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Assignment 3

1. Command = LsCmd | CdCmd | CatCmd | PrintCmd | ExecCmd ;

LsCmd = "ls" [Filename] ; (* Lists files *)
CdCmd = "cd" [FolderPath] ; (* changes directory *)
CatCmd = "cat" Filename ; (* shows file contents *)
PrintCmd = "print" Filename ; (* prints file *)
ExecCmd = "exec" Filename ; (* runs program *)

Filename = Name8 "." Name3 ; (* DOS filename *)

FolderPath = Root | Folder { "\" Folder } ;
Root = "\" ;
Folder = Letter { Letter } ; (* max 8 characters *)

Name8 = Letter { Letter } ; (* 1–8 letters *)
Name3 = Letter { Letter } ; (* 1–3 letters *)

Letter = "A" | "B" | ... | "Z"
| "a" | "b" | ... | "z" ;

The Tokens are: ls, cd, cat, print, exec, ".", "\", and Letter.

The Variables are: Command, LsCmd, CdCmd, CatCmd, PrintCmd, ExecCmd, Filename, FolderPath, Root, Folder, Name8, Name3, and Letter.

```

--- Input = cat NOTES.TXT ---
CMD      'cat'
FILENAME  'NOTES.TXT'      (valid 8.3 syntax)
EOF

--- Input = print DOC.TXT ---
CMD      'print'
FILENAME  'DOC.TXT'        (valid 8.3 syntax)
EOF

--- Input = exec GAME.EXE ---
CMD      'exec'
FILENAME  'GAME.EXE'       (valid 8.3 syntax)
EOF

--- Input = ls TERRIBLENAME.TOO_LONGEXT ---
CMD      'ls'
FILENAME  'TERRIBLENAME.TOO' (troublesome 8.3 syntax)
ERROR     '_'
NAME      'LONGEXT'
EOF

--- Input = RUN$ BAD ---
NAME      'RUN'
ERROR     '$'
NAME      'BAD'
EOF

```

2. C:\Users\lando\source\repos\Assignment3.2\x64\Debug\Assignment3.2.

```
--- Input = cd \ ---  
AST: CD (root) '\'  
  
--- Input = cd \FOLDER ---  
AST: CD path = FOLDER  
  
--- Input = cd \F1\SUB ---  
Parse error: Unexpected token after folder path  
  
--- Input = cat NOTES.TXT ---  
AST: CAT filename='NOTES.TXT' valid 8.3  
  
--- Input = print DOC.TXT ---  
AST: PRINT filename='DOC.TXT' valid 8.3  
  
--- Input = exec GAME.EXE ---  
AST: EXEC filename='GAME.EXE' valid 8.3  
  
--- Input = ls TERRIBLENAME.TOOLONGEXT ---  
AST: LS filename='TERRIBLENAME.TOOLONGEXT' Troublesome 8.3  
  
--- Input = cd \TOO_LONG_FOLDER_NAME ---  
Parse error: Unexpected token after folder path  
  
--- Input = unknowncmd arg ---  
Parse error: Expected command (ls|cd|cat|print|exec)
```

3. C:\Users\lando\source\repos\Assignment3.3\x64\Debug\Assignment3.3.exe