

Milestone 2

- CFGs:

1. *Function Call* \rightarrow identifier (*Arglist*)
2. *Arglist* \rightarrow identifier *Arguments* | e
3. *Arguments* \rightarrow ,identifier *Arguments* | e
4. *Term* \rightarrow number | identifier | *Function Call*
5. *Arithmetic operator* \rightarrow + | - | * | /
6. *Equation* \rightarrow *Equa* | (*Equa*) *eq*
7. *Equa* \rightarrow *Arithmetic operator Term eq* | e
8. *Eq* \rightarrow *Arithmetic operator Term eq* | e
9. *Expression* \rightarrow string | *Term* | *Equation*
10. *Assignment Statement* \rightarrow identifier *Assignment operator Expression*
11. *FullAssignmentStatement* \rightarrow identifier *Assignment operator Expression* ;
12. *Data type* \rightarrow int | float | string
13. *Declaration Statement* \rightarrow *Data type Declare* ;
14. *Declare* \rightarrow identifier *Decl /Assignment Statement Decl*
15. *Decl* \rightarrow ,*declare decl* | e
16. *Write Statement* \rightarrow write *write state* ;
17. *Write State* \rightarrow *Expression* | endl
18. *ReadStatement* \rightarrow read identifier ;

19. *ReturnStatement* \rightarrow return *expression*;
20. *ConditionOperator* \rightarrow < | > | = | <>
21. *Condition* \rightarrow identifier *condition operator Term*
22. *BooleanOperator* \rightarrow && | ||
23. *ConditionStatement* \rightarrow *Condition CondState*
24. *CondState* \rightarrow *BooleanOperator Condition*
CondState | e
25. *IfStatement* \rightarrow if *conditionStatement* then
Statements endState
26. *EndState* \rightarrow *elseifStatement / elseStatement* |
end
27. *Statements* \rightarrow *Statement State*
28. *State* \rightarrow *Statement State* | e
29. *Statement* \rightarrow *readStatement / writeStatement /*
declarationStatement / FullAssignmentStatement
/IfStatement / repeatStatement /returnStatement
/conditionStatement /FunctionStatement.
30. *ElseIFStatement* \rightarrow elseif *conditonStatement*
then *statements endstate*
31. *ElseStatement* \rightarrow else *Statements* end
32. *RepeatStatement* \rightarrow repeat *Statements* until
ConditionStatement
33. *FunctionName* \rightarrow identifier
34. *Parameter* \rightarrow *DataType* identifier
35. *FunctionDeclaration* \rightarrow *DataType*
functionName (ParamList)
36. *ParamList* \rightarrow *Parameter Par* | e
37. *Par* \rightarrow , *Parameter Par* | e

38. $FunctionBody \rightarrow \{ Statements returnStatement \}$
39. $FunctionStatement \rightarrow functionDeclaration$
 $FunctionBody$
40. $Main Function \rightarrow Datatype main ()$
 $FunctionBody$
41. $Program \rightarrow Prog MainFunction$
42. $Prog \rightarrow FunctionStatement Prog \mid e$