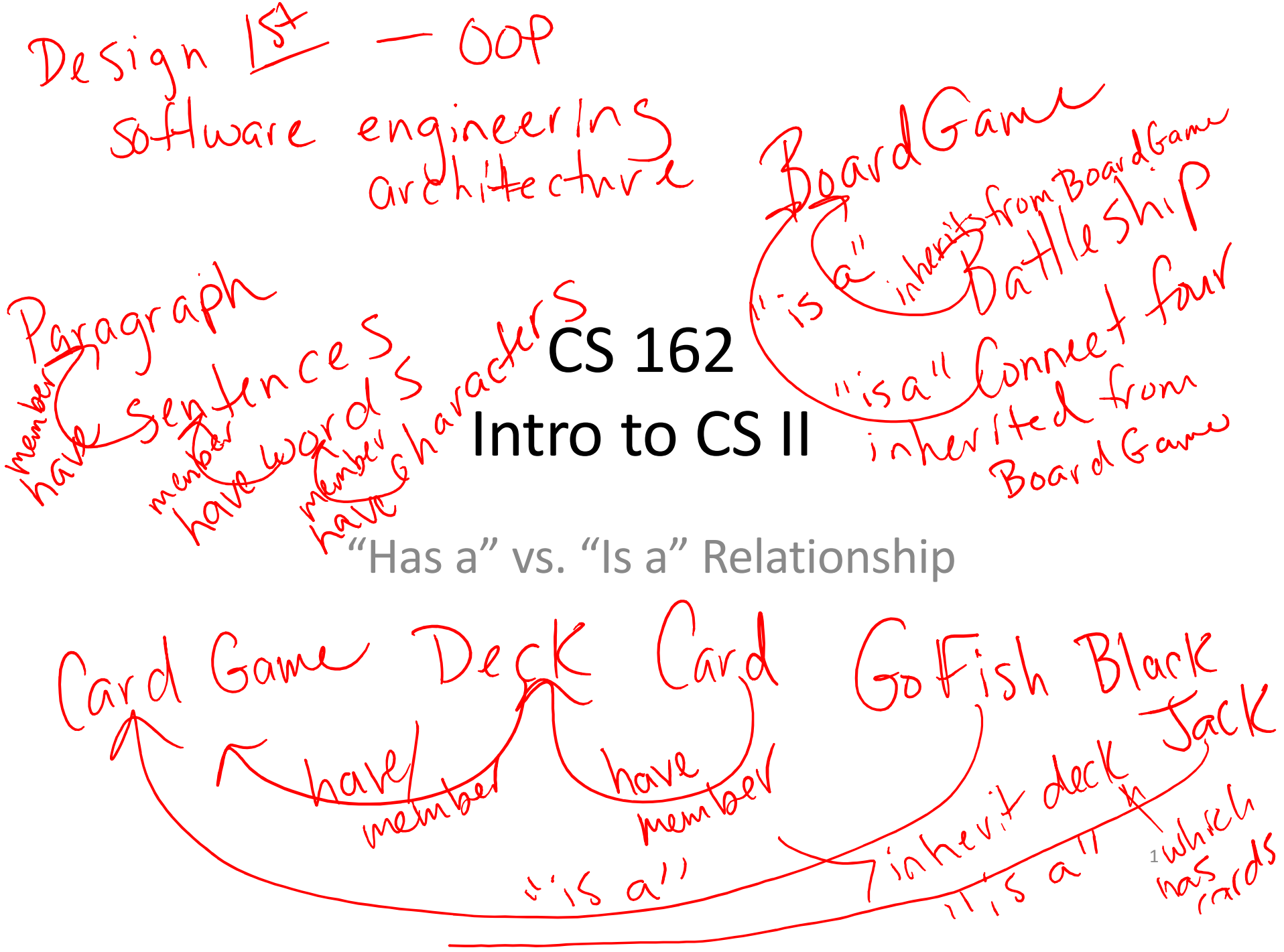
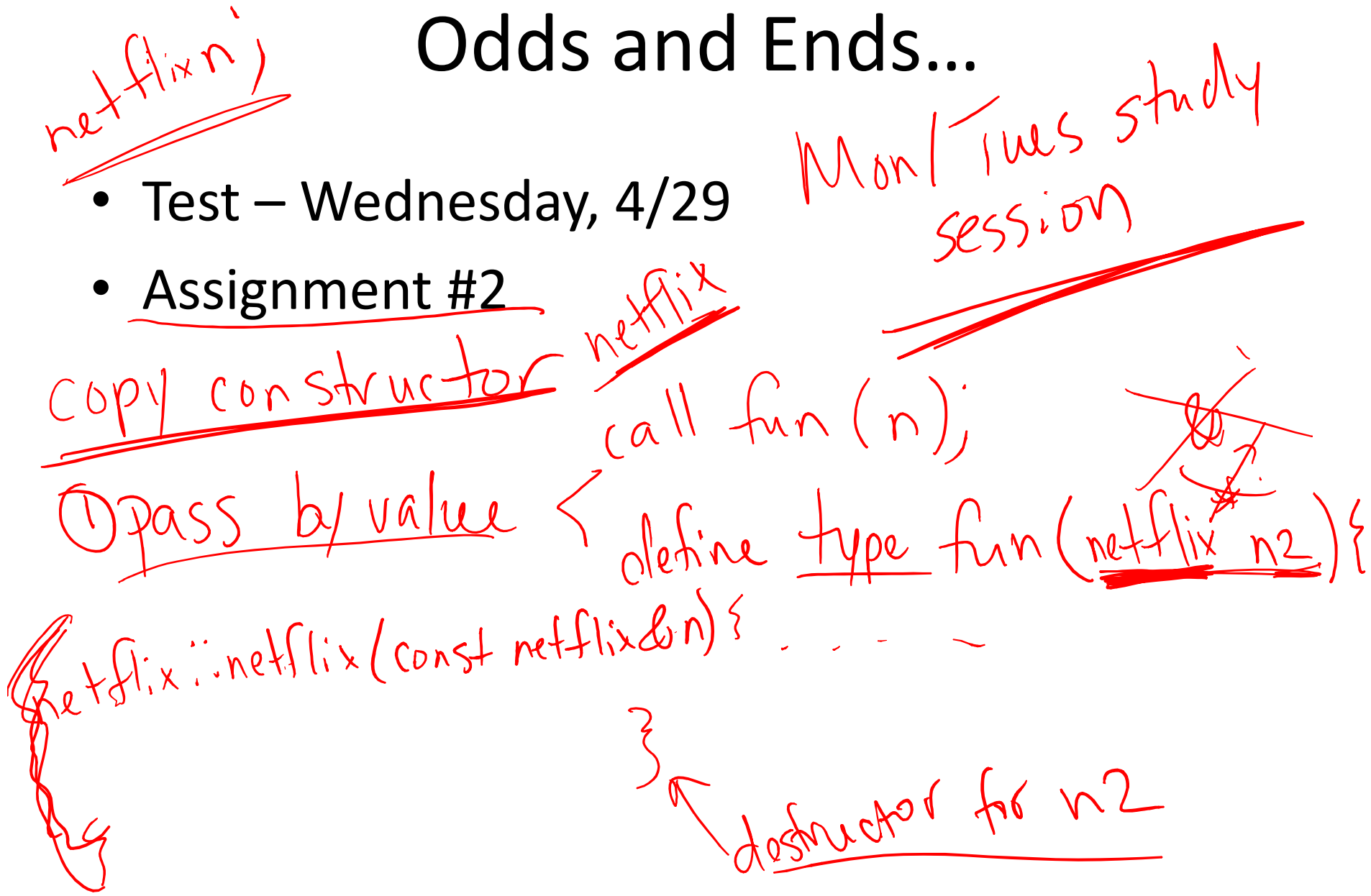
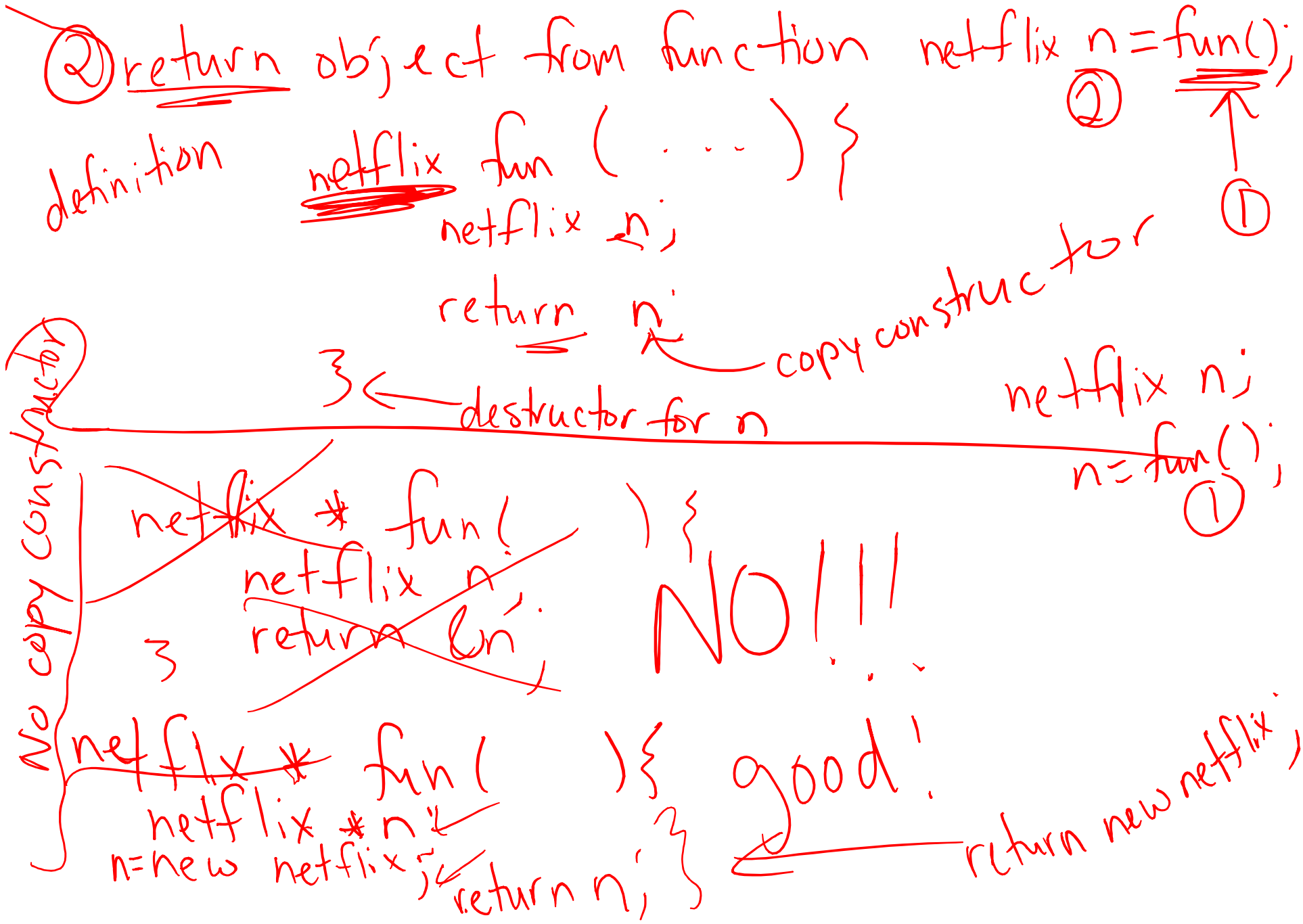

Design 1st — OOP
software engineering
architecture
BoardGame
"is a" inherits from BoardGame
Battleship
"is a" Connect four
inherited from
BoardGame
Paragraph
member
have Sentences
member
have words
member
have characters
CS 162
Intro to CS II
"Has a" vs. "Is a" Relationship
Card Game
Deck
Card
have member
have member
"is a"
Go Fish
Black Jack
inherit deck
"is a"
which has cards

Odds and Ends…

- Test – Wednesday, 4/29
- Assignment #2




② return object from function
definition
netflix fun (. . .) {
netflix n;
return n;
copy constructor
netflix n = fun();
②
①
3 ← destructor for n
netflix n;
n = fun();
①
No copy constructor
netflix * fun( ) {
netflix n;
return &n;
NO!!!
3
netflix * fun( ) {
netflix *n;
n=new netflix;
return n; }
good!
return new netflix;

③ netflix n;
netflix n2 = n;

copy constructor

vs.

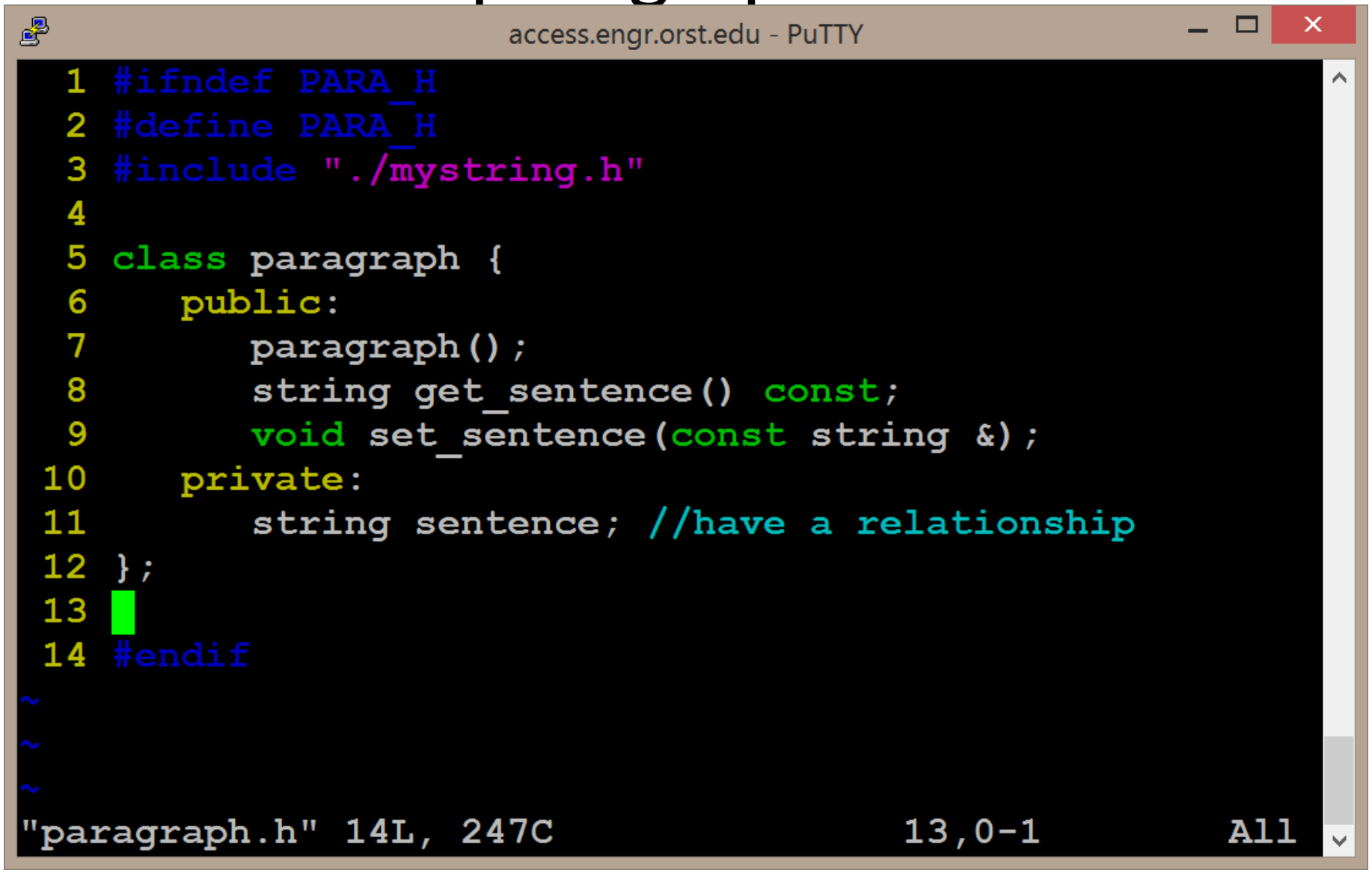
netflix n, n2;
n2 = n;

= op overload

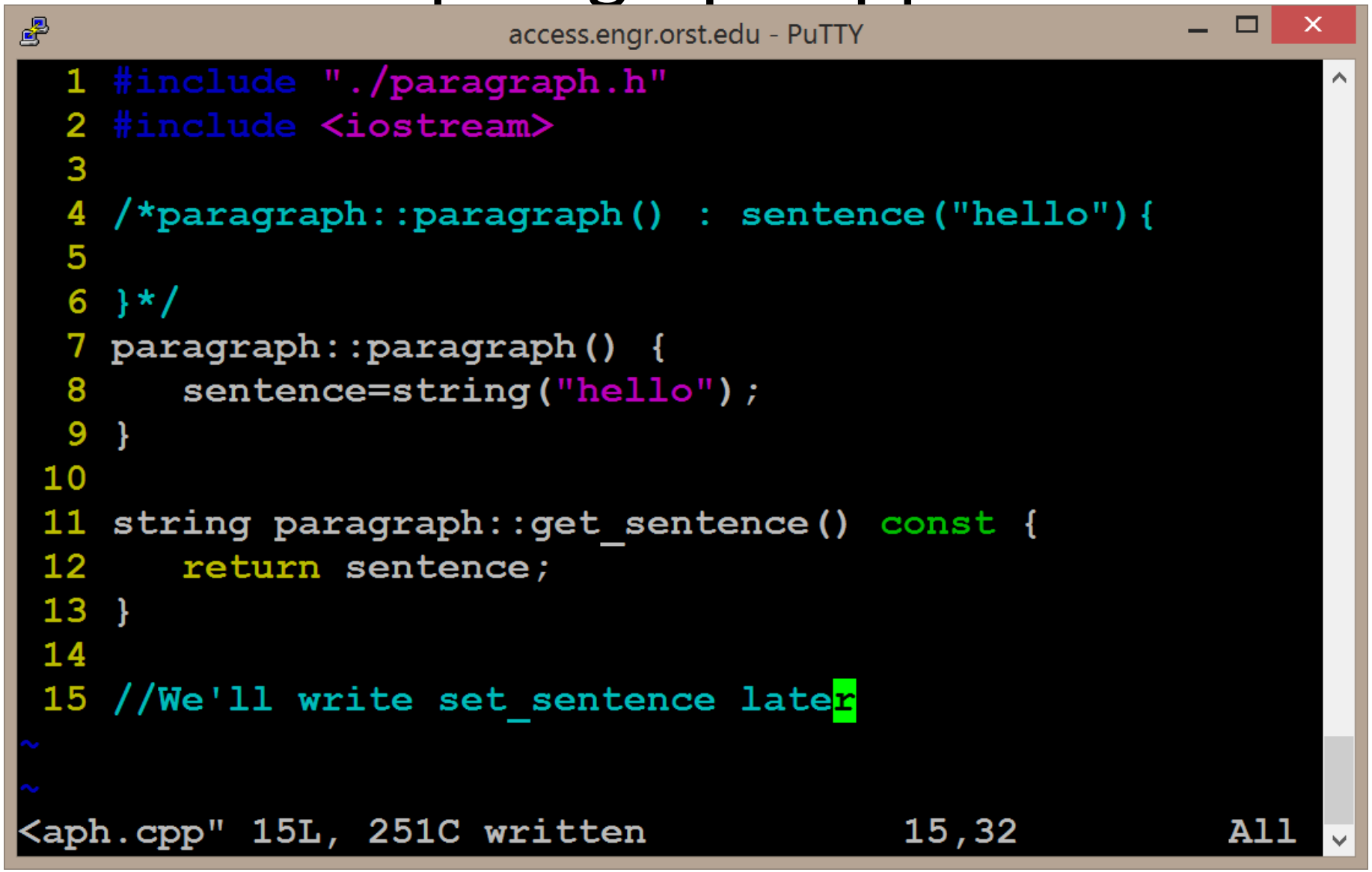
Revisit “has a” Relationship

- What is the “has a” relationship?
- How can we make a paragraph class that has strings?

paragraph.h


access.engr.orst.edu - PuTTY
1 #ifndef PARA_H
2 #define PARA_H
3 #include "./mystring.h"
4
5 class paragraph {
6 public:
7 paragraph();
8 string get_sentence() const;
9 void set_sentence(const string &);
10 private:
11 string sentence; //have a relationship
12 };
13
14 #endif
~
~
~
"paragraph.h" 14L, 247C 13,0-1 All

paragraph.cpp



main.cpp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4 #include <stdio.h>
5 #include "./paragraph.h"
6 using std::cout;
7 using std::endl;
8 using std::fstream;
9 using std::ios;
10
11 int main() {
12 paragraph p;
13 cout << p.get_sentence().at(1) << endl;
14
15 string str2("hello");
16 //string str=str2; //supposed to call copy constr
uct to make new
17 string str;
18 str=str2; //since both created, then call = ove
rload
18 fewer lines
11,1
12%