README

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1 Summary

This file goes over how the compiler package and it's implementation are to be used. This covers from start to end, including installation of Go, setting up a workspace for the compiler, and compiling the files and running the program.

2 Install Go

Download the appropriate installation from Google's Go website, `http://golang.org/doc/install`, there is additional documentation located on website as well.

3 Go's Workspace

Extract files from the tarball into the desired location. Inside the root folder you will find four directories

- `bin` compiled executables, along with sample micro program files
- `doc` documentation
- `pkg` package objects (the compiler package is located in here)
- `src` source files
  - `compiler` source files pertaining to the compiler package
  - `main` source files pertaining to the main package (the driver file)

4 Compiling Source Files

There are two steps to compile and the executable; building the compiler package and then build the executable.

```
$ cd ../01/src/compiler
$ go build
$ cd ../main
$ go install
```

Now there is an executable in the `bin` folder.

5 Running the Program

You can run the executable that was compiled. Ensure you are in the directory where the `sample.micro` file is located.

```
$ cd ../01/bin
$ ./main
```

6 Sample Input and Output

Input file `sample.micro`

```
BEGIN --SOMETHING UNUSUAL
   READ(A1, New_A, D, B);
   C:= A1 +(New_A - D) - 75;
   New_C:=((B - (7) + (C + D))) - (3 - A1); -- STUPID FORMULA
   WRITE(C, A1 + New_C);
   -- WHAT ABOUT := B + D;
END
```

Output from `sample.micro`

```
BeginSym ReadSym LParen Id Comma Id Comma Id Comma Id RParen SemiColon Id
AssignOp Id PlusOp LParen Id MinusOp Id RParen MinusOp IntLiteral SemiColon
Id AssignOp LParen LParen Id MinusOp LParen IntLiteral RParen PlusOp LParen
Id PlusOp Id RParen RParen RParen MinusOp LParen IntLiteral MinusOp Id RParen
SemiColon WriteSym LParen Id Comma Id PlusOp Id RParen SemiColon EndSym
```