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## **User Manual**

After the HernandezCompiler.jar has been downloaded, one can use it by doing the following instructions. First, you must have the Pascal program file that you wish to compile saved in the directory where the executable jar is saved. Then you can proceed to open up a terminal window and type the following formatted command.

```
java -jar HernandezCompiler.jar sample.pas syntaxtree.txt symboltable.txt
```

As you can see this jar takes in three arguments. The first argument taken in, represents the Pascal program filename to be compiled. The second argument is the name desired for the syntax tree file that is written out from the given Pascal file. Similarly, the third argument is the name desired for the symbol table file that is written out from the given Pascal file. If the user forgets to include any of these arguments, the following message will be printed out.

```
"You must pass in a pascal file, as well as the output file  
names for the syntax tree and symbol table!"
```

```
Example: sample.pas syntaxtree.txt symboltable.txt"
```

Once the command is executed successfully, both the syntax tree and symbol table files are written out to the directory that the command was executed at. In addition, both the syntax tree and symbol table are printed out within the command window. Below is output of a successful run for a sample.pas program.

```
The syntax tree is  
Program: sample.pas
```

```

|-- Declarations:
|-- --- Variable: dollars
|-- --- Type: INTEGER
|-- --- Variable: yen
|-- --- Type: INTEGER
|-- --- Variable: bitcoins
|-- --- Type: INTEGER
|-- Subprogram declarations:
|-- Compound statement:
|-- --- Assignment statement:
|-- --- --- Variable: dollars
|-- --- --- Type: INTEGER
|-- --- --- Value: 1000000
|-- --- Assignment statement:
|-- --- --- Variable: yen
|-- --- --- Type: INTEGER
|-- --- --- Operation: MULTIPLICATION
|-- --- --- --- Variable: dollars
|-- --- --- --- Type: INTEGER
|-- --- --- --- Value: 102
|-- --- Assignment statement:
|-- --- --- Variable: bitcoins
|-- --- --- Type: INTEGER
|-- --- --- Operation: DIVISION
|-- --- --- --- Variable: dollars
|-- --- --- --- Type: INTEGER
|-- --- --- --- Value: 400

```

The symbol table is

ID	kind	variable type
dollars	VARIABLE	INTEGER
bitcoins	VARIABLE	INTEGER
yen	VARIABLE	INTEGER
sample	PROGRAM	null