nonterminals: nothing

terminals: bold

underline: token supplied by lexer

valid\_program : solver

solver : type\_link solver\_stmt\_list

| solver\_stmt\_list

type\_link : **use** string **;**

solver\_stmt\_list : solver\_stmt **;**

| block\_stmt

| solver\_stmt\_list solver\_stmt **;**

| solver\_stmt\_list block\_stmt

func\_stmt\_list : func\_stmt **;**

| func\_block\_stmt

| func\_stmt\_list func\_stmt **;**

| func\_stmt\_list func\_block\_stmt

block\_stmt : while\_stmt

| if\_stmt

| func\_dec

func\_block\_stmt : func\_while\_stmt

| func\_if\_stmt

solver\_stmt : prim\_dec

| assignment

| print\_stmt

| func\_call

func\_stmt : prim\_dec

| assignment

| print\_stmt

| func\_call

| **return** expr

func\_call : id **(** attr\_list **)**

func\_dec : param **(** param\_list **) {** func\_stmt\_list **}**

while\_stmt : **while** **(** expr **)** **{** solver\_stmt\_list **}**

func\_while\_stmt: **while (** expr **) {** func\_stmt\_list **}**

if\_stmt : **if** **(** expr **) {** solver\_stmt\_list **}**

func\_if\_stmt : **if** **(** expr **) {** func\_stmt\_list **}**

expr : **(** expr **)**

| **(** type **)** expr

| - expr

| expr **>** expr

| expr **>=** expr

| expr **<** expr

| expr **<=** expr

| expr **!=** expr

| expr **==** expr

| expr **+** expr

| expr **-** expr

| expr **\*** expr

| expr **/** expr

| expr **%** expr

| id **.** id

| **Graph** **.** id

| assignment

| access

| id

| func\_call

| pvalue

| list\_lit

param\_list : param\_list **,** param

| param

| epsilon

param : type id

assignment : access **=** expr

| id = expr

access : id **[** expr **]**

list\_lit : **[** attr\_list **]**

type : ptype

| **Node**

| **Arc**

| list\_type

list\_type : **list of** type

prim\_dec : type id

| type id = expr

attr\_list : expr

| attr\_list **,** expr

id : ID

ptype : **int**

| **float**

| **string**

pvalue : int

| float

| string

print\_stmt : **PRINT** expr