

# Inheritance Workshop

## Overloading and override

- What is meant by
  - Overloading a member function?
  - Overriding a member function?

- Are there any potential issues in the program shown on the next two pages?
- What would you expect the main function to print out?
- Compile and run the program. Is the output what the programmer probably intended?
- Fix any issues and run the program again

## Base and derived class

```
#include <complex>
```

```
class base {
```

```
public:
```

```
    virtual void f(double) { cout << "Base class's f taking double" << endl; }
```

```
};
```

```
class derived: public base {
```

```
public:
```

```
    void f(complex<double>) { cout << "Derived class's f taking complex" << endl; }
```

```
};
```

## Main function

```
int main() {  
    base b;  
    derived d;  
    unique_ptr<base> pb = make_unique<derived>();  
  
    b.f(1.0);  
    d.f(2.0);  
    pb->f(3.0);  
}
```