

P4

A simple name analyzer for `b` programming language.

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Comp Sci 536

How to invoke

```
make
make test
```

files details

- `Sym.java`: In this file, we define a subclass *FuncSym* to store the parameters list and return type of a function. We add new fields and getter methods for these two. Also, there is a override `toString()` method for unparsing.
We also add new `structTable` & `isStruct` fields for the struct. We write a second constructor for struct case. Also, the getter methods for these two fields.
- `SymTable.java`: In this file, we define a new field: a `HashMap` to contains defined struct. Also, we add the getter, setter, add and lookup methods for the new `structDefinedList`.
- `ast.java`: we added `nameAnalyzer()` to nodes to check if the name is valid. Generally, if the current node is a declaration, we do some check call `ProgramSymTable.addDecl`. If the current node is a expression or statement, we do some check to see if it's a valid usage. For details, plz check the comments in the files.
- `P4.java`: the main program will parse, do `nameAnalyzer`, and unparsing.
- `test.b`: contains all valid name cases.
- `nameErrors.b`: contains error cases.