

Landon Holmes
lholmes7@my.athens.edu
A00116756
Assignment 4

```
1. Command = LS [Filename]
   | CD [Path]
   | CAT Filename
   | PRINT Filename
   | EXEC Filename
   | SET Var "=" Expr
   | ECHO Var ;
```

```
Path = "\" { NAME "\" } NAME ;
```

```
Filename = NAME "." NAME ;
```

```
Var = "$" IDENT ;
```

```
Expr = Term { ("+" | "-") Term } ;
Term = Factor { ("*" | "/" ) Factor } ;
Factor = NUMBER
        | Var
        | "(" Expr ")" ;
```

The tokens are: LS, CD, CAT, PRINT, EXEC, SET, ECHO, NAME, IDENT, FILENAME, NUMBER, \$, "=", "+", "-", "*", "/", "(", ")", "\"\""

The variables are: Command, Path, Filename, Var, Expr, Term, Factor

The start symbol is Command.

```
$Y = "(1+2)*3"

--- Input = exec $F ---
AST: EXEC file=$F
Symbol table (2 entries):
  $X = "123"
  $Y = "(1+2)*3"

--- Input = set $Z = $X + 5 ---
AST: SET $Z = $X+5
Symbol table (3 entries):
  $X = "123"
  $Y = "(1+2)*3"
  $Z = "$X+5"

--- Input = echo $Z ---
AST: ECHO $Z
Symbol table (3 entries):
  $X = "123"
  $Y = "(1+2)*3"
  $Z = "$X+5"

--- Input = unknown cmd ---
Error: Expected command
```

2. C:\Users\lando\source\repos\Assignment4.2\x64\Debug\Assignment4.2.