ACTOR 2

Inheritance in multi-file programs

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DECLARATION VS. DEFINITION

PROTOTYPES ONLY

```cpp
class Person
{
    private:
        string    name;
    public:
        Person(string n);
        void display();
};
```

INLINE FUNCTIONS

```cpp
class Person
{
    private:
        string    name;
    public:
        Person(string n) : name(n) {}
        void display()
            { cout << name << endl; }
};
```

GUARDING CLASS SPECIFICATIONS

#include GUARD

- #ifndef
  - if not defined
- #define
  - creates a macro or symbolic constant
- #endif
  - end if

#pragma once

- #pragma once

- The "pragma" directive introduces practical shortcuts
- May be system-specific
- Non-ANSI features

SUPERCLASS
Person

```
#pragma once

#include <iostream>
#include <string>
using namespace std;

class Person
{ . . . };
```

```
#ifndef _PERSON_H_
#define _PERSON_H_

#include <iostream>
#include <string>
using namespace std;

class Person
{ . . . };

#endif
```

SUPER AND SUBCLASS
Actor

```cpp
#pragma once

#include <iostream>
#include <string>
#include "Person.h"
using namespace std;

class Actor : public Person
{ . . . };
```

```cpp
#ifndef _ACTOR_H_
#define _ACTOR_H_

#include <iostream>
#include <string>
#include "Person.h"
using namespace std;

class Actor : public Person
{ . . . };

#endif
```

SUBCLASS
Star

```cpp
#pragma once

#include <iostream>
#include <string>
#include "Actor.h"
using namespace std;

class Star : public Actor
{ . . . };
```

```cpp
#ifndef _STAR_H_
#define _STAR_H_

#include <iostream>
#include <string>
#include "Actor.h"
using namespace std;

class Star : public Actor
{ . . . };

#endif
```

main

```
#include "Person.h"
#include "Actor.h"
#include "Star.h"

Person director("Steven Spielberg");
director.display();

Actor sidekick("Harvey Korman", "Dilbert");
sidekick.display();

Star big_star("John Wayne", "Cranston Snort", 5000000);
big_star.display();
```

ROBUST HEADER FILES

```cpp
#include <iostream>
#include <string>
using namespace std;
#include "Person.h"
#include "Actor.h"
#include "Star.h"
```

```cpp
#include "Person.h"
#include "Actor.h"
#include "Star.h"
#include <iostream>
#include <string>
using namespace std;
```