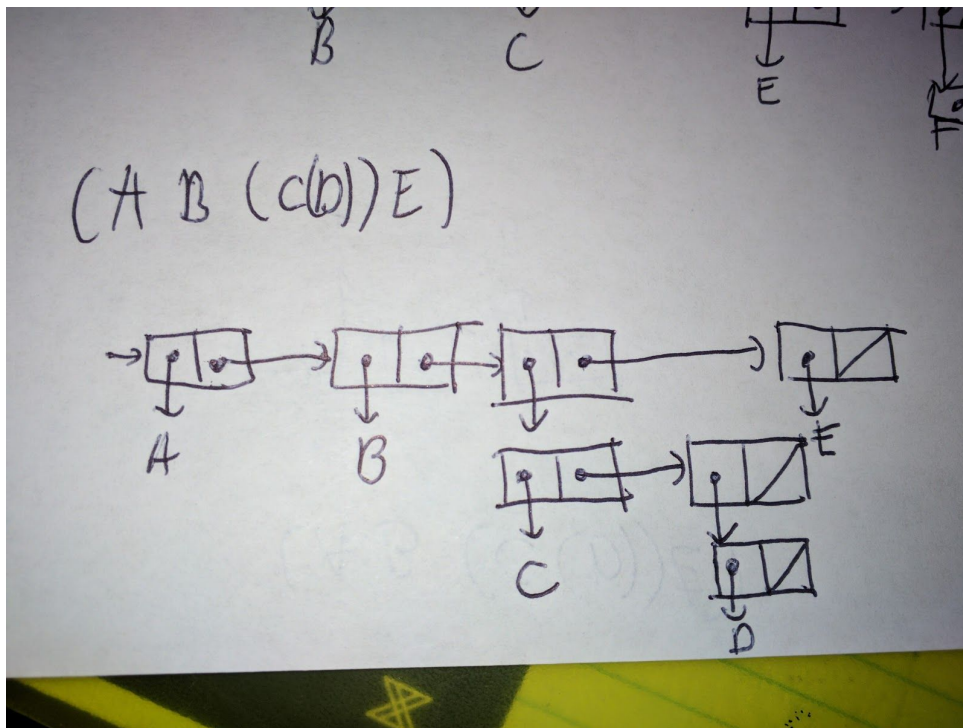


PLC HW
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1. Java's use of right hand braces to terminate compound statements:
 - **For:**
 - Allow for easier reability and writability instead of previous languages with keywords, like endif, that take up space in memory, compiler grammar, and in source code.
 - Clearer semantics for control statements and subprograms both for developer and compiler (dangling else statement)
 - **Against:**
 - Having terminating braces will decrease readability, whitespace looks cleaner
 - Variable scope is limited, additional keywords are now required for scope which take up space and decrease performance
2. A symbol table divides a program's source code into lexical units for the compiler to understand.
3. C++ has one more function of having static to store a variable within a class instead of an instance. Therefore, the variable is initialized once and keeps state.
- 4.



5.

6. In line 2, there should be a semicolon at the end of the statement (syntactic).

In line 7, temperature is set to a double value, but should be assigned to its int type as specified in line 2 (semantic).

In line 2, temperature is set to private, but to be used in functions it should be declared public for access within methods (semantic).

(Also on line 10 there is a logic error of += will just assign a positive degrees value to temperature.)

7. a) True

b) False, Smalltalk is all objects where operations are conducted on the objects.

There are no types except the ones you make.

c) False, Smalltalk does not declared type, type is determined at runtime.

d) True

e) True

f) True

8.

1. 4

2. 11

3. 12

4. 9

5. 11

6. 5

7. 2

8. 5

9. 3

10. 7

11. 17

12. 7

13. 1

14. 1

Total lexemes: 95