
ClassBody:



referenced by:

- EnumConstant
- <u>UnqualifiedClassInstanceCreationExpression</u>

ClassBodyDeclaration:



ClassBodyDeclaration

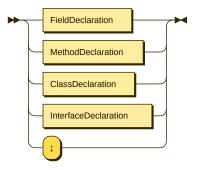
 $::= {\tt ClassMemberDeclaration}$ InstanceInitializer StaticInitializer

ConstructorDeclaration

referenced by:

- <u>ClassBody</u><u>EnumBodyDeclarations</u>

ClassMemberDeclaration:



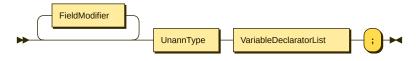
ClassMemberDeclaration

```
::= FieldDeclaration
   MethodDeclaration
   ClassDeclaration
   InterfaceDeclaration
';'
```

referenced by:

ClassBodyDeclaration

FieldDeclaration:

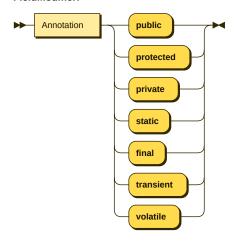


FieldDeclaration
 ::= FieldModifier* UnannType VariableDeclaratorList ';'

referenced by:

• ClassMemberDeclaration

FieldModifier:



FieldModifier ::= Annotation ('public' | 'protected' | 'private' | 'static' | 'final' | 'transient' | 'volatile')

referenced by:

• FieldDeclaration

VariableDeclaratorList:

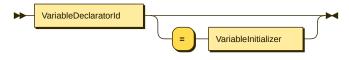


```
VariableDeclaratorList
         ::= VariableDeclarator ( ',' VariableDeclarator )*
```

referenced by:

- ConstantDeclaration
- FieldDeclaration
- LocalVariableDeclaration

VariableDeclarator:



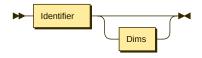
VariableDeclarator

::= VariableDeclaratorId ('=' VariableInitializer)?

referenced by:

VariableDeclaratorList

VariableDeclaratorId:



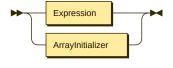
VariableDeclaratorId

::= Identifier Dims?

referenced by:

- CatchFormalParameter
- EnhancedForStatement
- EnhancedForStatementNoShortIf
- FormalParameter LambdaParameter
- VariableDeclarator

VariableInitializer:

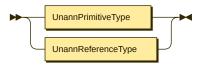


VariableInitializer ::= Expression | ArrayInitializer

referenced by:

- VariableDeclarator
- VariableInitializerList

UnannType:



UnannType

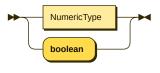
::= UnannPrimitiveType | UnannReferenceType

referenced by:

- AnnotationTypeElementDeclarationConstantDeclaration
- FieldDeclaration
- FormalParameter
- <u>LambdaParameterType</u>
- <u>LocalVariableType</u>

- RecieverParameter
- ResultVariableArityParameter

UnannPrimitiveType:

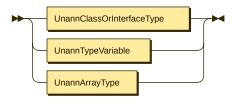


UnannPrimitiveType ::= NumericType | 'boolean'

referenced by:

- <u>UnannArrayType</u>
- <u>UnannType</u>

UnannReferenceType:



UnannReferenceType

- ::= UnannClassOrInterfaceType | UnannTypeVariable

 - UnannArrayType

referenced by:

• <u>UnannType</u>

UnannClassOrInterfaceType:

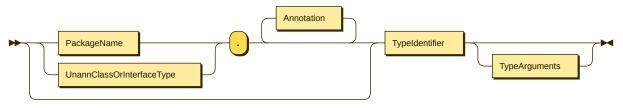


UnannClassOrInterfaceType ::= UnannClassType | UnannInterfaceType

referenced by:

- <u>UnannArrayType</u>
- UnannClassType
- <u>UnannReferenceType</u>

UnannClassType:

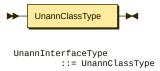


UnannClassType ::= ((PackageName | UnannClassOrInterfaceType) '.' Annotation*)? TypeIdentifier TypeArguments?

referenced by:

- CatchType
- <u>UnannClassOrInterfaceType</u>
- <u>UnannInterfaceType</u>

UnannInterfaceType:



referenced by:

• <u>UnannClassOrInterfaceType</u>

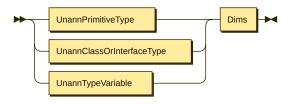
UnannTypeVariable:



referenced by:

- <u>UnannArrayType</u><u>UnannReferenceType</u>

UnannArrayType:

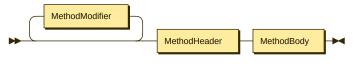


UnannArrayType ::= (UnannPrimitiveType | UnannClassOrInterfaceType | UnannTypeVariable) Dims

referenced by:

• <u>UnannReferenceType</u>

MethodDeclaration:



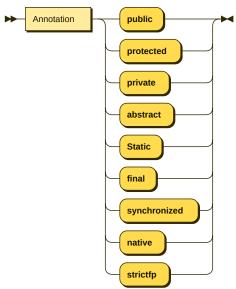
MethodDeclaration

::= MethodModifier* MethodHeader MethodBody

referenced by:

• ClassMemberDeclaration

MethodModifier:

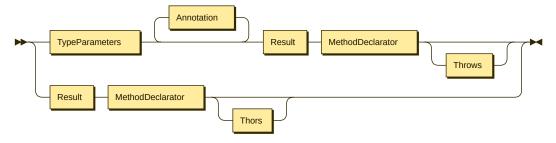


MethodModifier ::= Annotation ('public' | 'protected' | 'private' | 'abstract' | 'Static' | 'final' | 'synchronized' | 'native' | 'strictfp')

referenced by:

• MethodDeclaration

MethodHeader:



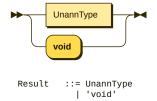
MethodHeader

::= Result MethodDeclarator Thors? | TypeParameters Annotation* Result MethodDeclarator Throws?

referenced by:

- InterfaceMethodDeclarationMethodDeclaration

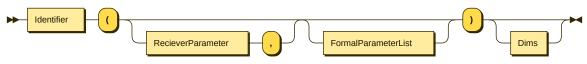
Result:



referenced by:

MethodHeader

MethodDeclarator:



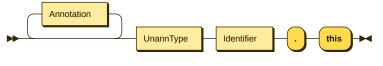
MethodDeclarator

::= Identifier '(' (RecieverParameter ',')? FormalParameterList? ')' Dims?

referenced by:

• MethodHeader

RecieverParameter:



RecieverParameter

::= Annotation* UnannType Identifier '.' 'this'

referenced by:

- ConstructorDeclarator
- MethodDeclarator

FormalParameterList:



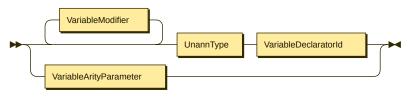
 ${\tt FormalParameterList}$

::= FormalParameter (',' FormalParameter)*

referenced by:

- ConstructorDeclarator
- MethodDeclarator

FormalParameter:



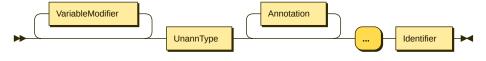
FormalParameter

::= VariableModifier* UnannType VariableDeclaratorId | VariableArityParameter

referenced by:

• FormalParameterList

VariableArityParameter:



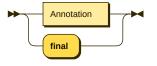
VariableArityParameter

::= VariableModifier* UnannType Annotation* ' ...' Identifier

referenced by:

- FormalParameter
- LambdaParameter

VariableModifier:



VariableModifier ::= Annotation | 'final'

referenced by:

- CatchFormalParameterEnhancedForStatement
- EnhancedForStatementNoShortIf
- FormalParameter
- LambdaParameter
 LocalVariableDeclaration
- Resource
- VariableArityParameter

Throws:

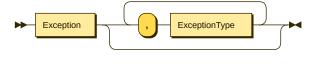


::= 'throws' ExceptionTypeList

referenced by:

- ConstructorDeclaration
- MethodHeader

ExceptionTypeList:

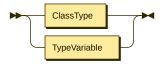


ExceptionTypeList
 ::= Exception (',' ExceptionType)*

referenced by:

• Throws

ExceptionType:

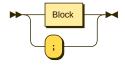


ExceptionType ::= ClassType | TypeVariable

referenced by:

• ExceptionTypeList

MethodBody:



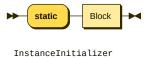
MethodBody ::= Block | ';'

referenced by:

• InterfaceMethodDeclaration

• MethodDeclaration

InstanceInitializer:

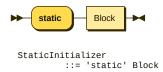


::= 'static' Block

referenced by:

• ClassBodyDeclaration

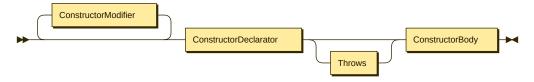
StaticInitializer:



referenced by:

• ClassBodyDeclaration

ConstructorDeclaration:



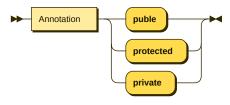
ConstructorDeclaration

::= ConstructorModifier* ConstructorDeclarator Throws? ConstructorBody

referenced by:

• ClassBodyDeclaration

ConstructorModifier:

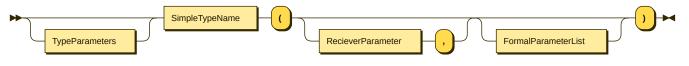


ConstructorModifier
 ::= Annotation ('puble' | 'protected' | 'private')

referenced by:

• ConstructorDeclaration

ConstructorDeclarator:



ConstructorDeclarator

::= TypeParameters? SimpleTypeName '(' (RecieverParameter ',')? FormalParameterList? ')'

referenced by:

• ConstructorDeclaration

SimpleTypeName:

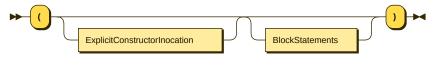


::= TypeIdentifier

referenced by:

• ConstructorDeclarator

ConstructorBody:

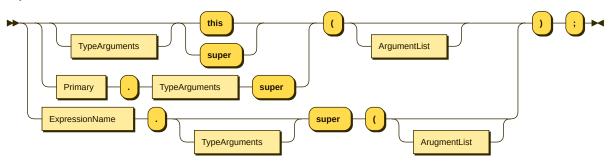


ConstructorBody
 ::= '(' ExplicitConstructorInocation? BlockStatements? ')'

referenced by:

• ConstructorDeclaration

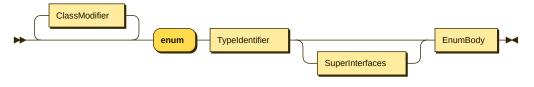
ExplicitConstructorInvocation:



 ${\tt ExplicitConstructorInvocation}$::= ((TypeArguments? ('this' | 'super') | Primary '.' TypeArguments 'super') '(' ArgumentList? | ExpressionName '.'
TypeArguments? 'super' '(' ArugmentList?) ')' ';'

no references

EnumDeclaration:



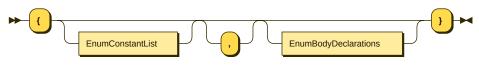
EnumDeclaration

::= ClassModifier* 'enum' TypeIdentifier SuperInterfaces? EnumBody

referenced by:

• ClassDeclaration

EnumBody:

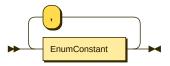


 ${\tt EnumBody} ::= \ '\{' \ {\tt EnumConstantList?} \ ', '? \ {\tt EnumBodyDeclarations?} \ '\}'$

referenced by:

• EnumDeclaration

EnumConstantList:

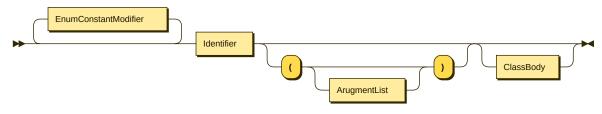


 ${\tt EnumConstantList}$::= EnumConstant (',' EnumConstant)*

referenced by:

• EnumBody

EnumConstant:



EnumConstant ::= EnumConstantModifier* Identifier ('(' ArugmentList? ')')? ClassBody?

referenced by:

• EnumConstantList

EnumConstantModifier:



 ${\tt EnumConstantModifier}$::= Annotation

referenced by:

• EnumConstant

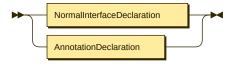
EnumBodyDeclarations:



referenced by:

• EnumBody

InterfaceDeclaration:



InterfaceDeclaration

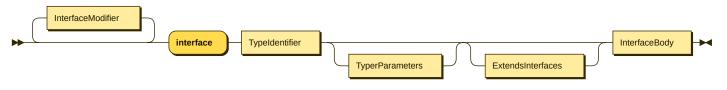
::= NormalInterfaceDeclaration | AnnotationDeclaration

referenced by:

- ClassMemberDeclaration
- InterfaceMemberDeclaration

• TypeDeclaration

NormalInterfaceDeclaration:

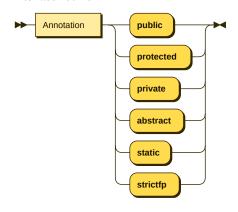


NormalInterfaceDeclaration ::= InterfaceModifier* 'interface' TypeIdentifier TyperParameters? ExtendsInterfaces? InterfaceBody

referenced by:

• InterfaceDeclaration

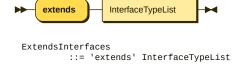
InterfaceModifier:



referenced by:

- AnnotationTypeDeclaration
- NormalInterfaceDeclaration

ExtendsInterfaces:



referenced by:

• NormalInterfaceDeclaration

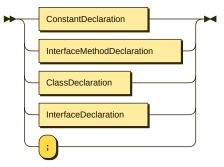
InterfaceBody:



referenced by:

• NormalInterfaceDeclaration

InterfaceMemberDeclaration:

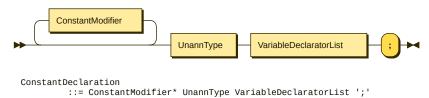


InterfaceMemberDeclaration ::= ConstantDeclaration | InterfaceMethodDeclaration ClassDeclaration InterfaceDeclaration
';'

referenced by:

InterfaceBody

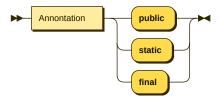
ConstantDeclaration:



referenced by:

- AnnotationTypeBody InterfaceMemberDeclaration

ConstantModifier:

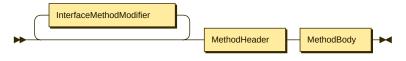


ConstantModifier ::= Annontation ('public' | 'static' | 'final')

referenced by:

• ConstantDeclaration

InterfaceMethodDeclaration:



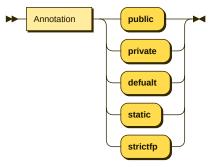
InterfaceMethodDeclaration

::= InterfaceMethodModifier* MethodHeader MethodBody

referenced by:

• InterfaceMemberDeclaration

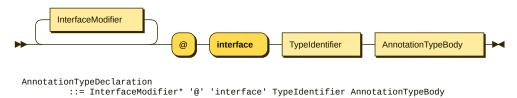
InterfaceMethodModifier:



referenced by:

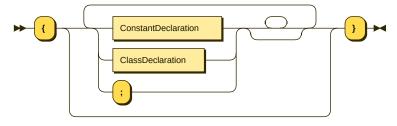
• InterfaceMethodDeclaration

AnnotationTypeDeclaration:



no references

AnnotationTypeBody:



AnnotationTypeBody $::= '\{' (ConstantDeclaration | ClassDeclaration | ';') ()*)* '}'$

referenced by:

• AnnotationTypeDeclaration

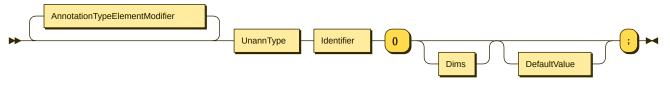
$\label{lem:lementDeclaration: Annontation Type Element Declaration: \\$

\longrightarrow

 $\label{lem:lementDeclaration} AnnontationTypeElementDeclaration ::=$

no references

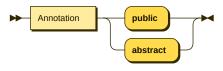
${\bf Annotation Type Element Declaration:}$



AnnotationTypeElementDeclaration
::= AnnotationTypeElementModifier* UnannType Identifier '()' Dims? DefaultValue? ';'

no references

AnnotationTypeElementModifier:

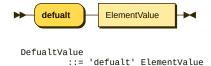


```
{\tt AnnotationTypeElementModifier}
          ::= Annotation ( 'public' | 'abstract' )
```

referenced by:

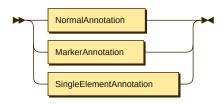
• AnnotationTypeElementDeclaration

DefualtValue:



no references

Annotation:



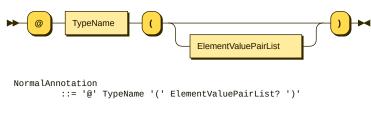
Annotation

```
::= NormalAnnotation
   MarkerAnnotation
   SingleElementAnnotation
```

referenced by:

- AnnotationTypeElementModifier
- ClassModifier
- ClassOrInterfaceTypeToInstantiate
- <u>ClassType</u>
- ConstructorModifier
- <u>DimExpr</u>
- DimsElementValue
- EnumConstantModifier
- FieldModifier
- InterfaceMethodModifier
- InterfaceModifier
- <u>MethodHeader</u>
- MethodModifier
- ModuleDeclaration
- PackageModifier PrimitiveType
- RecieverParameter
- **TypeParameterModifier**
- <u>TypeVariable</u>
- <u>UnannClassType</u>
- <u>VariableArityParameter</u>
- VariableModifier
- Wildcard

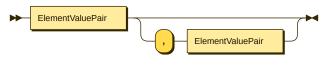
NormalAnnotation:



referenced by:

• Annotation

ElementValuePairList:

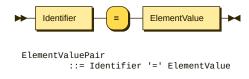


ElementValuePairList ::= ElementValuePair (',' ElementValuePair)?

referenced by:

• NormalAnnotation

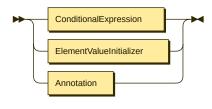
ElementValuePair:



referenced by:

• ElementValuePairList

ElementValue:



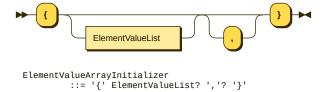
ElementValue

::= ConditionalExpression | ElementValueInitializer | Annotation

referenced by:

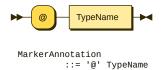
- <u>DefualtValue</u>
- ElementValuePair
- SingleElementAnnotation

ElementValueArrayInitializer:



no references

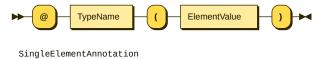
MarkerAnnotation:



referenced by:

• Annotation

SingleElementAnnotation:

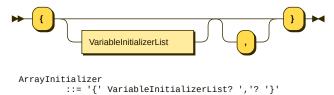


::= '@' TypeName '(' ElementValue ')'

referenced by:

• Annotation

ArrayInitializer:



referenced by:

- ArrayCreationExpression VariableInitializer

VariableInitializerList:



VariableInitializerList ::= VariableInitializer (',' VariableInitializer)*

referenced by:

ArrayInitializer

Block:



::= '{' BlockStatements? '}' Block

referenced by:

- CatchCaluse
- Finally
- InstanceInitializer
 LambdaBody
- MethodBody
- <u>StatementWithoutTrailingSubstatement</u>
- StaticInitializer
 SynchronizedStatement
- TryStatement
 TryWithResourcesStatement

BlockStatements:

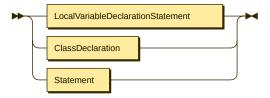


referenced by:

- Block
- ConstructorBody
 SwitchBlockStatementGroup

::= BlockStatement+

BlockStatement:



BlockStatement

::= LocalVariableDeclarationStatement

| ClassDeclaration

Statement

referenced by:

• BlockStatements

LocalVariableDeclarationStatement:



 ${\tt Local Variable Declaration Statement}$ $::= \ Local Variable Declaration ';'$

referenced by:

• BlockStatement

LocalVariableDeclaration:



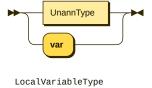
LocalVariableDeclaration

::= VariableModifier? LocalVariableType VariableDeclaratorList

referenced by:

- LocalVariableDeclarationStatement

LocalVariableType:

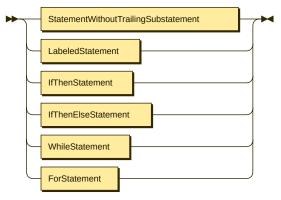


::= UnannType | 'var'

referenced by:

- EnhancedForStatement
 EnhancedForStatementNoShortIf
 LocalVariableDeclaration
- Resource

Statement:



Statement

::= StatementWithoutTrailingSubstatement

LabeledStatement

IfThenStatement

IfThenElseStatement

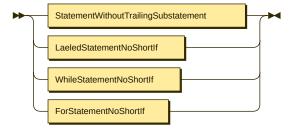
WhileStatement

ForStatement

referenced by:

- BasicForStatement
- <u>BlockStatement</u>
- DoStatement
- EnhancedForStatement
- IfThenElseStatement IfThenStatement
- LabeledStatement
- WhileStatement

StatementNoShortIf:



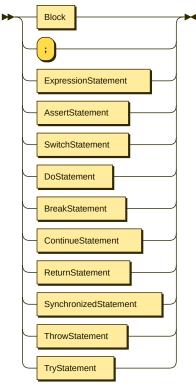
StatementNoShortIf

::= StatementWithoutTrailingSubstatement
| LaeledStatementNoShortIf
| WhileStatementNoShortIf
| ForStatementNoShortIf

referenced by:

- BasicForStatementNoShortIf
 IfThenElseStatement
 IfThenElseStatementNoShortIf
 WhileStatementNoShortIf

Statement Without Trailing Substatement:



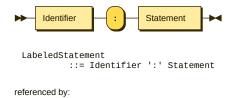
StatementWithoutTrailingSubstatement ::= Block

';' ExpressionStatement AssertStatement SwitchStatement DoStatement BreakStatement ${\tt ContinueStatement}$ ReturnStatement ${\tt SynchronizedStatement}$ ThrowStatement TryStatement

referenced by:

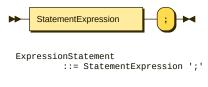
- Statement
 StatementNoShortIf

LabeledStatement:



• Statement

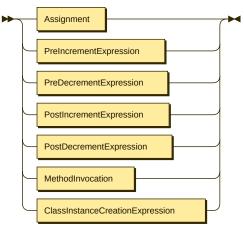
ExpressionStatement:



referenced by:

• <u>StatementWithoutTrailingSubstatement</u>

StatementExpression:



StatementExpression
::= Assignment
| PreIncrementExpression
| PreDecrementExpression
| PostIncrementExpression

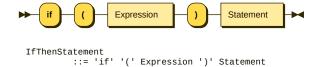
| PostDecrementExpression

| MethodInvocation | ClassInstanceCreationExpression

referenced by:

- ExpressionStatement
- StatementExpressionList

IfThenStatement:



referenced by:

• Statement

IfThenElseStatement:



IfThenElseStatement

::= 'if' '(' Expression ')' StatementNoShortIf 'else' Statement

referenced by:

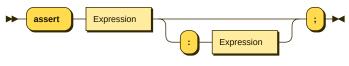
• Statement

IfThenElseStatementNoShortIf:



no references

AssertStatement:



AssertStatement

::= 'assert' Expression (':' Expression)? ';'

referenced by:

• StatementWithoutTrailingSubstatement

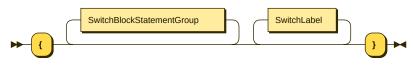
SwitchStatement:

```
SwitchStatement
::= 'switch' '(' Expression ')' SwitchBlock
```

referenced by:

• StatementWithoutTrailingSubstatement

SwitchBlock:



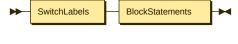
 ${\bf SwitchBlock}$

::= '{' SwitchBlockStatementGroup* SwitchLabel* '}'

referenced by:

• SwitchStatement

${\bf SwitchBlockStatementGroup:}$

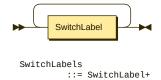


SwitchBlockStatementGroup
 ::= SwitchLabels BlockStatements

referenced by:

• SwitchBlock

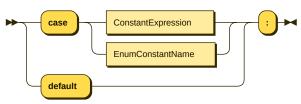
SwitchLabels:



referenced by:

• SwitchBlockStatementGroup

SwitchLabel:

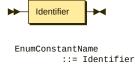


```
\label{eq:SwitchLabel} \textbf{SwitchLabel} \\ \textbf{::= ( 'case' ( ConstantExpression | EnumConstantName ) | 'default' ) ':'} \\
```

referenced by:

- SwitchBlock
- SwitchLabels

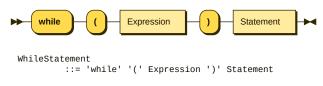
EnumConstantName:



referenced by:

• SwitchLabel

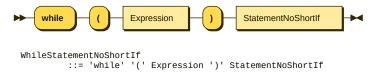
WhileStatement:



referenced by:

Statement

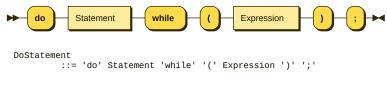
WhileStatementNoShortIf:



referenced by:

• StatementNoShortIf

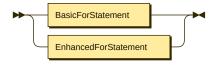
DoStatement:



referenced by:

• <u>StatementWithoutTrailingSubstatement</u>

ForStatement:



ForStatement

::= BasicForStatement | EnhancedForStatement

referenced by:

• Statement

ForStatementNoShortIf:



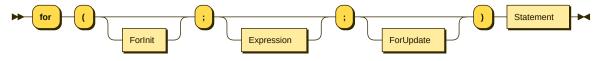
For Statement No Short If

::= BasicForStatementNoShortIf | EnhancedForStatementNoShortIf

referenced by:

• StatementNoShortIf

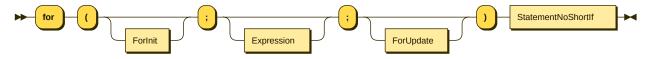
BasicForStatement:



referenced by:

ForStatement

BasicForStatementNoShortIf:



referenced by:

• ForStatementNoShortIf

ForInit:



referenced by:

- BasicForStatement
- BasicForStatementNoShortIf

ForUpdate:



ForUpdate ::= StatementExpressionList

referenced by:

- BasicForStatement
- BasicForStatementNoShortIf

StatementExpressionList:



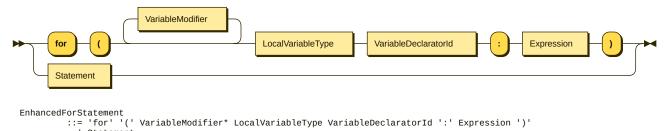
 $\begin{tabular}{lll} Statement Expression List \\ ::= Statement Expression (',' Statement Expression)* \end{tabular}$

referenced by:

• ForInit

• ForUpdate

EnhancedForStatement:

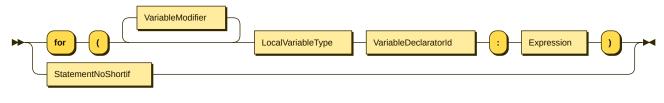


referenced by:

• ForStatement

EnhancedForStatementNoShortIf:

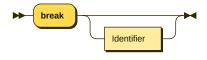
| Statement



referenced by:

• ForStatementNoShortIf

Breakstatement:

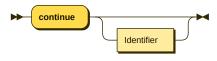


Breakstatement

::= 'break' Identifier?

no references

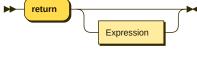
Continue:



Continue ::= 'continue' Identifier?

no references

ReturnStatement:

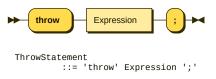


ReturnStatement
 ::= 'return' Expression?

referenced by:

• <u>StatementWithoutTrailingSubstatement</u>

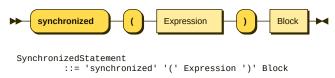
ThrowStatement:



referenced by:

• StatementWithoutTrailingSubstatement

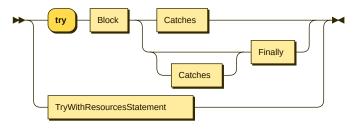
SynchronizedStatement:



referenced by:

• StatementWithoutTrailingSubstatement

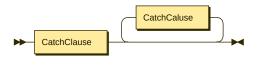
TryStatement:



referenced by:

• StatementWithoutTrailingSubstatement

Catches:



Catches ::= CatchClause CatchCaluse*

referenced by:

- <u>TryStatement</u>
- <u>TryWithResourcesStatement</u>

CatchCaluse:



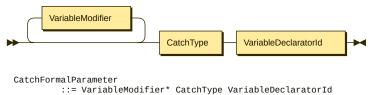
::

::= 'catch' '(' CatchFormalParameter ')' Block

referenced by:

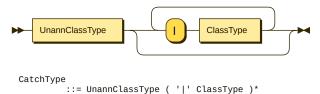
Catches

CatchFormalParameter:



• CatchCaluse

CatchType:



referenced by:

• CatchFormalParameter

Finally:

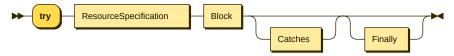


Finally ::= 'finally' Block

referenced by:

- TryStatement
- <u>TryWithResourcesStatement</u>

TryWithResourcesStatement:



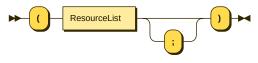
TryWithResourcesStatement

::= 'try' ResourceSpecification Block Catches? Finally?

referenced by:

• <u>TryStatement</u>

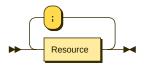
ResourceSpecification:



referenced by:

• TryWithResourcesStatement

ResourceList:



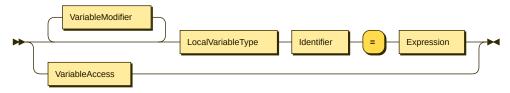
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```
ResourceList
        ::= Resource ( ';' Resource )*
```

referenced by:

• ResourceSpecification

Resource:

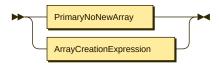


```
Resource ::= VariableModifier* LocalVariableType Identifier '=' Expression
           | VariableAccess
```

referenced by:

ResourceList

Primary:

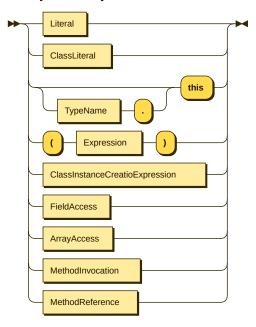


Primary ::= PrimaryNoNewArray
| ArrayCreationExpression

referenced by:

- ClassInstanceCreationExpression
 ExplicitConstructorInvocation
- FieldAccess
- MethodInvocation
 MethodReference
- PostfixExpression

PrimaryNoNewArray:



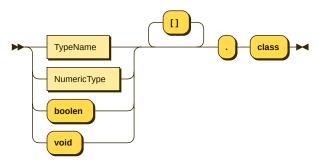
```
PrimaryNoNewArray
                  ::= Literal
                          ClassLiteral
( TypeName '.' )? 'this'
'(' Expression ')'
ClassInstanceCreatioExpression
FieldAccess
```

ArrayAccess MethodInvocation MethodReference

referenced by:

- ArrayAccess
- Primary

ClassLiteral:

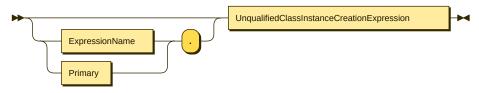


```
ClassLiteral
     ::= ( TypeName | NumericType | 'boolen' | 'void' ) '[ ]'* '.' 'class'
```

referenced by:

• PrimaryNoNewArray

ClassInstanceCreationExpression:



 $\hbox{\tt ClassInstanceCreationExpression} \\ ::= (\ (\ \hbox{\tt ExpressionName} \ | \ \hbox{\tt Primary} \) \ '.' \)? \ \hbox{\tt UnqualifiedClassInstanceCreationExpression} \\$

referenced by:

• StatementExpression

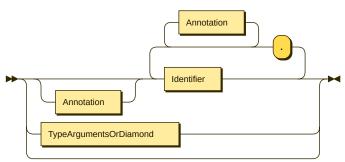
Unqualified Class Instance Creation Expression:



referenced by:

• ClassInstanceCreationExpression

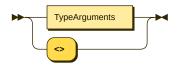
ClassOrInterfaceTypeToInstantiate:



```
ClassOrInterfaceTypeToInstantiate
         ::= ( Annotation? Identifier ( '.' Annotation* Identifier )* | TypeArgumentsOrDiamond )?
```

• <u>UnqualifiedClassInstanceCreationExpression</u>

TypeArgumentsOrDiamond:

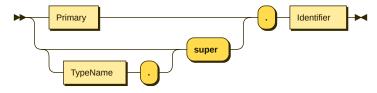


```
TypeArgumentsOrDiamond
          ::= TypeArguments
| '<>'
```

referenced by:

• <u>ClassOrInterfaceTypeToInstantiate</u>

FieldAccess:

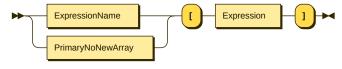


```
FieldAccess
::= ( Primary | ( TypeName '.' )? 'super' ) '.' Identifier
```

referenced by:

- <u>LeftHandSide</u><u>PrimaryNoNewArray</u>

ArrayAccess:



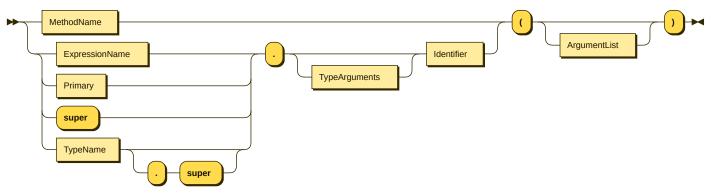
ArrayAccess

::= (ExpressionName | PrimaryNoNewArray) '[' Expression ']'

referenced by:

- LeftHandSide
- PrimaryNoNewArray

MethodInvocation:

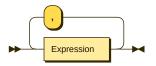


MethodInvocation

```
::= ( MethodName | ( ExpressionName | Primary | 'super' | TypeName ( '.' 'super' )? ) '.' TypeArguments? Identifier ) '(' ArgumentList? ')'
```

- PrimaryNoNewArray
- StatementExpression

ArgumentList:



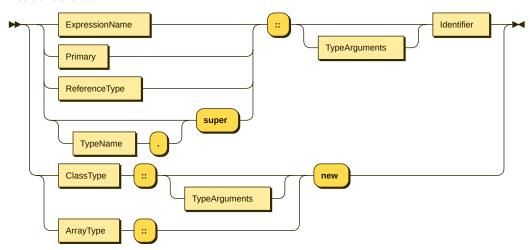
ArgumentList

::= Expression (',' Expression)*

referenced by:

- ExplicitConstructorInvocation
- MethodInvocation
- UnqualifiedClassInstanceCreationExpression

MethodReference:



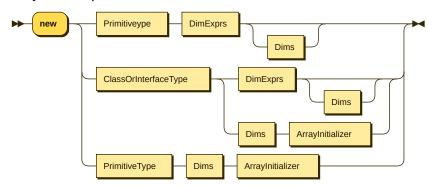
MethodReference

::= (ExpressionName | Primary | ReferenceType | (TypeName '.')? 'super') '::' TypeArguments? Identifier | (ClassType '::' TypeArguments? | ArrayType '::') 'new'

referenced by:

• PrimaryNoNewArray

ArrayCreationExpression:



ArrayCreationExpression

::= 'new' (Primitiveype DimExprs Dims? | ClassOrInterfaceType (DimExprs Dims? | Dims ArrayInitializer) | PrimitiveType Dims ArrayInitializer)

referenced by:

Primary

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DimExprs:

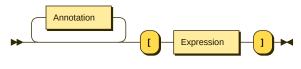


DimExprs ::= DimExpr+

referenced by:

• ArrayCreationExpression

DimExpr:



DimExpr ::= Annotation* '[' Expression ']'

referenced by:

• DimExprs

Expression:



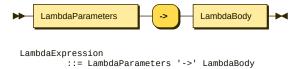
Expression

::= LambdaExpression | AssignmentExpression

referenced by:

- ArgumentList
- <u>ArrayAccess</u>
- <u>AssertStatement</u>
- <u>Assignment</u>
- <u>BasicForStatement</u>
- BasicForStatementNoShortIf
 ConditionalExpression
- ConstantExpression
- DimExpr
- DoStatement
- **EnhancedForStatement**
- $\underline{\textbf{EnhancedForStatementNoShortIf}}$
- IfThenElseStatement
 IfThenElseStatementNoShortIf
- IfThenStatement <u>LambdaBody</u>
- <u>PrimaryNoNewArray</u>
- Resource
- ReturnStatement
- <u>SwitchStatement</u>
- SynchronizedStatement
- <u>ThrowStatement</u> VariableInitializer
- WhileStatement
- WhileStatementNoShortIf

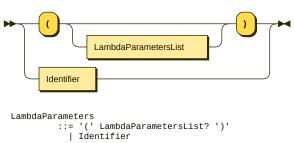
LambdaExpression:



referenced by:

- CastExpression
- ConditionalExpression
- <u>Expression</u>

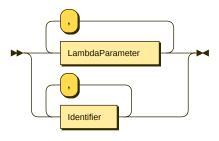
LambdaParameters:



referenced by:

• LambdaExpression

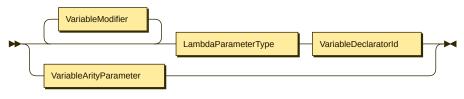
LambdaParameterList:



```
LambdaParameterList
::= LambdaParameter ( ',' LambdaParameter )*
| Identifier ( ',' Identifier )*
```

no references

LambdaParameter:



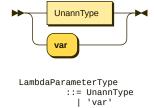
LambdaParameter

::= VariableModifier* LambdaParameterType VariableDeclaratorId | VariableArityParameter

referenced by:

• LambdaParameterList

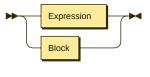
LambdaParameterType:



referenced by:

• <u>LambdaParameter</u>

LambdaBody:



LambdaBody
::= Expression
' Rlock

referenced by:

• LambdaExpression

AssignmentExpression:



 ${\tt AssignmentExpression}$::= ConditionalExpression | Assignment

referenced by:

• Expression

Assignment:



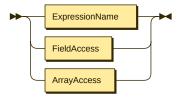
Assignment

::= LeftHandSide AssignmentOperator Expression

referenced by:

- <u>AssignmentExpression</u> <u>StatementExpression</u>

LeftHandSide:



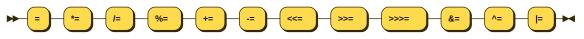
LeftHandSide

::= ExpressionName FieldAccess ArrayAccess

referenced by:

Assignment

AssignmentOperator:

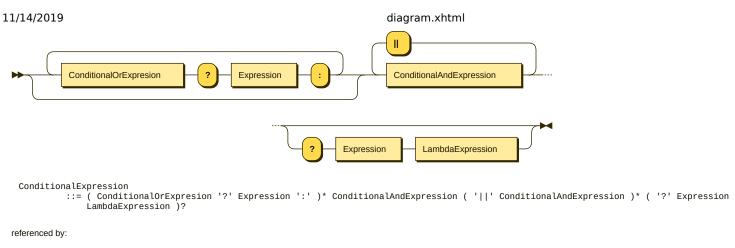


AssignmentOperator ::= '=' '*=' '/=' '%=' '+=' '-=' '<<=' '>>=' '>>=' '&=' '/=' '|='

referenced by:

• Assignment

ConditionalExpression:



- AssignmentExpression
- ElementValue

${\bf Conditional And Expression:}$



ConditionalAndExpression

::= InclusiveOrExpression ('&&' InclusiveOrExpression)*

referenced by:

• ConditionalExpression

InclusiveOrExpression:



InclusiveOrExpression

::= ExclusiveOrExpression ('|' ExclusiveOrExpression)*

referenced by:

• ConditionalAndExpression

ExclusiveOrExpression:



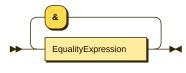
ExclusiveOrExpression

::= AndExpression ('^' AndExpression)*

referenced by:

InclusiveOrExpression

AndExpression:

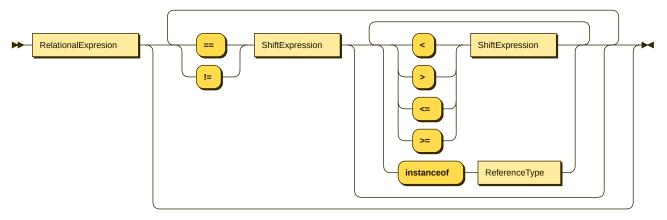


 ${\tt AndExpression}$

::= EqualityExpression ('&' EqualityExpression)*

• ExclusiveOrExpression

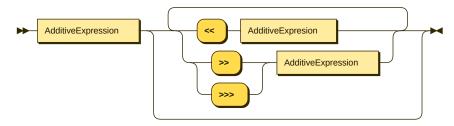
EqualityExpression:



referenced by:

AndExpression

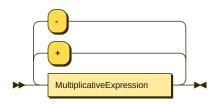
ShiftExpression:



referenced by:

• EqualityExpression

AdditiveExpression:

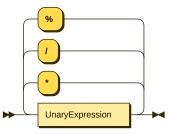


```
\label{eq:AdditiveExpression}  \mbox{AdditiveExpression ( ( '+' | '-' ) MultiplicativeExpression )*} \\
```

referenced by:

• ShiftExpression

MultiplicativeExpression:

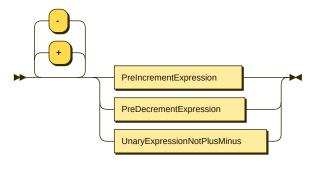


 ${\tt MultiplicativeExpression}$::= UnaryExpression (('*' | '/' | '%') UnaryExpression)*

referenced by:

• AdditiveExpression

UnaryExpression:



UnaryExpression ::= ('+' | '-')* (PreIncrementExpression | PreDecrementExpression | UnaryExpressionNotPlusMinus)

referenced by:

- CastExpression
- MultiplicativeExpression
- PreDecrementExpression
- PreIncrementExpressionUnaryExpressionNotPlusMinus

PreIncrementExpression:



PreIncrementExpression
::= '++' UnaryExpression

referenced by:

- StatementExpression
 UnaryExpression

PreDecrementExpression:

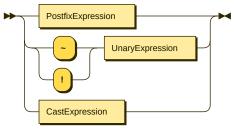


PreDecrementExpression
::= '--' UnaryExpression

referenced by:

- StatementExpression
- <u>UnaryExpression</u>

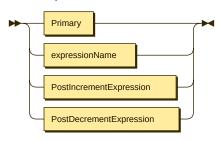
UnaryExpressionNotPlusMinus:



```
UnaryExpressionNotPlusMinus
             | CastExpression
| ( '~' | '!' ) UnaryExpression
| CastExpression
```

- CastExpression
- <u>UnaryExpression</u>

PostfixExpression:



PostfixExpression

- ::= Primary
 - expressionName

 - PostIncrementExpression PostDecrementExpression

referenced by:

- PostDecrementExpressionPostIncrementExpressionUnaryExpressionNotPlusMinus

PostIncrementExpression:



 ${\tt PostIncrementExpression}$::= PostfixExpression '++'

referenced by:

- PostfixExpression
- StatementExpression

PostDecrementExpression:

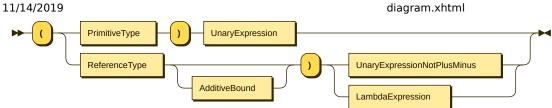


PostDecrementExpression ::= PostfixExpression '--'

referenced by:

- <u>PostfixExpression</u><u>StatementExpression</u>

CastExpression:



CastExpression
::= '(' (PrimitiveType ')' UnaryExpression | ReferenceType AdditiveBound? ')' (UnaryExpressionNotPlusMinus | LambdaExpression
))

referenced by:

• <u>UnaryExpressionNotPlusMinus</u>

ConstantExpression:



 ${\tt ConstantExpression}$::= Expression

referenced by:

SwitchLabel

... generated by Railroad Diagram Generator