ERPLAG GRAMMAR RULES

CS F363 – Compiler Construction | Group 24

Nachiket Kotalwar (2020A7PS0024P)
Parth Patel (2020A7PS0026P)
Partha Sarathi Purkayastha (2020A7PS0043P)
Labeeb Ahsan (2020A7PS0045P)
Anish Atul Kulkarni (2020A7PS0975P)

---

1. Program Moduledeclarations Othermodules Drivermodule Othermodules .
2. Moduledeclarations Moduledeclaration Moduledeclarations .
3. Moduledeclarations .
4. Moduledeclaration declare module id semicol .
5. Othermodules Module Othermodules .
6. Othermodules .
7. Drivermodule driverdef driver program driverenddef Moduledef .
8. Module def module id enddef takes input sqbo Input_plist sqbc semicol Ret Moduledef .
9. Ret returns sqbo Output_plist sqbc semicol .
10. Ret .
11. Input_plist id colon Datatype A' .
12. A' comma id colon Datatype A' .
13. A' .
14. Output_plist id colon Datatype B' .
15. B' comma id colon Datatype B' .
16. B' .
17. Datatype integer .
18. Datatype real .
19. Datatype boolean .
20. Datatype array sqbo Rangenew sqbc of Type .
21. Rangenew Indarray rangeop Indarray .
22. Indarray Sign Indexcoef .
23. Indarray Indexcoef .
24. Indexcoef num .
25. Indexcoef id .
26. Sign plus .
27. Sign minus .
28. Type integer .

29. Type real .
30. Type boolean .
31. Moduledef start Statements end .
32. Statements Statement Statements .
33. Statements .
34. Statement Iostmt .
35. Statement Simplestmt .
36. Statement Declarestmt .
37. Statement Conditionalstmt .
38. Statement Iterativestmt .
39. Iostmt get_value bo id bc semicol .
40. Iostmt print bo Printvar bc semicol .
41. Varnew Printvar .
42. Varnew Sign Printvar .
43. Printvar Bool .
44. Printvar num .
45. Printvar rnum .
46. Printvar id J' .
47. J' sqbo Indarray sqbc .
48. J' .
49. Simplestmt Assignmentstmt .
50. Simplestmt Modulereusestmt .
51. Assignmentstmt id Whichstmt .
52. Whichstmt Lvalueidstmt .
53. Whichstmt Lvaluearrstmt .
54. Lvalueidstmt assignop Expression semicol .
55. Lvaluearrstmt sqbo Elemindex sqbc assignop Expression semicol .
56. Elemindex Sign G' .
57. Elemindex Aexpr .
58. G' Indexcoef .
59. G' bo Aexpr bc .
60. Modulereusestmt Optional use module id with parameters Actparalist semicol .
61. Optional sqbo Idlist sqbc assignop .
62. Optional .
63. Idlist id C' .
64. C' comma id C' .
65. C' .
66. Actparalist Varnew N11 .
67. N11 comma Varnew N11 .
68. N11 .

69. Expression Aorbexpr .
70. Expression Unaryexpr .
71. Unaryexpr Op3 Unaryop .
72. Unaryop bo Arithmeticexpr bc .
73. Unaryop Var_idnum .
74. Var_idnum num .
75. Var_idnum rnum .
76. Var_idnum id .
77. Op3 plus .
78. Op3 minus .
79. Aorbexpr Genterm H' .
80. H' Logicalop Genterm H' .
81. H' .
82. Genterm Arithmeticexpr I' .
83. I' Relationalop Arithmeticexpr .
84. I' .
85. Arithmeticexpr Term D' .
86. D' Op1 Term D' .
87. D' .
88. Op1 plus .
89. Op1 minus .
90. Term Factor E' .
91. E' Op2 Factor E' .
92. E' .
93. Op2 mul .
94. Op2 div .
95. Factor bo Aorbexpr bc .
96. Factor Bool .
97. Factor num .
98. Factor rnum .
99. Factor id K' .
100. K' sqbo Elemindex sqbc .
101. K' .
102. Aexpr Aterm N4 .
103. N4 Op1 Aterm N4 .
104. N4 .
105. Aterm Afactor N5 .
106. N5 Op2 Afactor N5 .
107. N5 .
108. Afactor id .

109. Afactor num .
110. Afactor Bool .
111. Afactor bo Aexpr bc .
112. Bool true .
113. Bool false .
114. Logicalop AND .
115. Logicalop OR .
116. Relationalop lt .
117. Relationalop gt .
118. Relationalop le .
119. Relationalop ge .
120. Relationalop eq .
121. Relationalop ne .
122. Declarestmt declare Actparalist colon Datatype semicol .
123. Conditionalstmt switch bo id bc start Casestmt Default end .
124. Casestmt case Value colon Statements break semicol F' .
125. F' case Value colon Statements break semicol F' .
126. F' .
127. Value num .
128. Value true .
129. Value false .
130. Default default colon Statements break semicol .
131. Default .
132. Iterativestmt for bo id in Range bc start Statements end .
133. Range Indloop rangeop Indloop .
134. Indloop Signloop Indcoefloop .
135. Indcoefloop num .
136. Signloop plus .
137. Signloop minus .
138. Signloop .
139. Iterativestmt while bo Aorbexpr bc start Statements end .