1. Pgm = kwdprog Vargroup Fcndefs Main
2. Main = kwdmain BBlock
3. BBlock = brace1 Vargroup Stmts brace2

4. Vargroup = kwdvars PPvarlist
5. Vargroup = eps
6. PPvarlist = parens1 Varlist parens2
7. Varlist = Varitem semi Varlist
8. Varlist = eps
9. Varitem = Vardecl A
10. ~~Varitem = Vardecl equal Varinit~~
11. Varitem = kwdclass Varitemtail
12. ~~Varitem = Classdef~~
13. Vardecl = Simplekind Varspec
14. Simplekind = Basekind
15. Simplekind = Classid
16. Basekind = int
17. Basekind = float
18. Basekind = string
19. Classid = id
20. Varspec = id VarspecTail
21. ~~Varspec = Arrspec~~
22. Varspec = Deref_id
23. Varid = id
24. Arrspec = Varid KKint
25. KKint = bracket1 int bracket2
26. Deref_id = Deref id
27. Deref = aster

28. Varinit = Expr
29. Varinit = BBexprs
30. BBexprs = brace1 BBexprsTail
31. ~~BBexprs = brace1 brace2~~
32. Exprlist = Expr Moreexprs
33. Moreexprs = comma Exprlist
34. Moreexprs = eps

35. Classdecl = kwdclass Classid

36. Classdef = Classheader BBclassitems
37. BBClassitems = brace1 Classitems brace2
38. Classheader = Classdecl Classmom Interfaces
39. Classmom = colon Classid
40. Classmom = eps
41. Classitems = ClassitemsTail
42. ~~Classitems = eps~~
43. Classgroup = Class_ctrl
44. Classgroup = Varlist
45. Classgroup = Mddecls
46. Class_ctrl = colon id // in {public, protected, private}
47. Interfaces = colon Classid Interfaces
48. Interfaces = eps

49. Mddecls = Mdheader Mddecls
50. Mddecls = eps
51. Mdheader = kwdfcn Md_id PParmlist Retkind
52. Md_id = Classid colon Fcnid

53. Fcndefs = Fcndef Fcndefs
54. Fcndefs = eps
55. Fcndef = Fcnheader BBlock

56. Fcnheader = kwdfcn Fcnid PParmlist Retkind
57. Fcnid = id
58. Retkind = Simplekind   //Asked professor during lab and said he needed to correct it from Retkind = Kind
59. PParmlist = parens1 PParmlistTail
60. ~~PParmlist = PPonly~~
61. Varspecs = Varspec More_varspecs
62. More_varspecs = comma Varspecs
63. More_varspecs = eps
64. PPonly = parens1 parens2

65. Stmts = Stmt semi Stmts
66. Stmts = eps
67. Stmt = id StmtTail
68. ~~Stmt = Fcall~~
69. Stmt = Stif

70. Stmt = Stwhile
71. Stmt = Stprint
72. Stmt = Strtn

73. Stasgn = Lval equal Expr
74. Lval = id LvalTail
75. ~~Lval = Aref~~
76. Lval = Deref_id
77. Aref = Varid KKexpr
78. KKexpr = bracket1 Expr bracket2

79. Fcall = Fcnid PPexprs
80. PPexprs = parens1 PPexprsTail
81. ~~PPExprs = PPonly~~

82. Stif = kwdif PPexpr BBlock Elsepart
83. Elsepart = kwdelseif PPexpr BBlock Elsepart
84. Elsepart = kwdelse BBlock
85. Elsepart = eps

86. Stwhile = kwdwhile PPexpr BBlock
87. Stprint = kprint PPexprs

88. Strtn = kwdreturn StrtnTail
89. ~~Strtn = kwdreturn~~

90. PPexpr = parens1 Expr parens2
91. Expr = Rterm
92. Rterm = Term
93. Term = Fact
94. Fact = Basekind
95. Fact = id FactTail
96. Fact = Addrof_id
97. ~~Fact = Fcall~~
98. Fact = PPexpr
99. Addrof_id = ampersand id
100.   Oprel = opeq
101.   Oprel = opne
102.   Oprel = Lthan

103. Oprel = ople
104. Oprel = opge
105. Oprel = Gthan
106. Lthan = angle1
107. Gthan = angle2
108. Opadd = plus
109. Opadd = minus
110. Opmul = aster
111. Opmul = slash
112. Opmul = caret

Added Rules

113. Q = eps
114. Q = Oprel Rterm Q
115. Q = Opadd Term Q
116. Q = Opmul Fact Q

117. A = eps
118. A = equal Varinit

119. VaritemTail = ClassDefTail
120. VaritemTail = eps
121. ClassDefTail = Classmom Interfaces BBclassitems

122. VarspecTail = eps
123. VarspecTail = KKint

124. BBexprsTail = Exprlist brace2
125. BBexprsTail = brace2

126. ClassitemsTail = eps
127. ClassitemsTail = ClassgroupTail Classitems
128. ClassgroupTail = Class_ctrl
129. ClassgroupTail = VarlistTail
130. ClassgroupTail = Mdheader Mddecls
131. VarlistTail = Varitem semi Varlist

132. PParmlistTail = Varspecs parens2

133. PParmTail = parens2

134. StmtTail = PPexprs
135. StmtTail = equal Expr

136. LvalTail = eps
137. LvalTail = KKexpr

138. PPExprTail = Exprlist parens2
139. PPExprTail = parens2

140. StrtnTail = Expr
141. StrtnTail = eps

142. FactTail = eps
143. FactTail = KKExpr
144. FactTail = PPExpr