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FILE: hw4-writeup.pdf

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DESC: This pdf will provide a short description of any challenges and/or issues I faced and how I addressed them in this assignment.

Challenges faced:

I faced many challenges on this assignment. The majority of them stemmed from confusion on how to implement interface classes in an efficient and readable way. It clicked for me when I realized I could set the value of Stmt variables to be any of the Stmt+ classes.

Another challenge I faced was related to how the Lexer handled IDs. I ran into an issue where the Lexer would continue building an ID even if it ran into a < or > because I did not include those two symbols as stopping points. This caused issues for things such as `i<=1` that did not have a space between the `i` and symbols following it.

Testing:

All Tests Passing

```
./ast_parser_tests
```

```
[-----] Global test environment tear-down
[=====] 58 tests from 1 test suite ran. (1 ms total)
[ PASSED ] 58 tests.
○ (base) benpuryear@Bens-MacBook-Pro-2 hw4-Ben10164 %
```

```
./parser_syntax_tests
```

```
[-----] Global test environment tear-down
[=====] 76 tests from 1 test suite ran. (2 ms total)
[ PASSED ] 76 tests.
○ (base) benpuryear@Bens-MacBook-Pro-2 hw4-Ben10164 %
```

All Diff Outputs of Examples/print-#.mypl

```
● (base) benpuryear@Bens-MacBook-Pro-2 hw4-Ben10164 % make && ./mypl --print examples/print-1.mypl > uh.txt
[ 30%] Built target ast_parser_tests
[ 60%] Built target parser_syntax_tests
[100%] Built target mypl
● (base) benpuryear@Bens-MacBook-Pro-2 hw4-Ben10164 % diff uh.txt examples/print-1.out
```

```
● (base) benpuryear@Bens-MacBook-Pro-2 hw4-Ben10164 % make && ./mypl --print examples/print-2.mypl > uh.txt
[ 30%] Built target ast_parser_tests
[ 60%] Built target parser_syntax_tests
[100%] Built target mypl
● (base) benpuryear@Bens-MacBook-Pro-2 hw4-Ben10164 % diff uh.txt examples/print-2.out
○ (base) benpuryear@Bens-MacBook-Pro-2 hw4-Ben10164 %
```

```
● (base) benpuryear@Bens-MacBook-Pro-2 hw4-Ben10164 % make && ./mypl --print examples/print-3.mypl > uh.txt
[ 30%] Built target ast_parser_tests
[ 60%] Built target parser_syntax_tests
[100%] Built target mypl
● (base) benpuryear@Bens-MacBook-Pro-2 hw4-Ben10164 % diff uh.txt examples/print-3.out
```