Lecture 10
const (read only)

- read right to left
  - operates on the thing to the left
  - if nothing on left, acts on right

- Use const to say that whatever you are referring to can't be modified
  - Arrays
    - void youCantModifyMe(const int b[]);
  - classes
    - Class method that is const cannot modify class data members
      - void print() const {};
    - Class method that is const cannot call non-const class methods
  - Pointers (next slide)
const (pointers)

- 4 types
  - nonconstant pointer to nonconstant data
  - nonconstant pointer to constant data
  - constant pointer to nonconstant data
  - constant pointer to constant data

- Arrays are constant pointers to nonconstant data
const (errata)

- `int * const ptr = &x; //const pointer has to be initialized (like a reference)`
- You can cast away the const
  - `const_cast`
  - But, modifying the resulting variable leads to undefined behavior!!
volatile (C++)

- declare variable that can be modified by hardware
- declare variable that might be accessed by multiple threads
  - prevents smart compilers from optimizing away the variable
- Must be reread any time it is accessed