

Announcements

HW0 available, due 8/29 before lecture.

MP1 available, due 8/30, 11:59p.

```
class sphere{  
public:  
  
void setRadius(double newRad);  
double getDiameter() const;  
...  
private:  
double theRadius;  
};
```

```
//constructor(s) (next page)  
void sphere::setRadius(double newRad) {  
  
}  
double sphere::getDiameter() const {  
  
}
```

```
int main() {
```

```
}
```

Constructors (intro): When you *declare* a sphere, a sphere class constructor is invoked.

Points to remember abt ctors:

1.

2.

3.

```
int main() {
```

```
}
```

```
...
```

```
//default constructor
```

```
sphere::sphere() {
```

```
}
```

```
//default constructor, alternative
```

```
sphere::sphere()
```

```
{
```

```
}
```

```
//constructor with given radius
```

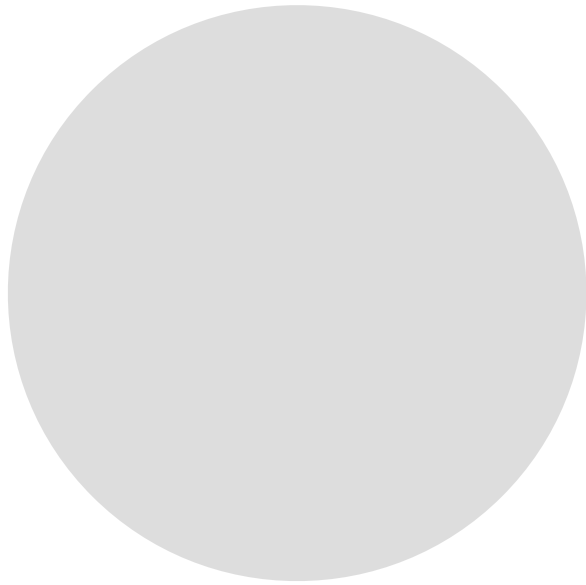
```
sphere::sphere(double r)
```

```
{
```

```
}
```

```
...
```

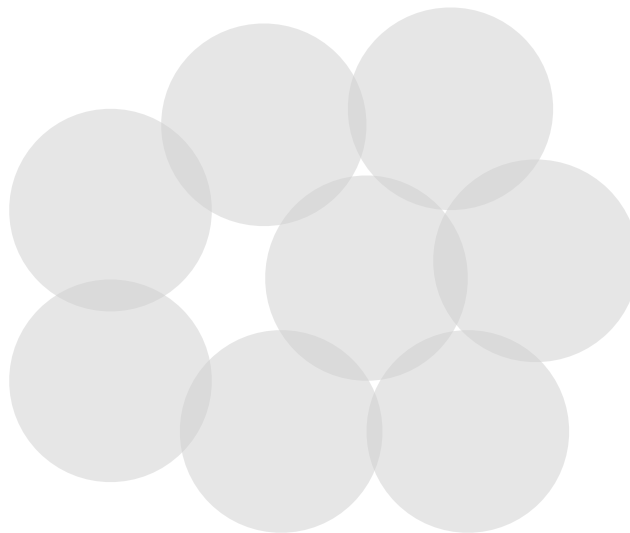
Class Definition... where are we?



Encapsulation in C++:

1)

2)



Recap...

Ideas/concepts:

- Class definitions

- Class function implementation

- Constructors

- Clients

OOP: we now understand how C++ supports

- Inheritance

- Encapsulation (separation of interface from implementation)

 - 1)

 - 2)

- Polymorphism

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 computation tasks, such as video editing and DVD authoring.

Your iMac uses one of synchronous dynamic without wasting clock

- ☒ 4GB 1066MHz DDR3
- ☐ 8GB 1066MHz DDR3
- ☐ 8GB 1066MHz DDR3
- ☐ 16GB 1066MHz DDR3



Variables and memory in C++

Stack memory

[illegible]

Pointers - Intro

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

How do we assign to p?

p =

p =

_____ operator: &

_____ operator: *

Stack memory

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++](#)