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# 1 lecture 02 06/04/19

*OOP-review:*

## 1.1 inline function

member function definition given completely in the definition of the class saves overhead of a function invocation very short definitions

## 1.2 static members

keyword static is used, global variable or member static member functions can be accessed without an object ever being created `class::memberFunction()`

private: static int y; //will be shared by all object instances

## 1.3 scope resolution operator

::

## 2 lecture 03 06/06/19

*OOP-review cont:*

### 2.1 member initialization list

member initialization list for base class  
using base class constructor

- Cat(int a, string b, bool c): Animal(d, e, f)

### 2.2 Redefining

overloading - same name but different parameters, usually occurs in same class, fn, etc. overriding - same function signature/prototype, inheritance is usually involved

### 2.3 constructors

derived class constructor can't access private base class data, must call base class constructor in deriv.

### 2.4 OOD (object oriented design) fundamentals

- encapsulation
- inheritance
- polymorphism

ex) pShape->draw();

Shape is a pointer of base class and can point to Circle obj or Square or etc..  
each have different virtual draw

### 2.5 Access levels

- public
- protected
- private

### **3 lecture 04 06/10/19**