

▼ <i>Package</i>	
• <b>package</b> <i>PackageName</i> ; <i>ImportList</i> <i>S</i>	
▼ <i>PackageName</i>	
• <i>Name</i>	
• <i>Name.PackageName</i>	
▼ <i>ImportList</i>	
• <i>null</i>	
• <b>import</b> <i>PackageName</i> ; <i>ImportList</i>	
▼ <i>S</i>	<b>statement</b>
• <i>null</i>	empty statement
• <i>E</i>	
• <i>E</i> ; <i>S</i>	semi-separated exprs
▼ <i>E</i>	<b>expression</b>
• <i>E op E</i>	infix
• <i>E</i> , <i>E</i>	comma
• <i>U</i> := <i>E</i>	update
• <i>A</i>	apply
• <i>D</i>	declare
• <i>I</i>	index
• <i>P</i>	prefix
• <i>R</i>	
• <i>X</i>	xml
▼ <i>op</i>	<b>infix operator</b>
• +	
• -	
• *	
• **	
• <b>mod</b>	
• <b>div</b>	
• ++	<b>concatenation</b>
▼ <i>U</i>	<b>LHS of assignment</b>
• <i>Id</i>	
• <i>A</i>	
▼ <i>A</i>	<b>application</b>
• <i>E.Id</i>	postfix apply
• <i>Id</i> ( <i>E</i> )	prefix apply
• <i>P</i> ( <i>E</i> )	general prefix apply
▼ <i>D</i>	<b>definition</b>
• <b>var</b> <i>Id</i> = <i>E</i>	mutable
• <b>val</b> <i>Id</i> = <i>E</i>	immutable (was const)
• <b>function</b> <i>A</i> => <i>S</i> <b>endfunction</b>	
▼ <i>I</i>	<b>index</b>
• <i>E</i> [ <i>E</i> ]	
• <i>E</i> [ <i>E</i> .. <i>E</i> ]	
▼ <i>P</i>	<b>prefix expression</b>

- *Literal*
- *Id*
- *( S )*
- *{ S }*
- *If*
- *Switch*
- *For*

list construction

#### ▼ *Literal*

- *String*
- *Integer*
- *Atom*
- *Characters*

e.g. "sna"

e.g. -42

e.g. `fu`

e.g. 'bar'

#### ▼ *If*

- **if** *E ThenDo S CascadeList OptElse endif*
- **unless** *E ThenDo S CascadeList OptElse endunless*

#### ▼ *ThenDo*

- **do**
- **then**

#### ▼ *CascadeList*

- *null*
- **elseif** *E ThenDo S CascadeList*
- **elseunless** *E ThenDo S CascadeList*

#### ▼ *OptElse*

- *null*
- **else** *S*

#### ▼ *Switch*

- **switch** *E CaseList OptElse endswitch*

#### ▼ *CaseList*

- *null*
- **case** *E ThenDo S CaseList*

#### ▼ *For*

- **for** *ForList ThenDo S OptFinally endfor*

#### ▼ *ForList*

- *null*
- *BindingList*
- *ConditionList*
- *BindingList ; ConditionList*

#### ▼ *BindingList*

- *Binding*
- *Binding ; BindingList*

#### ▼ *Binding*

- *Id times E*
- *Id in E*
- *Id & Id in G*
- *Id from E*

generator

a design error!

- *Id from E to E*
- *Id from E by E to E*

#### ▼ *ConditionList*

- *Condition OptionalBreak*
- *Condition OptionalBreak ; ConditionList*

#### ▼ *Condition*

- **while** *E*
- **until** *E*

#### ▼ *OptionalBreak*

- *null*
- **break** *E*

#### ▼ *OptFinally*

- *null*
- **finally** *S*

#### ▼ *R*

- *E relop E*
- *E relop R*

#### ▼ *relop*

- **=**
- **==**
- **<**
- **>**
- **<=**
- **>=**

#### ▼ *X*

- *< Name AttributeList > E </ Name >*
- *< Name AttributeList />*

#### ▼ *AttributeList*

- *null*
- *Name = P AttributeList*

**condition**

**relational chain**

**relational operator**

structural equality

identity

numerical less than

numerical greater than

numerical less than or  
equal

numerical greater than  
or equal

**XML element**