Compilers CFG

1. ProgramStart ➡️ ProgramUnit ProgramStart2

2. ProgramStart2 ➡️ ProgramUnit ProgramStart2 | 3

3. ProgramUnit ➡️ Header Block Footer

4. Header ➡️ program identifier delimiter

5. Block ➡️ implicit none delimiter TypeDecls Statements

6. Footer ➡️ end program identifier delimiter

7. TypeDecls ➡️ TypeDecl TypeDecls2 | 3

8. TypeDecls2 ➡️ TypeDecl TypeDecls2 | 3

9. TypeDecl ➡️ DataType TypeDecl2

10. TypeDecl2 ➡️ :: IdentifierList delimiter | , parameter :: NamedConstant delimiter

11. DataType ➡️ integer | real | complex | logical | CharacterDType

12. NamedConstant ➡️ identifier = LogicalOrConst

13. CharacterDType ➡️ character CharacterDType2

14. CharacterDType2 ➡️ (len = IdorConst) | 3

15. Statements ➡️ Statement Statements2

16. Statements2 ➡️ Statement Statements2 | 3

17. Statement ➡️ Assignment | Print | Read | IF | DoLoop | 3

18. Assignment ➡️ identifier = Relations delimiter

19. Relations ➡️ IdorConst Relation | LogicalVal

20. Relation ➡️ ArithmeticOp IdorConst Relation2 | 3

21. Relation2 ➡️ ArithmeticOp IdorConst Relation2 | 3

22. Print ➡️ print * PrintCall delimiter

23. PrintCall ➡️ , PrintList | 3

24. PrintList ➡️ PrintHolder PrintList2

25. PrintList2 ➡️ , PrintHolder PrintList2 | 3

26. PrintHolder ➡️ identifier | constant | string | 3

27. Read ➡️ read * , IdentifierList delimiter

28. IF ➡️ IFStart IF2

29. IF2 ➡️ end if delimiter | else delimiter Statements end if delimiter

30. IFStart ➡️ if Conditional then delimiter Statements

31. DoLoop ➡️ DoStart Statements end do delimiter

32. DoStart ➡️ do identifier = constant , IdorConst Step delimiter

33. Step ➡️ , IdorConst | 3

34. ArithmeticOp ➡️ * | / | + | -

35. IdentifierList ➡️ identifier IdentifierList2

36. IdentifierList2 ➡️ , identifier IdentifierList2 | 3

37. Conditional ➡️ IdorConst RelationalOp IdorConst | identifier | LogicalVal

38. IdorConst ➡️ identifier | constant

39. RelationalOp ➡️ > | < | <= | >= | == | /=

40. LogicalOrIdentifier ➡️ LogicalVal | IdentifierList

41. LogicalOrConst ➡️ LogicalVal | constant

42. LogicalVal ➡️ true | false