

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

V = Non-Terminals = {s, source\_file, package\_declaration, import\_declaration, import\_path, toplevel\_declaration, function\_name, function, signature\_rest, function\_body}

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

S = Starting Variable = S

R = Production Rules (as following):

|                      |  |
|----------------------|--|
| s                    | = source_file.   |
| source_file          | = package_declaration “;” import_declaration.  |
| import_declaration   | = "import" import_path import_declaration<br>  "import" import_path<br>  top_level_declaration . |
| package_declaration  | = “package” package_name .   |
| package_name         | = PID<br>  LETTER .  |
| import_declaration   | “import” import_path “;” import_declaration<br>  “import” import_path “;” .                      |
| import_path          | = STRING .   |
| toplevel_declaration | = toplevel_declaration “func” function_name function.<br>  “func” function_name function.        |
| function_name        | = ID<br>  PID.   |
| function             | = signature_rest function_body .   |
| signature_rest       | = “(“ “)”” .   |
| function_body        | = “{“ “}”” .   |