Announcements

HW0 available, due 8/31 before lecture and online.

MP1 available, due 9/1, 11:59p.

Ideas/concepts: Class definitions, Class function implementation, Constructors, Clients

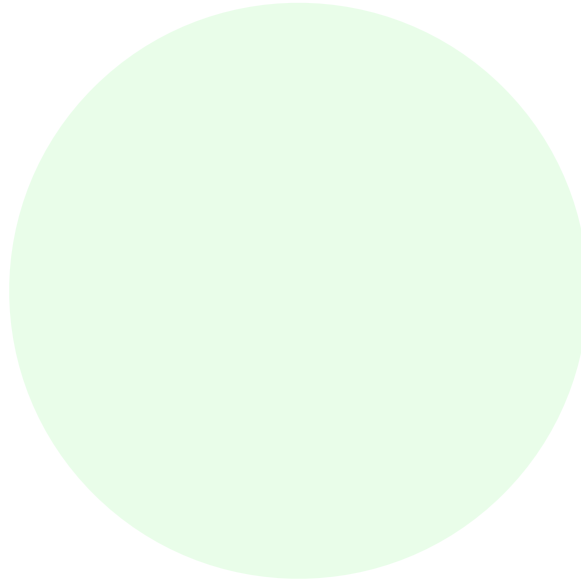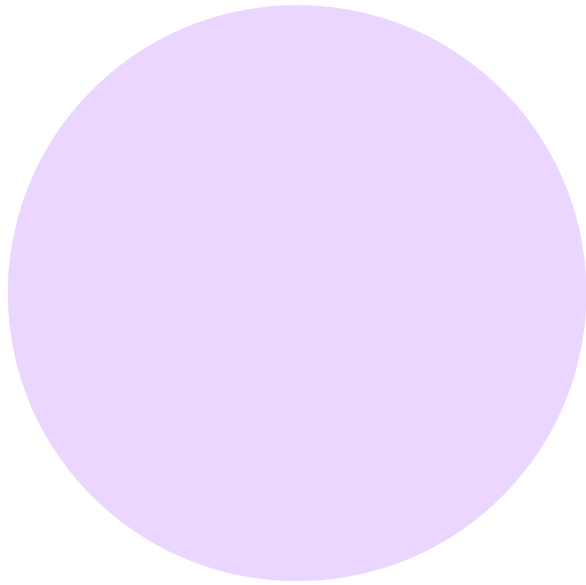# OOP: we need to understand how C++ supports

Inheritance

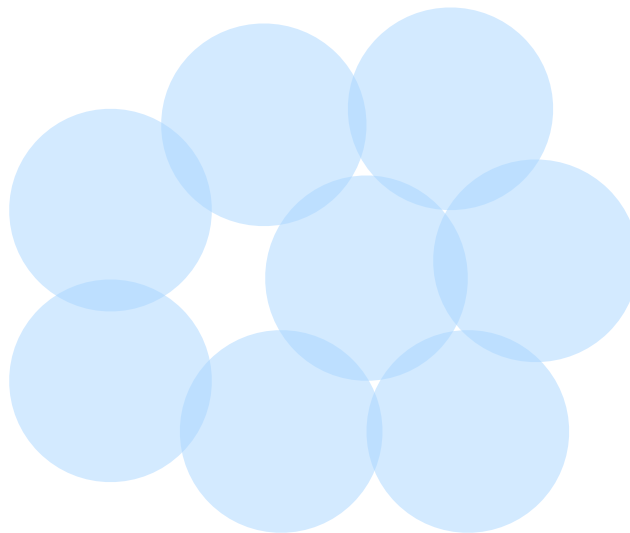Encapsulation (separation of interface from implementation)

1)

2)

Polymorphism

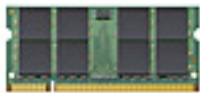# Class Definition… where are we?

Encapsulation in C++:

1)

2)

Switching gears…

Configure your iMac 27-inch

Use the options below to build the system of your dreams

Memory

More memory (RAM) increases performance and enables your computer to perform faster and better. Choose additional 1066MHz DDR3 memory for your iMac.

Learn more ▼

The more memory your computer has, the more programs you can run simultaneously, and the better performance you get from your computer.

- Select the standard memory configuration to support day-to-day tasks such as email, word processing, and web browsing as well as more complex tasks such as editing photos, creating illustrations, and building presentations.
- Upgrade your memory to enjoy greater performance for more intensive computing tasks, such as video editing and DVD authoring

Your iMac uses one of the fastest memory technologies available today—1066MHz, Double Data Rate (DDR3), synchronous dynamic random-access memory (SDRAM)—ensuring that the processor is constantly fed with data without wasting clock cycles.

- ⦿ 4GB 1066MHz DDR3 SDRAM – 2x2GB
- ◯ 8GB 1066MHz DDR3 SDRAM – 4x2GB [Add $200.00]
- ◯ 8GB 1066MHz DDR3 SDRAM – 2x4GB [Add $600.00]
- ◯ 16GB 1066MHz DDR3 SDRAM – 4x4GB [Add $1,400.00]

Variables and memory in C++
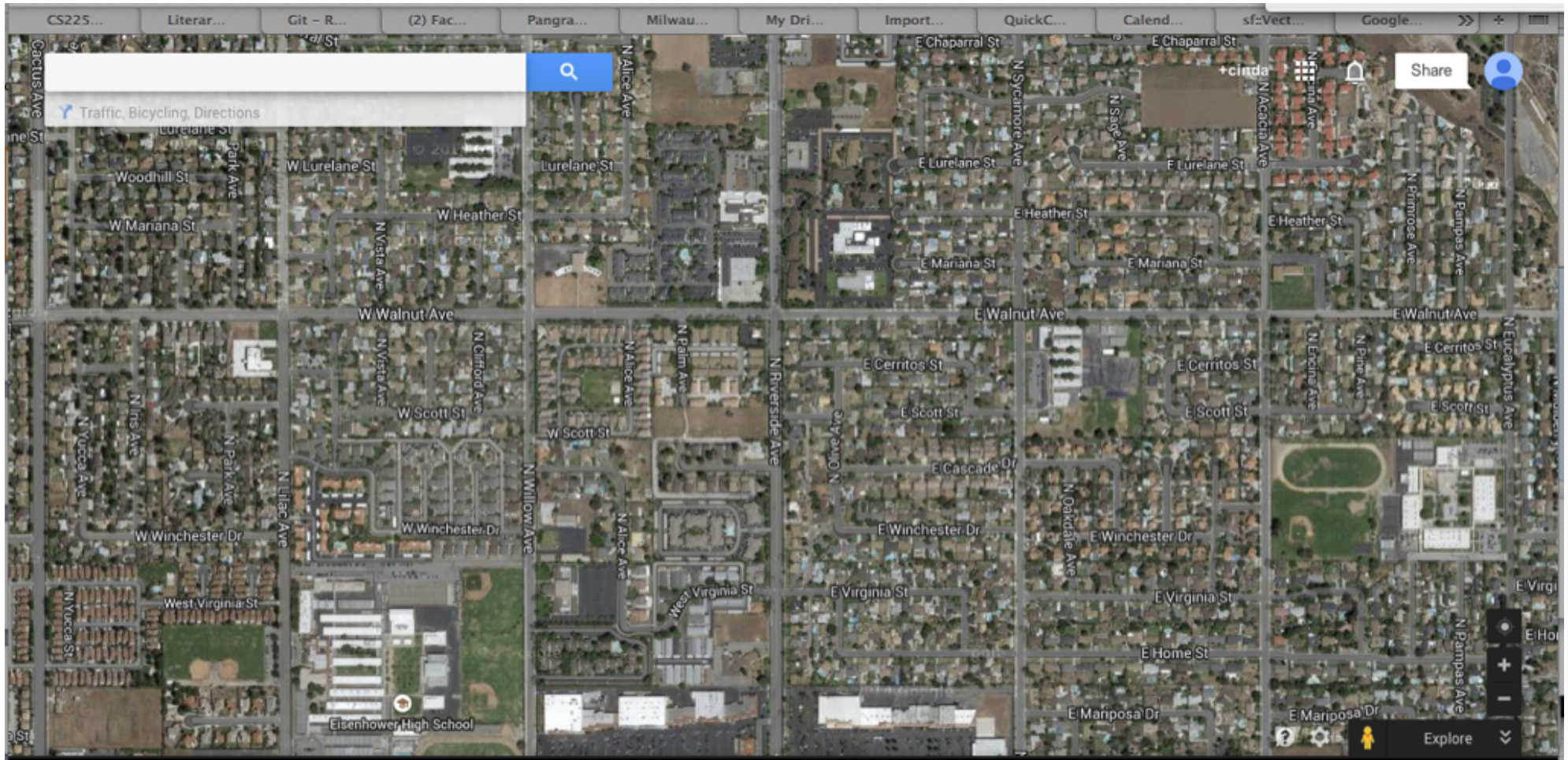
Variables and memory in C++

Stack memory

loc	name	value	type

Pointers - Intro

Stack memory

```
int x;
int * p;
```

How do we assign to p?

```
p =


p =
```

_____ operator: &

_____ operator: *

loc	name	value	type
a20	x	5	int
a40	p		int *

Pointer variables and dynamic memory allocation:

`int * p;`

Stack memory

loc	name	type	value
a40	p	int *	

Heap memory

loc	name	type	value

Youtube: pointer binky c++

Fun and games with pointers: (warm-up)

```
int * p, q;
```
What type is q?_____

```
int *p;

int x;

p = &x;

*p = 6;

cout << x;
```
What is output?_____
```
cout << p;
```
What is output?_____

Write a statement whose output is the value of x, using variable p: _____