**A EBNF for XQuery 1.0 Grammar with Update extensions**

**XQuery Update Facility 1.0**

**W3C Working Draft 28 August 2007**

The EBNF in this document and in this section is aligned with the current XML Query 1.0 grammar (see [[XQuery 1.0]](http://www.w3.org/TR/xqupdate/" \l "xquery)).

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| --- | --- | --- | --- |
| [1] | Module | ::= | [VersionDecl](http://www.w3.org/TR/xqupdate/#prod-xquery-VersionDecl)? ([LibraryModule](http://www.w3.org/TR/xqupdate/#prod-xquery-LibraryModule) | [MainModule](http://www.w3.org/TR/xqupdate/#prod-xquery-MainModule)) |
| [2] | VersionDecl | ::= | "xquery" "version" [StringLiteral](http://www.w3.org/TR/xqupdate/#prod-xquery-StringLiteral) ("encoding" [StringLiteral](http://www.w3.org/TR/xqupdate/#prod-xquery-StringLiteral))? [Separator](http://www.w3.org/TR/xqupdate/#prod-xquery-Separator) |
| [3] | MainModule | ::= | [Prolog](http://www.w3.org/TR/xqupdate/#prod-xquery-Prolog) [QueryBody](http://www.w3.org/TR/xqupdate/#prod-xquery-QueryBody) |
| [4] | LibraryModule | ::= | [ModuleDecl](http://www.w3.org/TR/xqupdate/#prod-xquery-ModuleDecl) [Prolog](http://www.w3.org/TR/xqupdate/#prod-xquery-Prolog) |
| [5] | ModuleDecl | ::= | "module" "namespace" [NCName](http://www.w3.org/TR/xqupdate/#prod-xquery-NCName) "=" [URILiteral](http://www.w3.org/TR/xqupdate/#prod-xquery-URILiteral) [Separator](http://www.w3.org/TR/xqupdate/#prod-xquery-Separator) |
| [6] | Prolog | ::= | (([DefaultNamespaceDecl](http://www.w3.org/TR/xqupdate/#prod-xquery-DefaultNamespaceDecl) | [Setter](http://www.w3.org/TR/xqupdate/#prod-xquery-Setter) | [NamespaceDecl](http://www.w3.org/TR/xqupdate/#prod-xquery-NamespaceDecl) | [Import](http://www.w3.org/TR/xqupdate/#prod-xquery-Import)) [Separator](http://www.w3.org/TR/xqupdate/#prod-xquery-Separator))\* (([VarDecl](http://www.w3.org/TR/xqupdate/#prod-xquery-VarDecl) | [FunctionDecl](http://www.w3.org/TR/xqupdate/#prod-xquery-FunctionDecl) | [OptionDecl](http://www.w3.org/TR/xqupdate/#prod-xquery-OptionDecl)) [Separator](http://www.w3.org/TR/xqupdate/#prod-xquery-Separator))\* |
| [7] | [Setter](http://www.w3.org/TR/xqupdate/#doc-xquery-Setter) | ::= | [BoundarySpaceDecl](http://www.w3.org/TR/xqupdate/#prod-xquery-BoundarySpaceDecl) | [DefaultCollationDecl](http://www.w3.org/TR/xqupdate/#prod-xquery-DefaultCollationDecl) | [BaseURIDecl](http://www.w3.org/TR/xqupdate/#prod-xquery-BaseURIDecl) | [ConstructionDecl](http://www.w3.org/TR/xqupdate/#prod-xquery-ConstructionDecl) | [OrderingModeDecl](http://www.w3.org/TR/xqupdate/#prod-xquery-OrderingModeDecl) | [EmptyOrderDecl](http://www.w3.org/TR/xqupdate/#prod-xquery-EmptyOrderDecl) | [RevalidationDecl](http://www.w3.org/TR/xqupdate/#prod-xquery-RevalidationDecl) | [CopyNamespacesDecl](http://www.w3.org/TR/xqupdate/#prod-xquery-CopyNamespacesDecl) |
| [8] | Import | ::= | [SchemaImport](http://www.w3.org/TR/xqupdate/#prod-xquery-SchemaImport) | [ModuleImport](http://www.w3.org/TR/xqupdate/#prod-xquery-ModuleImport) |
| [9] | Separator | ::= | ";" |
| [10] | NamespaceDecl | ::= | "declare" "namespace" [NCName](http://www.w3.org/TR/xqupdate/#prod-xquery-NCName) "=" [URILiteral](http://www.w3.org/TR/xqupdate/#prod-xquery-URILiteral) |
| [11] | BoundarySpaceDecl | ::= | "declare" "boundary-space" ("preserve" | "strip") |
| [12] | DefaultNamespaceDecl | ::= | "declare" "default" ("element" | "function") "namespace" [URILiteral](http://www.w3.org/TR/xqupdate/#prod-xquery-URILiteral) |
| [13] | OptionDecl | ::= | "declare" "option" [QName](http://www.w3.org/TR/xqupdate/#prod-xquery-QName) [StringLiteral](http://www.w3.org/TR/xqupdate/#prod-xquery-StringLiteral) |
| [14] | OrderingModeDecl | ::= | "declare" "ordering" ("ordered" | "unordered") |
| [15] | EmptyOrderDecl | ::= | "declare" "default" "order" "empty" ("greatest" | "least") |
| [16] | CopyNamespacesDecl | ::= | "declare" "copy-namespaces" [PreserveMode](http://www.w3.org/TR/xqupdate/#prod-xquery-PreserveMode) "," [InheritMode](http://www.w3.org/TR/xqupdate/#prod-xquery-InheritMode) |
| [17] | PreserveMode | ::= | "preserve" | "no-preserve" |
| [18] | InheritMode | ::= | "inherit" | "no-inherit" |
| [19] | DefaultCollationDecl | ::= | "declare" "default" "collation" [URILiteral](http://www.w3.org/TR/xqupdate/#prod-xquery-URILiteral) |
| [20] | BaseURIDecl | ::= | "declare" "base-uri" [URILiteral](http://www.w3.org/TR/xqupdate/#prod-xquery-URILiteral) |
| [21] | SchemaImport | ::= | "import" "schema" [SchemaPrefix](http://www.w3.org/TR/xqupdate/#prod-xquery-SchemaPrefix)? [URILiteral](http://www.w3.org/TR/xqupdate/#prod-xquery-URILiteral) ("at" [URILiteral](http://www.w3.org/TR/xqupdate/#prod-xquery-URILiteral) ("," [URILiteral](http://www.w3.org/TR/xqupdate/#prod-xquery-URILiteral))\*)? |
| [22] | SchemaPrefix | ::= | ("namespace" [NCName](http://www.w3.org/TR/xqupdate/#prod-xquery-NCName) "=") | ("default" "element" "namespace") |
| [23] | ModuleImport | ::= | "import" "module" ("namespace" [NCName](http://www.w3.org/TR/xqupdate/#prod-xquery-NCName) "=")? [URILiteral](http://www.w3.org/TR/xqupdate/#prod-xquery-URILiteral) ("at" [URILiteral](http://www.w3.org/TR/xqupdate/#prod-xquery-URILiteral) ("," [URILiteral](http://www.w3.org/TR/xqupdate/#prod-xquery-URILiteral))\*)? |
| [24] | VarDecl | ::= | "declare" "variable" "$" [QName](http://www.w3.org/TR/xqupdate/#prod-xquery-QName) [TypeDeclaration](http://www.w3.org/TR/xqupdate/#prod-xquery-TypeDeclaration)? ((":=" [ExprSingle](http://www.w3.org/TR/xqupdate/#prod-xquery-ExprSingle)) | "external") |
| [25] | ConstructionDecl | ::= | "declare" "construction" ("strip" | "preserve") |
| [26] | [FunctionDecl](http://www.w3.org/TR/xqupdate/#doc-xquery-FunctionDecl) | ::= | "declare" "updating"? "function" [QName](http://www.w3.org/TR/xqupdate/#prod-xquery-QName) "(" [ParamList](http://www.w3.org/TR/xqupdate/#prod-xquery-ParamList)? ")" ("as" [SequenceType](http://www.w3.org/TR/xqupdate/#prod-xquery-SequenceType))? ([EnclosedExpr](http://www.w3.org/TR/xqupdate/#prod-xquery-EnclosedExpr) | "external") |
| [27] | ParamList | ::= | [Param](http://www.w3.org/TR/xqupdate/#prod-xquery-Param) ("," [Param](http://www.w3.org/TR/xqupdate/#prod-xquery-Param))\* |
| [28] | Param | ::= | "$" [QName](http://www.w3.org/TR/xqupdate/#prod-xquery-QName) [TypeDeclaration](http://www.w3.org/TR/xqupdate/#prod-xquery-TypeDeclaration)? |
| [29] | EnclosedExpr | ::= | "{" [Expr](http://www.w3.org/TR/xqupdate/#prod-xquery-Expr) "}" |
| [30] | QueryBody | ::= | [Expr](http://www.w3.org/TR/xqupdate/#prod-xquery-Expr) |
| [31] | Expr | ::= | [ExprSingle](http://www.w3.org/TR/xqupdate/#prod-xquery-ExprSingle) ("," [ExprSingle](http://www.w3.org/TR/xqupdate/#prod-xquery-ExprSingle))\* |
| [32] | [ExprSingle](http://www.w3.org/TR/xqupdate/#doc-xquery-ExprSingle) | ::= | [FLWORExpr](http://www.w3.org/TR/xqupdate/#prod-xquery-FLWORExpr) | [QuantifiedExpr](http://www.w3.org/TR/xqupdate/#prod-xquery-QuantifiedExpr) | [TypeswitchExpr](http://www.w3.org/TR/xqupdate/#prod-xquery-TypeswitchExpr) | [IfExpr](http://www.w3.org/TR/xqupdate/#prod-xquery-IfExpr) | [InsertExpr](http://www.w3.org/TR/xqupdate/#prod-xquery-InsertExpr) | [DeleteExpr](http://www.w3.org/TR/xqupdate/#prod-xquery-DeleteExpr) | [RenameExpr](http://www.w3.org/TR/xqupdate/#prod-xquery-RenameExpr) | [ReplaceExpr](http://www.w3.org/TR/xqupdate/#prod-xquery-ReplaceExpr) | [TransformExpr](http://www.w3.org/TR/xqupdate/#prod-xquery-TransformExpr) | [OrExpr](http://www.w3.org/TR/xqupdate/#prod-xquery-OrExpr) |
| [33] | FLWORExpr | ::= | ([ForClause](http://www.w3.org/TR/xqupdate/#prod-xquery-ForClause) | [LetClause](http://www.w3.org/TR/xqupdate/#prod-xquery-LetClause))+ [WhereClause](http://www.w3.org/TR/xqupdate/#prod-xquery-WhereClause)? [OrderByClause](http://www.w3.org/TR/xqupdate/#prod-xquery-OrderByClause)? "return" [ExprSingle](http://www.w3.org/TR/xqupdate/#prod-xquery-ExprSingle) |
| [34] | ForClause | ::= | "for" "$" [VarName](http://www.w3.org/TR/xqupdate/#prod-xquery-VarName) [TypeDeclaration](http://www.w3.org/TR/xqupdate/#prod-xquery-TypeDeclaration)? [PositionalVar](http://www.w3.org/TR/xqupdate/#prod-xquery-PositionalVar)? "in" [ExprSingle](http://www.w3.org/TR/xqupdate/#prod-xquery-ExprSingle) ("," "$" [VarName](http://www.w3.org/TR/xqupdate/#prod-xquery-VarName) [TypeDeclaration](http://www.w3.org/TR/xqupdate/#prod-xquery-TypeDeclaration)? [PositionalVar](http://www.w3.org/TR/xqupdate/#prod-xquery-PositionalVar)? "in" [ExprSingle](http://www.w3.org/TR/xqupdate/#prod-xquery-ExprSingle))\* |
| [35] | PositionalVar | ::= | "at" "$" [VarName](http://www.w3.org/TR/xqupdate/#prod-xquery-VarName) |
| [36] | LetClause | ::= | "let" "$" [VarName](http://www.w3.org/TR/xqupdate/#prod-xquery-VarName) [TypeDeclaration](http://www.w3.org/TR/xqupdate/#prod-xquery-TypeDeclaration)? ":=" [ExprSingle](http://www.w3.org/TR/xqupdate/#prod-xquery-ExprSingle) ("," "$" [VarName](http://www.w3.org/TR/xqupdate/#prod-xquery-VarName) [TypeDeclaration](http://www.w3.org/TR/xqupdate/#prod-xquery-TypeDeclaration)? ":=" [ExprSingle](http://www.w3.org/TR/xqupdate/#prod-xquery-ExprSingle))\* |
| [37] | WhereClause | ::= | "where" [ExprSingle](http://www.w3.org/TR/xqupdate/#prod-xquery-ExprSingle) |
| [38] | OrderByClause | ::= | (("order" "by") | ("stable" "order" "by")) [OrderSpecList](http://www.w3.org/TR/xqupdate/#prod-xquery-OrderSpecList) |
| [39] | OrderSpecList | ::= | [OrderSpec](http://www.w3.org/TR/xqupdate/#prod-xquery-OrderSpec) ("," [OrderSpec](http://www.w3.org/TR/xqupdate/#prod-xquery-OrderSpec))\* |
| [40] | OrderSpec | ::= | [ExprSingle](http://www.w3.org/TR/xqupdate/#prod-xquery-ExprSingle) [OrderModifier](http://www.w3.org/TR/xqupdate/#prod-xquery-OrderModifier) |
| [41] | OrderModifier | ::= | ("ascending" | "descending")? ("empty" ("greatest" | "least"))? ("collation" [URILiteral](http://www.w3.org/TR/xqupdate/#prod-xquery-URILiteral))? |
| [42] | QuantifiedExpr | ::= | ("some" | "every") "$" [VarName](http://www.w3.org/TR/xqupdate/#prod-xquery-VarName) [TypeDeclaration](http://www.w3.org/TR/xqupdate/#prod-xquery-TypeDeclaration)? "in" [ExprSingle](http://www.w3.org/TR/xqupdate/#prod-xquery-ExprSingle) ("," "$" [VarName](http://www.w3.org/TR/xqupdate/#prod-xquery-VarName) [TypeDeclaration](http://www.w3.org/TR/xqupdate/#prod-xquery-TypeDeclaration)? "in" [ExprSingle](http://www.w3.org/TR/xqupdate/#prod-xquery-ExprSingle))\* "satisfies" [ExprSingle](http://www.w3.org/TR/xqupdate/#prod-xquery-ExprSingle) |
| [43] | TypeswitchExpr | ::= | "typeswitch" "(" [Expr](http://www.w3.org/TR/xqupdate/#prod-xquery-Expr) ")" [CaseClause](http://www.w3.org/TR/xqupdate/#prod-xquery-CaseClause)+ "default" ("$" [VarName](http://www.w3.org/TR/xqupdate/#prod-xquery-VarName))? "return" [ExprSingle](http://www.w3.org/TR/xqupdate/#prod-xquery-ExprSingle) |
| [44] | CaseClause | ::= | "case" ("$" [VarName](http://www.w3.org/TR/xqupdate/#prod-xquery-VarName) "as")? [SequenceType](http://www.w3.org/TR/xqupdate/#prod-xquery-SequenceType) "return" [ExprSingle](http://www.w3.org/TR/xqupdate/#prod-xquery-ExprSingle) |
| [45] | IfExpr | ::= | "if" "(" [Expr](http://www.w3.org/TR/xqupdate/#prod-xquery-Expr) ")" "then" [ExprSingle](http://www.w3.org/TR/xqupdate/#prod-xquery-ExprSingle) "else" [ExprSingle](http://www.w3.org/TR/xqupdate/#prod-xquery-ExprSingle) |
| [46] | OrExpr | ::= | [AndExpr](http://www.w3.org/TR/xqupdate/#prod-xquery-AndExpr) ( "or" [AndExpr](http://www.w3.org/TR/xqupdate/#prod-xquery-AndExpr) )\* |
| [47] | AndExpr | ::= | [ComparisonExpr](http://www.w3.org/TR/xqupdate/#prod-xquery-ComparisonExpr) ( "and" [ComparisonExpr](http://www.w3.org/TR/xqupdate/#prod-xquery-ComparisonExpr) )\* |
| [48] | ComparisonExpr | ::= | [RangeExpr](http://www.w3.org/TR/xqupdate/#prod-xquery-RangeExpr) ( ([ValueComp](http://www.w3.org/TR/xqupdate/" \l "prod-xquery-ValueComp) | [GeneralComp](http://www.w3.org/TR/xqupdate/#prod-xquery-GeneralComp) | [NodeComp](http://www.w3.org/TR/xqupdate/#prod-xquery-NodeComp)) [RangeExpr](http://www.w3.org/TR/xqupdate/#prod-xquery-RangeExpr) )? |
| [49] | RangeExpr | ::= | [AdditiveExpr](http://www.w3.org/TR/xqupdate/#prod-xquery-AdditiveExpr) ( "to" [AdditiveExpr](http://www.w3.org/TR/xqupdate/#prod-xquery-AdditiveExpr) )? |
| [50] | AdditiveExpr | ::= | [MultiplicativeExpr](http://www.w3.org/TR/xqupdate/#prod-xquery-MultiplicativeExpr) ( ("+" | "-") [MultiplicativeExpr](http://www.w3.org/TR/xqupdate/#prod-xquery-MultiplicativeExpr) )\* |
| [51] | MultiplicativeExpr | ::= | [UnionExpr](http://www.w3.org/TR/xqupdate/#prod-xquery-UnionExpr) ( ("\*" | "div" | "idiv" | "mod") [UnionExpr](http://www.w3.org/TR/xqupdate/#prod-xquery-UnionExpr) )\* |
| [52] | UnionExpr | ::= | [IntersectExceptExpr](http://www.w3.org/TR/xqupdate/#prod-xquery-IntersectExceptExpr) ( ("union" | "|") [IntersectExceptExpr](http://www.w3.org/TR/xqupdate/#prod-xquery-IntersectExceptExpr) )\* |
| [53] | IntersectExceptExpr | ::= | [InstanceofExpr](http://www.w3.org/TR/xqupdate/#prod-xquery-InstanceofExpr) ( ("intersect" | "except") [InstanceofExpr](http://www.w3.org/TR/xqupdate/#prod-xquery-InstanceofExpr) )\* |
| [54] | InstanceofExpr | ::= | [TreatExpr](http://www.w3.org/TR/xqupdate/#prod-xquery-TreatExpr) ( "instance" "of" [SequenceType](http://www.w3.org/TR/xqupdate/#prod-xquery-SequenceType) )? |
| [55] | TreatExpr | ::= | [CastableExpr](http://www.w3.org/TR/xqupdate/#prod-xquery-CastableExpr) ( "treat" "as" [SequenceType](http://www.w3.org/TR/xqupdate/#prod-xquery-SequenceType) )? |
| [56] | CastableExpr | ::= | [CastExpr](http://www.w3.org/TR/xqupdate/#prod-xquery-CastExpr) ( "castable" "as" [SingleType](http://www.w3.org/TR/xqupdate/#prod-xquery-SingleType) )? |
| [57] | CastExpr | ::= | [UnaryExpr](http://www.w3.org/TR/xqupdate/#prod-xquery-UnaryExpr) ( "cast" "as" [SingleType](http://www.w3.org/TR/xqupdate/#prod-xquery-SingleType) )? |
| [58] | UnaryExpr | ::= | ("-" | "+")\* [ValueExpr](http://www.w3.org/TR/xqupdate/#prod-xquery-ValueExpr) |
| [59] | ValueExpr | ::= | [ValidateExpr](http://www.w3.org/TR/xqupdate/#prod-xquery-ValidateExpr) | [PathExpr](http://www.w3.org/TR/xqupdate/#prod-xquery-PathExpr) | [ExtensionExpr](http://www.w3.org/TR/xqupdate/#prod-xquery-ExtensionExpr) |
| [60] | GeneralComp | ::= | "=" | "!=" | "<" | "<=" | ">" | ">=" |
| [61] | ValueComp | ::= | "eq" | "ne" | "lt" | "le" | "gt" | "ge" |
| [62] | NodeComp | ::= | "is" | "<" | ">" |
| [63] | ValidateExpr | ::= | "validate" [ValidationMode](http://www.w3.org/TR/xqupdate/#prod-xquery-ValidationMode)? "{" [Expr](http://www.w3.org/TR/xqupdate/#prod-xquery-Expr) "}" |
| [64] | ValidationMode | ::= | "lax" | "strict" |
| [65] | ExtensionExpr | ::= | [Pragma](http://www.w3.org/TR/xqupdate/#prod-xquery-Pragma)+ "{" [Expr](http://www.w3.org/TR/xqupdate/#prod-xquery-Expr)? "}" |
| [66] | Pragma | ::= | "(#" [S](http://www.w3.org/TR/xqupdate/#prod-xquery-S)? [QName](http://www.w3.org/TR/xqupdate/#prod-xquery-QName) ([S](http://www.w3.org/TR/xqupdate/#prod-xquery-S) [PragmaContents](http://www.w3.org/TR/xqupdate/#prod-xquery-PragmaContents))? "#)" |
| [67] | PragmaContents | ::= | ([Char](http://www.w3.org/TR/xqupdate/#prod-xquery-Char)\* - (Char\* '#)' Char\*)) |
| [68] | PathExpr | ::= | ("/" [RelativePathExpr](http://www.w3.org/TR/xqupdate/#prod-xquery-RelativePathExpr)?) | ("//" [RelativePathExpr](http://www.w3.org/TR/xqupdate/#prod-xquery-RelativePathExpr)) | [RelativePathExpr](http://www.w3.org/TR/xqupdate/#prod-xquery-RelativePathExpr) |
| [69] | RelativePathExpr | ::= | [StepExpr](http://www.w3.org/TR/xqupdate/#prod-xquery-StepExpr) (("/" | "//") [StepExpr](http://www.w3.org/TR/xqupdate/#prod-xquery-StepExpr))\* |
| [70] | StepExpr | ::= | [FilterExpr](http://www.w3.org/TR/xqupdate/#prod-xquery-FilterExpr) | [AxisStep](http://www.w3.org/TR/xqupdate/#prod-xquery-AxisStep) |
| [71] | AxisStep | ::= | ([ReverseStep](http://www.w3.org/TR/xqupdate/#prod-xquery-ReverseStep) | [ForwardStep](http://www.w3.org/TR/xqupdate/#prod-xquery-ForwardStep)) [PredicateList](http://www.w3.org/TR/xqupdate/#prod-xquery-PredicateList) |
| [72] | ForwardStep | ::= | ([ForwardAxis](http://www.w3.org/TR/xqupdate/#prod-xquery-ForwardAxis) [NodeTest](http://www.w3.org/TR/xqupdate/#prod-xquery-NodeTest)) | [AbbrevForwardStep](http://www.w3.org/TR/xqupdate/#prod-xquery-AbbrevForwardStep) |
| [73] | ForwardAxis | ::= | ("child" "::") | ("descendant" "::") | ("attribute" "::") | ("self" "::") | ("descendant-or-self" "::") | ("following-sibling" "::") | ("following" "::") |
| [74] | AbbrevForwardStep | ::= | "@"? [NodeTest](http://www.w3.org/TR/xqupdate/#prod-xquery-NodeTest) |
| [75] | ReverseStep | ::= | ([ReverseAxis](http://www.w3.org/TR/xqupdate/#prod-xquery-ReverseAxis) [NodeTest](http://www.w3.org/TR/xqupdate/#prod-xquery-NodeTest)) | [AbbrevReverseStep](http://www.w3.org/TR/xqupdate/#prod-xquery-AbbrevReverseStep) |
| [76] | ReverseAxis | ::= | ("parent" "::") | ("ancestor" "::") | ("preceding-sibling" "::") | ("preceding" "::") | ("ancestor-or-self" "::") |
| [77] | AbbrevReverseStep | ::= | ".." |
| [78] | NodeTest | ::= | [KindTest](http://www.w3.org/TR/xqupdate/#prod-xquery-KindTest) | [NameTest](http://www.w3.org/TR/xqupdate/#prod-xquery-NameTest) |
| [79] | NameTest | ::= | [QName](http://www.w3.org/TR/xqupdate/#prod-xquery-QName) | [Wildcard](http://www.w3.org/TR/xqupdate/#prod-xquery-Wildcard) |
| [80] | Wildcard | ::= | "\*" | ([NCName](http://www.w3.org/TR/xqupdate/#prod-xquery-NCName) ":" "\*") | ("\*" ":" [NCName](http://www.w3.org/TR/xqupdate/#prod-xquery-NCName)) |
| [81] | FilterExpr | ::= | [PrimaryExpr](http://www.w3.org/TR/xqupdate/#prod-xquery-PrimaryExpr) [PredicateList](http://www.w3.org/TR/xqupdate/#prod-xquery-PredicateList) |
| [82] | PredicateList | ::= | [Predicate](http://www.w3.org/TR/xqupdate/#prod-xquery-Predicate)\* |
| [83] | Predicate | ::= | "[" [Expr](http://www.w3.org/TR/xqupdate/#prod-xquery-Expr) "]" |
| [84] | PrimaryExpr | ::= | [Literal](http://www.w3.org/TR/xqupdate/#prod-xquery-Literal) | [VarRef](http://www.w3.org/TR/xqupdate/#prod-xquery-VarRef) | [ParenthesizedExpr](http://www.w3.org/TR/xqupdate/#prod-xquery-ParenthesizedExpr) | [ContextItemExpr](http://www.w3.org/TR/xqupdate/#prod-xquery-ContextItemExpr) | [FunctionCall](http://www.w3.org/TR/xqupdate/#prod-xquery-FunctionCall) | [OrderedExpr](http://www.w3.org/TR/xqupdate/#prod-xquery-OrderedExpr) | [UnorderedExpr](http://www.w3.org/TR/xqupdate/#prod-xquery-UnorderedExpr) | [Constructor](http://www.w3.org/TR/xqupdate/#prod-xquery-Constructor) |
| [85] | Literal | ::= | [NumericLiteral](http://www.w3.org/TR/xqupdate/#prod-xquery-NumericLiteral) | [StringLiteral](http://www.w3.org/TR/xqupdate/#prod-xquery-StringLiteral) |
| [86] | NumericLiteral | ::= | [IntegerLiteral](http://www.w3.org/TR/xqupdate/#prod-xquery-IntegerLiteral) | [DecimalLiteral](http://www.w3.org/TR/xqupdate/#prod-xquery-DecimalLiteral) | [DoubleLiteral](http://www.w3.org/TR/xqupdate/#prod-xquery-DoubleLiteral) |
| [87] | VarRef | ::= | "$" [VarName](http://www.w3.org/TR/xqupdate/#prod-xquery-VarName) |
| [88] | VarName | ::= | [QName](http://www.w3.org/TR/xqupdate/#prod-xquery-QName) |
| [89] | ParenthesizedExpr | ::= | "(" [Expr](http://www.w3.org/TR/xqupdate/#prod-xquery-Expr)? ")" |
| [90] | ContextItemExpr | ::= | "." |
| [91] | OrderedExpr | ::= | "ordered" "{" [Expr](http://www.w3.org/TR/xqupdate/#prod-xquery-Expr) "}" |
| [92] | UnorderedExpr | ::= | "unordered" "{" [Expr](http://www.w3.org/TR/xqupdate/#prod-xquery-Expr) "}" |
| [93] | FunctionCall | ::= | [QName](http://www.w3.org/TR/xqupdate/#prod-xquery-QName) "(" ([ExprSingle](http://www.w3.org/TR/xqupdate/#prod-xquery-ExprSingle) ("," [ExprSingle](http://www.w3.org/TR/xqupdate/#prod-xquery-ExprSingle))\*)? ")" |
| [94] | Constructor | ::= | [DirectConstructor](http://www.w3.org/TR/xqupdate/#prod-xquery-DirectConstructor) | [ComputedConstructor](http://www.w3.org/TR/xqupdate/#prod-xquery-ComputedConstructor) |
| [95] | DirectConstructor | ::= | [DirElemConstructor](http://www.w3.org/TR/xqupdate/#prod-xquery-DirElemConstructor) | [DirCommentConstructor](http://www.w3.org/TR/xqupdate/#prod-xquery-DirCommentConstructor) | [DirPIConstructor](http://www.w3.org/TR/xqupdate/#prod-xquery-DirPIConstructor) |
| [96] | DirElemConstructor | ::= | "<" [QName](http://www.w3.org/TR/xqupdate/#prod-xquery-QName) [DirAttributeList](http://www.w3.org/TR/xqupdate/#prod-xquery-DirAttributeList) ("/>" | (">" [DirElemContent](http://www.w3.org/TR/xqupdate/#prod-xquery-DirElemContent)\* "</" [QName](http://www.w3.org/TR/xqupdate/#prod-xquery-QName) [S](http://www.w3.org/TR/xqupdate/#prod-xquery-S)? ">")) |
| [97] | DirAttributeList | ::= | ([S](http://www.w3.org/TR/xqupdate/#prod-xquery-S) ([QName](http://www.w3.org/TR/xqupdate/#prod-xquery-QName) [S](http://www.w3.org/TR/xqupdate/#prod-xquery-S)? "=" [S](http://www.w3.org/TR/xqupdate/#prod-xquery-S)? [DirAttributeValue](http://www.w3.org/TR/xqupdate/#prod-xquery-DirAttributeValue))?)\* |
| [98] | DirAttributeValue | ::= | ('"' ([EscapeQuot](http://www.w3.org/TR/xqupdate/#prod-xquery-EscapeQuot) | [QuotAttrValueContent](http://www.w3.org/TR/xqupdate/#prod-xquery-QuotAttrValueContent))\* '"') | ("'" ([EscapeApos](http://www.w3.org/TR/xqupdate/#prod-xquery-EscapeApos) | [AposAttrValueContent](http://www.w3.org/TR/xqupdate/#prod-xquery-AposAttrValueContent))\* "'") |
| [99] | QuotAttrValueContent | ::= | [QuotAttrContentChar](http://www.w3.org/TR/xqupdate/#prod-xquery-QuotAttrContentChar) | [CommonContent](http://www.w3.org/TR/xqupdate/#prod-xquery-CommonContent) |
| [100] | AposAttrValueContent | ::= | [AposAttrContentChar](http://www.w3.org/TR/xqupdate/#prod-xquery-AposAttrContentChar) | [CommonContent](http://www.w3.org/TR/xqupdate/#prod-xquery-CommonContent) |
| [101] | DirElemContent | ::= | [DirectConstructor](http://www.w3.org/TR/xqupdate/#prod-xquery-DirectConstructor) | [CDataSection](http://www.w3.org/TR/xqupdate/#prod-xquery-CDataSection) | [CommonContent](http://www.w3.org/TR/xqupdate/#prod-xquery-CommonContent) | [ElementContentChar](http://www.w3.org/TR/xqupdate/#prod-xquery-ElementContentChar) |
| [102] | CommonContent | ::= | [PredefinedEntityRef](http://www.w3.org/TR/xqupdate/#prod-xquery-PredefinedEntityRef) | [CharRef](http://www.w3.org/TR/xqupdate/#prod-xquery-CharRef) | "{{" | "}}" | [EnclosedExpr](http://www.w3.org/TR/xqupdate/#prod-xquery-EnclosedExpr) |
| [103] | DirCommentConstructor | ::= | "<!--" [DirCommentContents](http://www.w3.org/TR/xqupdate/#prod-xquery-DirCommentContents) "-->" |
| [104] | DirCommentContents | ::= | (([Char](http://www.w3.org/TR/xqupdate/#prod-xquery-Char) - '-') | ('-' ([Char](http://www.w3.org/TR/xqupdate/#prod-xquery-Char) - '-')))\* |
| [105] | DirPIConstructor | ::= | "<?" [PITarget](http://www.w3.org/TR/xqupdate/#prod-xquery-PITarget) ([S](http://www.w3.org/TR/xqupdate/#prod-xquery-S) [DirPIContents](http://www.w3.org/TR/xqupdate/#prod-xquery-DirPIContents))? "?>" |
| [106] | DirPIContents | ::= | ([Char](http://www.w3.org/TR/xqupdate/#prod-xquery-Char)\* - (Char\* '?>' Char\*)) |
| [107] | CDataSection | ::= | "<![CDATA[" [CDataSectionContents](http://www.w3.org/TR/xqupdate/#prod-xquery-CDataSectionContents) "]]>" |
| [108] | CDataSectionContents | ::= | ([Char](http://www.w3.org/TR/xqupdate/#prod-xquery-Char)\* - (Char\* ']]>' Char\*)) |
| [109] | ComputedConstructor | ::= | [CompDocConstructor](http://www.w3.org/TR/xqupdate/#prod-xquery-CompDocConstructor) | [CompElemConstructor](http://www.w3.org/TR/xqupdate/#prod-xquery-CompElemConstructor) | [CompAttrConstructor](http://www.w3.org/TR/xqupdate/#prod-xquery-CompAttrConstructor) | [CompTextConstructor](http://www.w3.org/TR/xqupdate/#prod-xquery-CompTextConstructor) | [CompCommentConstructor](http://www.w3.org/TR/xqupdate/#prod-xquery-CompCommentConstructor) | [CompPIConstructor](http://www.w3.org/TR/xqupdate/#prod-xquery-CompPIConstructor) |
| [110] | CompDocConstructor | ::= | "document" "{" [Expr](http://www.w3.org/TR/xqupdate/#prod-xquery-Expr) "}" |
| [111] | CompElemConstructor | ::= | "element" ([QName](http://www.w3.org/TR/xqupdate/#prod-xquery-QName) | ("{" [Expr](http://www.w3.org/TR/xqupdate/#prod-xquery-Expr) "}")) "{" [ContentExpr](http://www.w3.org/TR/xqupdate/#prod-xquery-ContentExpr)? "}" |
| [112] | ContentExpr | ::= | [Expr](http://www.w3.org/TR/xqupdate/#prod-xquery-Expr) |
| [113] | CompAttrConstructor | ::= | "attribute" ([QName](http://www.w3.org/TR/xqupdate/#prod-xquery-QName) | ("{" [Expr](http://www.w3.org/TR/xqupdate/#prod-xquery-Expr) "}")) "{" [Expr](http://www.w3.org/TR/xqupdate/#prod-xquery-Expr)? "}" |
| [114] | CompTextConstructor | ::= | "text" "{" [Expr](http://www.w3.org/TR/xqupdate/#prod-xquery-Expr) "}" |
| [115] | CompCommentConstructor | ::= | "comment" "{" [Expr](http://www.w3.org/TR/xqupdate/#prod-xquery-Expr) "}" |
| [116] | CompPIConstructor | ::= | "processing-instruction" ([NCName](http://www.w3.org/TR/xqupdate/#prod-xquery-NCName) | ("{" [Expr](http://www.w3.org/TR/xqupdate/#prod-xquery-Expr) "}")) "{" [Expr](http://www.w3.org/TR/xqupdate/#prod-xquery-Expr)? "}" |
| [117] | SingleType | ::= | [AtomicType](http://www.w3.org/TR/xqupdate/#prod-xquery-AtomicType) "?"? |
| [118] | TypeDeclaration | ::= | "as" [SequenceType](http://www.w3.org/TR/xqupdate/#prod-xquery-SequenceType) |
| [119] | SequenceType | ::= | ("empty-sequence" "(" ")") | ([ItemType](http://www.w3.org/TR/xqupdate/#prod-xquery-ItemType) [OccurrenceIndicator](http://www.w3.org/TR/xqupdate/#prod-xquery-OccurrenceIndicator)?) |
| [120] | OccurrenceIndicator | ::= | "?" | "\*" | "+" |
| [121] | ItemType | ::= | [KindTest](http://www.w3.org/TR/xqupdate/#prod-xquery-KindTest) | ("item" "(" ")") | [AtomicType](http://www.w3.org/TR/xqupdate/#prod-xquery-AtomicType) |
| [122] | AtomicType | ::= | [QName](http://www.w3.org/TR/xqupdate/#prod-xquery-QName) |
| [123] | KindTest | ::= | [DocumentTest](http://www.w3.org/TR/xqupdate/#prod-xquery-DocumentTest) | [ElementTest](http://www.w3.org/TR/xqupdate/#prod-xquery-ElementTest) | [AttributeTest](http://www.w3.org/TR/xqupdate/#prod-xquery-AttributeTest) | [SchemaElementTest](http://www.w3.org/TR/xqupdate/#prod-xquery-SchemaElementTest) | [SchemaAttributeTest](http://www.w3.org/TR/xqupdate/#prod-xquery-SchemaAttributeTest) | [PITest](http://www.w3.org/TR/xqupdate/#prod-xquery-PITest) | [CommentTest](http://www.w3.org/TR/xqupdate/#prod-xquery-CommentTest) | [TextTest](http://www.w3.org/TR/xqupdate/#prod-xquery-TextTest) | [AnyKindTest](http://www.w3.org/TR/xqupdate/#prod-xquery-AnyKindTest) |
| [124] | AnyKindTest | ::= | "node" "(" ")" |
| [125] | DocumentTest | ::= | "document-node" "(" ([ElementTest](http://www.w3.org/TR/xqupdate/#prod-xquery-ElementTest) | [SchemaElementTest](http://www.w3.org/TR/xqupdate/#prod-xquery-SchemaElementTest))? ")" |
| [126] | TextTest | ::= | "text" "(" ")" |
| [127] | CommentTest | ::= | "comment" "(" ")" |
| [128] | PITest | ::= | "processing-instruction" "(" ([NCName](http://www.w3.org/TR/xqupdate/#prod-xquery-NCName) | [StringLiteral](http://www.w3.org/TR/xqupdate/#prod-xquery-StringLiteral))? ")" |
| [129] | AttributeTest | ::= | "attribute" "(" ([AttribNameOrWildcard](http://www.w3.org/TR/xqupdate/#prod-xquery-AttribNameOrWildcard) ("," [TypeName](http://www.w3.org/TR/xqupdate/#prod-xquery-TypeName))?)? ")" |
| [130] | AttribNameOrWildcard | ::= | [AttributeName](http://www.w3.org/TR/xqupdate/#prod-xquery-AttributeName) | "\*" |
| [131] | SchemaAttributeTest | ::= | "schema-attribute" "(" [AttributeDeclaration](http://www.w3.org/TR/xqupdate/#prod-xquery-AttributeDeclaration) ")" |
| [132] | AttributeDeclaration | ::= | [AttributeName](http://www.w3.org/TR/xqupdate/#prod-xquery-AttributeName) |
| [133] | ElementTest | ::= | "element" "(" ([ElementNameOrWildcard](http://www.w3.org/TR/xqupdate/#prod-xquery-ElementNameOrWildcard) ("," [TypeName](http://www.w3.org/TR/xqupdate/#prod-xquery-TypeName) "?"?)?)? ")" |
| [134] | ElementNameOrWildcard | ::= | [ElementName](http://www.w3.org/TR/xqupdate/#prod-xquery-ElementName) | "\*" |
| [135] | SchemaElementTest | ::= | "schema-element" "(" [ElementDeclaration](http://www.w3.org/TR/xqupdate/#prod-xquery-ElementDeclaration) ")" |
| [136] | ElementDeclaration | ::= | [ElementName](http://www.w3.org/TR/xqupdate/#prod-xquery-ElementName) |
| [137] | AttributeName | ::= | [QName](http://www.w3.org/TR/xqupdate/#prod-xquery-QName) |
| [138] | ElementName | ::= | [QName](http://www.w3.org/TR/xqupdate/#prod-xquery-QName) |
| [139] | TypeName | ::= | [QName](http://www.w3.org/TR/xqupdate/#prod-xquery-QName) |
| [140] | URILiteral | ::= | [StringLiteral](http://www.w3.org/TR/xqupdate/#prod-xquery-StringLiteral) |
| [141] | [RevalidationDecl](http://www.w3.org/TR/xqupdate/#doc-xquery-RevalidationDecl) | ::= | "declare" "revalidation" ("strict" | "lax" | "skip") |
| [142] | [InsertExprTargetChoice](http://www.w3.org/TR/xqupdate/#doc-xquery-InsertExprTargetChoice) | ::= | (("as" ("first" | "last"))? "into") | "after" | "before" |
| [143] | [InsertExpr](http://www.w3.org/TR/xqupdate/#doc-xquery-InsertExpr) | ::= | "insert" ("node" | "nodes") [SourceExpr](http://www.w3.org/TR/xqupdate/#prod-xquery-SourceExpr) [InsertExprTargetChoice](http://www.w3.org/TR/xqupdate/#prod-xquery-InsertExprTargetChoice) [TargetExpr](http://www.w3.org/TR/xqupdate/#prod-xquery-TargetExpr) |
| [144] | [DeleteExpr](http://www.w3.org/TR/xqupdate/#doc-xquery-DeleteExpr) | ::= | "delete" ("node" | "nodes") [TargetExpr](http://www.w3.org/TR/xqupdate/#prod-xquery-TargetExpr) |
| [145] | [ReplaceExpr](http://www.w3.org/TR/xqupdate/#doc-xquery-ReplaceExpr) | ::= | "replace" ("value" "of")? "node" [TargetExpr](http://www.w3.org/TR/xqupdate/#prod-xquery-TargetExpr) "with" [ExprSingle](http://www.w3.org/TR/xqupdate/#prod-xquery-ExprSingle) |
| [146] | [RenameExpr](http://www.w3.org/TR/xqupdate/#doc-xquery-RenameExpr) | ::= | "rename" "node" [TargetExpr](http://www.w3.org/TR/xqupdate/#prod-xquery-TargetExpr) "as" [NewNameExpr](http://www.w3.org/TR/xqupdate/#prod-xquery-NewNameExpr) |
| [147] | [SourceExpr](http://www.w3.org/TR/xqupdate/#doc-xquery-SourceExpr) | ::= | [ExprSingle](http://www.w3.org/TR/xqupdate/#prod-xquery-ExprSingle) |
| [148] | [TargetExpr](http://www.w3.org/TR/xqupdate/#doc-xquery-TargetExpr) | ::= | [ExprSingle](http://www.w3.org/TR/xqupdate/#prod-xquery-ExprSingle) |
| [149] | [NewNameExpr](http://www.w3.org/TR/xqupdate/#doc-xquery-NewNameExpr) | ::= | [ExprSingle](http://www.w3.org/TR/xqupdate/#prod-xquery-ExprSingle) |
| [150] | [TransformExpr](http://www.w3.org/TR/xqupdate/#doc-xquery-TransformExpr) | ::= | "copy" "$" [VarName](http://www.w3.org/TR/xqupdate/#prod-xquery-VarName) ":=" [ExprSingle](http://www.w3.org/TR/xqupdate/#prod-xquery-ExprSingle) ("," "$" [VarName](http://www.w3.org/TR/xqupdate/#prod-xquery-VarName) ":=" [ExprSingle](http://www.w3.org/TR/xqupdate/#prod-xquery-ExprSingle))\* "modify" [ExprSingle](http://www.w3.org/TR/xqupdate/#prod-xquery-ExprSingle) "return" [ExprSingle](http://www.w3.org/TR/xqupdate/#prod-xquery-ExprSingle) |

**A.1 Terminal Symbols**

|  |  |  |  |
| --- | --- | --- | --- |
| [151] | IntegerLiteral | ::= | [Digits](http://www.w3.org/TR/xqupdate/#prod-xquery-Digits) |
| [152] | DecimalLiteral | ::= | ("." [Digits](http://www.w3.org/TR/xqupdate/#prod-xquery-Digits)) | ([Digits](http://www.w3.org/TR/xqupdate/#prod-xquery-Digits) "." [0-9]\*) |
| [153] | DoubleLiteral | ::= | (("." [Digits](http://www.w3.org/TR/xqupdate/#prod-xquery-Digits)) | ([Digits](http://www.w3.org/TR/xqupdate/#prod-xquery-Digits) ("." [0-9]\*)?)) [eE] [+-]? [Digits](http://www.w3.org/TR/xqupdate/#prod-xquery-Digits) |
| [154] | StringLiteral | ::= | ('"' ([PredefinedEntityRef](http://www.w3.org/TR/xqupdate/#prod-xquery-PredefinedEntityRef) | [CharRef](http://www.w3.org/TR/xqupdate/#prod-xquery-CharRef) | [EscapeQuot](http://www.w3.org/TR/xqupdate/#prod-xquery-EscapeQuot) | [^"&])\* '"') | ("'" ([PredefinedEntityRef](http://www.w3.org/TR/xqupdate/#prod-xquery-PredefinedEntityRef) | [CharRef](http://www.w3.org/TR/xqupdate/#prod-xquery-CharRef) | [EscapeApos](http://www.w3.org/TR/xqupdate/#prod-xquery-EscapeApos) | [^'&])\* "'") |
| [155] | PredefinedEntityRef | ::= | "&" ("lt" | "gt" | "amp" | "quot" | "apos") ";" |
| [156] | EscapeQuot | ::= | '"' |
| [157] | EscapeApos | ::= | "''" |
| [158] | ElementContentChar | ::= | [Char](http://www.w3.org/TR/xqupdate/#prod-xquery-Char) - [{}<&] |
| [159] | QuotAttrContentChar | ::= | [Char](http://www.w3.org/TR/xqupdate/#prod-xquery-Char) - ["{}<&] |
| [160] | AposAttrContentChar | ::= | [Char](http://www.w3.org/TR/xqupdate/#prod-xquery-Char) - ['{}<&] |
| [161] | Comment | ::= | "(:" ([CommentContents](http://www.w3.org/TR/xqupdate/#prod-xquery-CommentContents) | [Comment](http://www.w3.org/TR/xqupdate/#prod-xquery-Comment))\* ":)" |
| [162] | PITarget | ::= | [[http://www.w3.org/TR/REC-xml#NT-PITarget]](http://www.w3.org/TR/REC-xml/#NT-PITarget)*XML* |
| [163] | CharRef | ::= | [[http://www.w3.org/TR/REC-xml#NT-CharRef]](http://www.w3.org/TR/REC-xml/#NT-CharRef)*XML* |
| [164] | QName | ::= | [[http://www.w3.org/TR/REC-xml-names/#NT-QName]](http://www.w3.org/TR/REC-xml-names/#NT-QName)*Names* |
| [165] | NCName | ::= | [[http://www.w3.org/TR/REC-xml-names/#NT-NCName]](http://www.w3.org/TR/REC-xml-names/#NT-NCName)*Names* |
| [166] | S | ::= | [[http://www.w3.org/TR/REC-xml#NT-S]](http://www.w3.org/TR/REC-xml/#NT-S)*XML* |
| [167] | Char | ::= | [[http://www.w3.org/TR/REC-xml#NT-Char]](http://www.w3.org/TR/REC-xml/#NT-Char)*XML* |

The following symbols are used only in the definition of terminal symbols; they are not terminal symbols in the grammar of [**[A EBNF for XQuery 1.0 Grammar with Update extensions]**](http://www.w3.org/TR/xqupdate/#id-grammar).

|  |  |  |  |
| --- | --- | --- | --- |
| [168] | Digits | ::= | [0-9]+ |
| [169] | CommentContents | ::= | ([Char](http://www.w3.org/TR/xqupdate/#prod-xquery-Char)+ - (Char\* ('(:' | ':)') Char\*)) |