## Grammar Tuple: $(V, \Sigma, R, S)$

V = Non-Terminals = {S, SourceFile, PackageDeclarationRest, ImportDeclaration, MainBody, Body, TopLevelDeclaration, MainFunc, PackageIdentifier, VoidFuncBody, ImportPath}

 $\Sigma$  = Terminals = Tokens (see "Tokens" subfolder)

S = Starting Variable = S

R = Production Rules (as following):

 $S \rightarrow SourceFile$ 

SourceFile → "package" PackageDeclarationRest

PackageDeclarationRest → "main" ";" ImportDeclaration MainBody

| PackageIdentifier ";" ImportDeclaration Body

 $\mbox{ImportDeclaration} \qquad \rightarrow \; \epsilon \, | \, \mbox{``import" ImportPath ``; '` ImportDeclaration}$ 

ImportPath  $\rightarrow$  \"[a-zA-Z]+\"

MainBody → TopLevelDeclaration MainFunc TopLevelDeclaration

Body → TopLevelDeclaration

TopLevelDeclaration  $\rightarrow \epsilon$ 

MainFunc → "func" "main" "(" ")" "{" VoidFuncBody "}"

PackageIdentifier  $\rightarrow$  [a-zA-Z]

| [ a-zA-Z][ a-zA-Z0-9]+

VoidFuncBody  $\rightarrow \varepsilon$