

Features:
blue: where clause
red: aliases
yellow: multi columns
orange: set quantifiers

grammar completeXXLQS002 ;

```
emptyproduction : queryspecification ;
queryspecification : SELECT (SETQUANTIFIER)? selectlist tableexpression;
selectlist : selectsublist ( COMMA selectsublist )* ;
selectsublist : derivedcolumn ;
tableexpression : fromclause whereclause? ;
fromclause : FROM tablereferencelist ;
derivedcolumn : valueexpression asclause? ;
valueexpression : commonvalueexpression ;
commonvalueexpression : stringvalueexpression ;
stringvalueexpression : charactervalueexpression ;
charactervalueexpression : characterfactor ;
characterfactor : characterprimary ;
characterprimary : valueexpressionprimary ;
valueexpressionprimary : nonparenthesizedvalueexpressionprimary ;
nonparenthesizedvalueexpressionprimary : columnreference ;
columnreference : basicidentifierchain ;
basicidentifierchain : identifierchain ;
identifierchain : identifier ;
tablereferencelist : tablereference ;
tablereference : tableprimaryorjoinedtable ;
tableprimaryorjoinedtable : tableprimary ;
tableprimary : tableorqueryname ;
tableorqueryname : tablename ;
tablename : qualifiedidentifier ;
qualifiedidentifier : identifier ;
```

```
asclause : AS? columnname ;
columnname : identifier ;
```

```
whereclause : WHERE searchcondition ;
searchcondition : booleanvalueexpression ;
booleanvalueexpression : booleanterm (OR booleanterm)* ;
booleanterm : booleanfactor (AND booleanfactor)* ;
booleanfactor : NOT? booleantest ;
booleantest : booleanprimary ( IS NOT? truthvalue )? ;
truthvalue : TRUE | FALSE | UNKNOWN ;
booleanprimary : booleanpredicand ;
booleanpredicand : nonparenthesizedvalueexpressionprimary ;
```

```
SELECT : 'select' ;
FROM : 'from' ;
PERIOD : '.' ;
ASTERISK : '*' ;
```

```
COMMA : ',' ;
```

```
AS : 'AS' ;
```

```
WHERE : 'where' ;
```

```
OR : 'OR' ;
```

```
AND : 'AND' ;
```

```
NOT : 'NOT' ;
```

```
IS : 'IS' ;
```

```
TRUE : 'TRUE' ;
```

```
FALSE : 'FALSE' ;
```

```
UNKNOWN : 'UNKNOWN' ;
```

```
LEFTPARAN : '(' ;
```

```
RIGHTPARAN : ')' ;
```

```
SETQUANTIFIER : 'DISTINCT' | 'ALL' ;
```

```
identifier : ID ;
```

```
ID : ('a'..'z'|'A'..'Z')+ ;  
DIGIT : '0'..'9'+ ;  
SEMICOLON : ';' ;  
NEWLINE:'\r'? '\n' ;  
WS : (' '|'\t'|\n'|\r')+;
```