Today - Lecture 9 - CS162

1) Continue with the class construct creating a "List" class for our show list program.

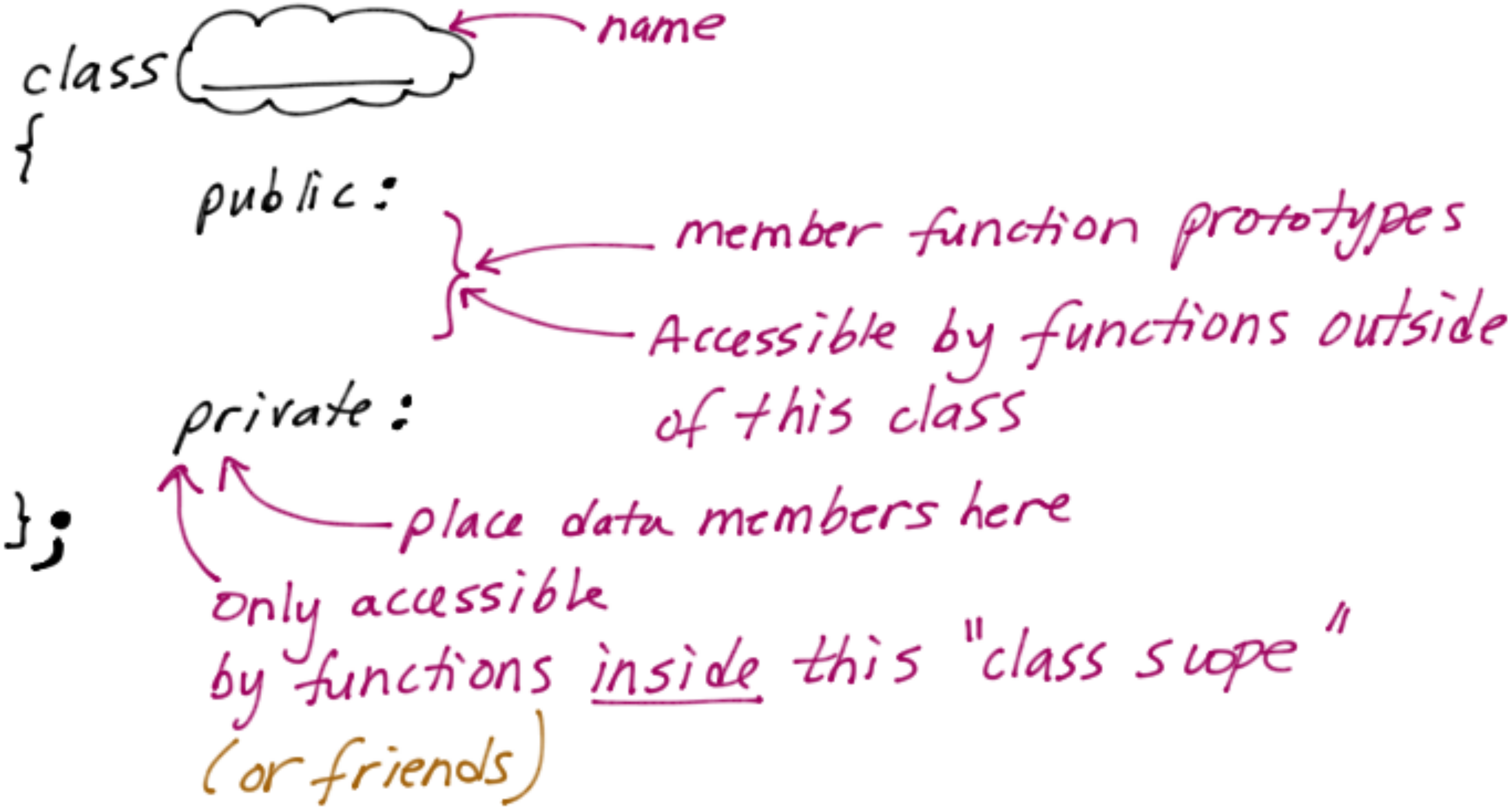
- review concepts
- examine the design
- implement anotler class

Class Construct

class → data type

object → variable, instance of a data type

class interface → where we declare functions (function prototypes) and specify the data that will be available for all objects of this class.



```
class ________
{
      public:
                      }
                      }
      private:
};
```

name

member function prototypes

Accessible by functions outside of this class

place data members here

only accessible by functions inside this "class scope"

(or friends)

Multiple Files

.h file (*declarations*)

1) #includes
2) constants
3) structs   also *prototypes*
4) class interfaces
5) **DO NOT** implement the "body" of functions in the .h file
6) **DO NOT** #include any .cpp file

.cpp files (implementation file)

function definitions

1) #include "~.h"   goes to your current working directory
2) Function bodies
3) There can be only 1 main function in all of the .cpp files put together

On unix, compile via:

```
g++ main.cpp video.cpp
```

or

```
g++ *.cpp
```

this works if **all** of the functions in your directory are part of this "project"

To use the gdb or ddd debuggers, compile with the -g option

```
g++ -g *.cpp
```

When implementing member functions

1) In the .cpp file **ALL** prototypes listed in the class interface (.h) **MUST** be implemented

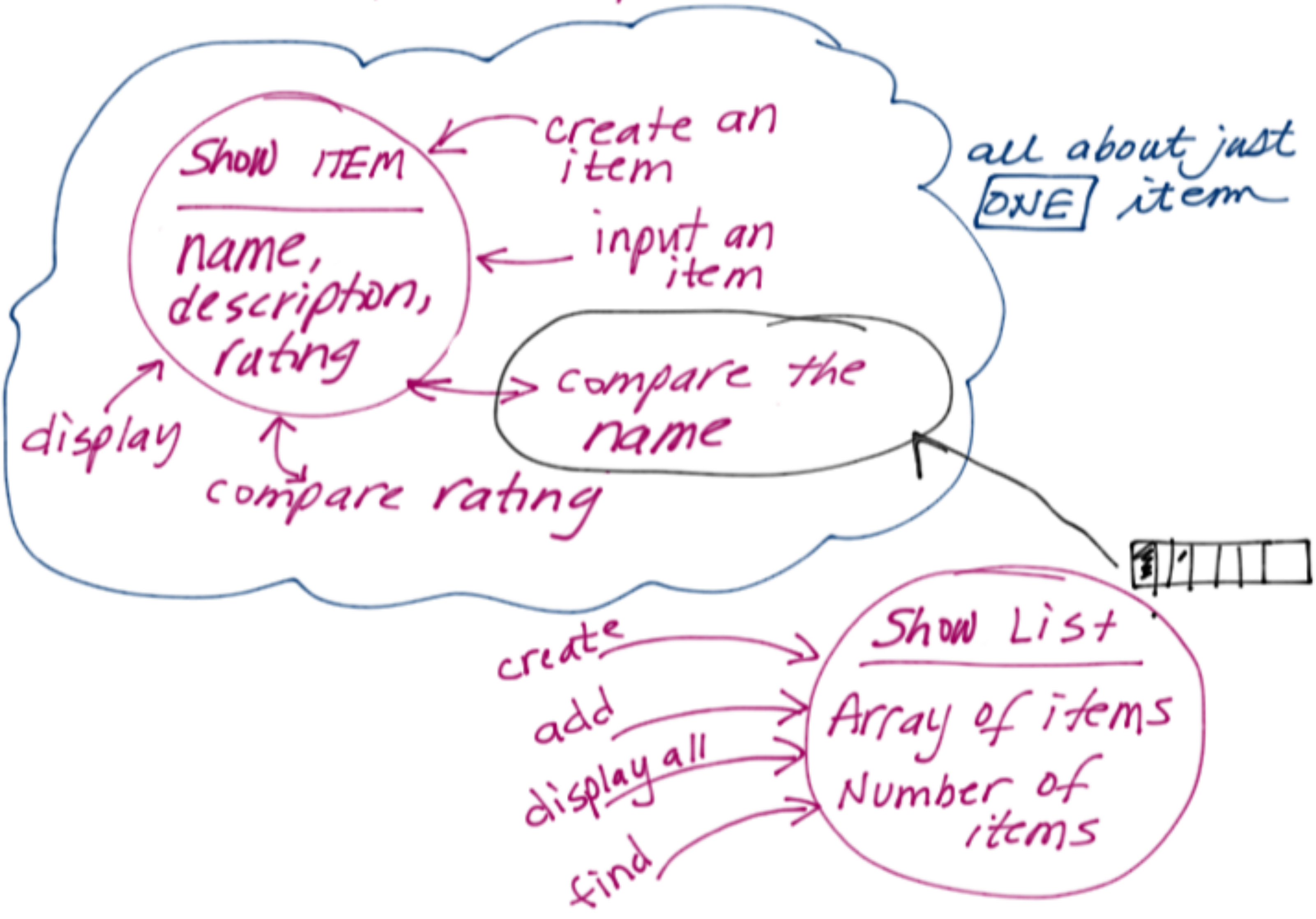
2) Preceed function name with the class name and the scope resolution operator (::)

```
video::video()
{
    //body of the function
}

void video::display()
{
    // body of the function
}
```

Now... using classes for the list of shows:

1) Design the solution by thinking about the data and thinking about what operations make sense working on that data — GROUPING IT TOGETHER


SHOW ITEM
name, description, rating
create an item
input an item
compare the name
display
compare rating
all about just ONE item
Show List
Array of items
Number of items
create
add
display all
find