

Practice #4

C++ Programming (Part 1)

Yunmin Go

School of CSEE



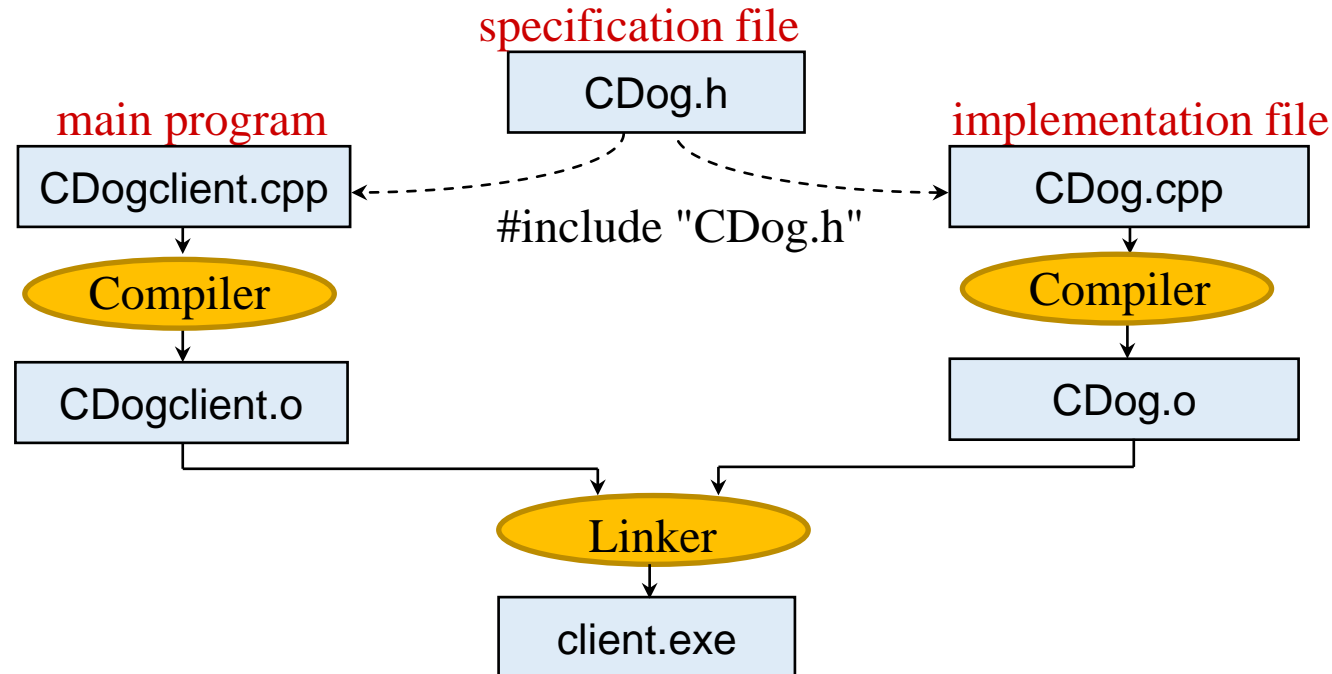
Practice #4 TO-DO List

To-Do	Submission	Notes
CDog Class	Screenshot and source code (CDog.h, CDog.cpp, CDogclient.cpp)	p.66 ~ 68, C++ Programming
Time Class	Screenshot and source code (time.h, time.cpp, timeclient.cpp)	p.24 ~ 26, C++ Programming
Array Class	Screenshot and source code (array.h, array.cpp, arrayclient.cpp)	p.69 ~ 70, C++ Programming

- Upload your screenshot and source codes on LMS by 11pm on 3/24 (Wed).
 - All your screenshots should be merged in one pdf file, screenshot.pdf.
 - Your pdf and all source codes should be compressed into zip file.
- File name: practice04_Your Student ID_Name.zip (only zip, not pdf, docx, c, etc)
 - ex) practice04_20400022_고윤민.zip

CDog Class

- Implement a CDog program
 - Skeleton code: CDog.h, CDog.cpp, CDogclient.cpp
 - Refer to p.66-68, Chapter C++ Programming (Part1).
 - Just write CDog.h, CDog.cpp, and CDogclient.cpp as in lecture PDF
 - Do not change 'include' line. We will practice the separate compilation.



CDog Class

- Expected results

```
PS C:\ds\practice04\sol> g++ .\CDogclient.cpp .\CDog.cpp -o .\CDogclient.exe
PS C:\ds\practice04\sol> .\CDogclient.exe
Ethel: eating
Bob: Grrrr
Bob's weight: 14
Ethel's weight: 8
```

Time Class

- Implement a Time Class
 - Skeleton code: time.h, time.cpp (timeclient.cpp has been already implemented)
 - Refer to p.24-26, Chapter C++ Programming (Part1).
 - Complete time.h and time.cpp
 - time.h: define member functions → Set(), Increment(), Print()
 - time.cpp: implement member functions → Set(), Increment(), Print()
 - Set(): set time using parameters
 - Increment(): increment time by 1 second
 - Print(): print time

Time Class

- Expected results

```
PS C:\ds\practice04\sol> .\timeclient.exe
17:59:51
17:59:52
17:59:53
17:59:54
17:59:55
17:59:56
17:59:57
17:59:58
17:59:59
18:0:0
18:0:1
18:0:2
18:0:3
18:0:4
18:0:5
18:0:6
18:0:7
18:0:8
18:0:9
18:0:10
```

Array Class

- Implement an integer array class
 - Skeleton code: array.cpp, arrayclient.cpp (array.h)
 - Refer to p.69-70, Chapter C++ Programming (Part1).
 - Complete array.cpp and arrayclient.cpp
 - array.cpp: implement the following functions
 - Array(int intarray[], int len): constructors that initializes array using parameter (i.e., intarray)
 - index_at(int value): returns the index of value in array (return -1 if not found)
 - sort(): sorts the array by ascending order
 - print(): print out all values in array
 - arrayclient.cpp: complete arrayclient.cpp referring to expected results
 - For class a1 and a2, do print() → sort() → print().

Array Class

- Expected results

```
PS C:\ds\practice04\sol> g++ .\arrayclient.cpp .\array.cpp -o .\arrayclient.exe
PS C:\ds\practice04\sol> .\arrayclient.exe
a1: before sort(): 18, 46, 83, 81, 25, 85, 79, 96, 45, 73
a1: after sort(): 18, 25, 45, 46, 73, 79, 81, 83, 85, 96
a2: before sort(): 50, 20, 30, 40, 10
a2: after sort(): 10, 20, 30, 40, 50
```