Safi Nassar - assignment p1

Usage:

- `javac -d ./bytecode *.java && (cd ./bytecode && java P1)`

Prerequisites:

- OpenJDK 11

Tests documentation:

`public class P1`

P1 class: tests the SymTable & related classes - Sym

Note: test methods tend to preserve names of corresponding methods being verified & are prefixed with "test_".

Note: "print" method is used althroughout the unit tests, which excludes it from being tested.

- **Author:** Safi

`public static void main(String[] args)`

test driver: calls unit test methods & annotates each test with pass/fail status

- **Parameters:** `args` — input arguments if any

`public static boolean test_Sym()`

checks the correctness of the constructor & related getter/setter methods implemented in the Sym class

- **Returns:** true: verifies a correct functionality, otherwise false.

`public static boolean test_exception()`

checks the correctness of custom checked exception classes

- **Returns:** true: verifies a correct functionality, otherwise false.

`public static boolean test_SymTable()`

checks the correctness of the constructor implemented in the SymTable class

- **Returns:** true: verifies a correct functionality, otherwise false.

`public static boolean test_addDecl()`

checks the correctness of the addDecl method in the SymTable class

depends on removeScope method

- **Returns:** true: verifies a correct functionality, otherwise false.

`public static boolean test_addScope()`

checks the correctness of the addScope implemented in the SymTable class

- **Returns:** true: verifies a correct functionality, otherwise false.

`public static boolean test_lookupLocal()`

checks the correctness of the lookupLocal implemented in the SymTable class

- **Returns:** true: verifies a correct functionality, otherwise false.

`public static boolean test_lookupGlobal()`

checks the correctness of the lookupGlobal implemented in the SymTable class

- **Returns:** true: verifies a correct functionality, otherwise false.

`public static boolean test_removeScope()`

checks the correctness of the removeScope implemented in the SymTable class

- **Returns:** true: verifies a correct functionality, otherwise false.

Compiler for a C– language

- C– is a simple programming language that uses Pascal identifiers.

Terminology:

- identifier: lexical token naming language entities (e.g. variable or function names).
- symbol: memory instance storing information about a corresponding identifier token.

To-do list:

Assignment submission:

- Create pdf from markdown: `pandoc README.md -o <lastname.firstname.Pn.pdf>`
  - generate markdown from javadoc or
  - generate javadoc to extract method headers: `find . -type f -name "*.java" | xargs javadoc -d ../javadoc`
- Add headers for each file
- Verify code format
- Verify code execution on CSL machines