CPSC 457 T03/T04

Week 3 Day 1

Xining Chen

Agenda

- Assignment 1 general feedback
- Threads
- Assignment 2

Assignment 1 general feedback

- **Code styling** – include comments for your code and ensure styling is good. *Marks will be removed if there are no comments or poor styling*.
  - Must update and include the comment header text that asks for your full name, tutorial section, etc.
- **File names** – name your code files exactly as instructed in the assignments.
- **Screenshots** – Do not include / copy and paste command line of your work-in-progress commands & outputs.

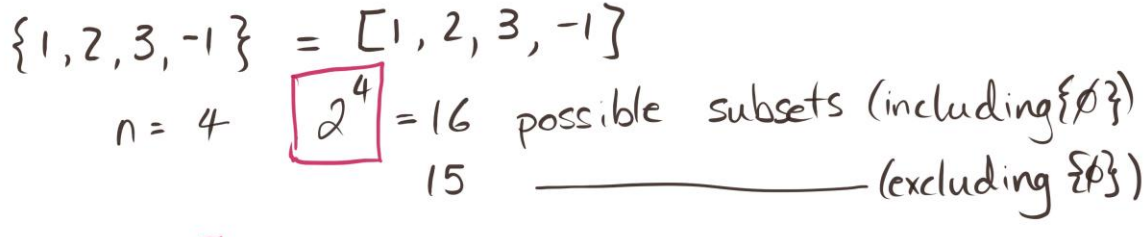
Threads in C++

Download code PDF on D2L

- #include <thread>
- thread t1 = thread(<function>, <inputs to function>)
- thread.join();
- To compile, must include: -lpthread
  - Ex:// g++ threads.cpp –lpthread –o threads
- Demo

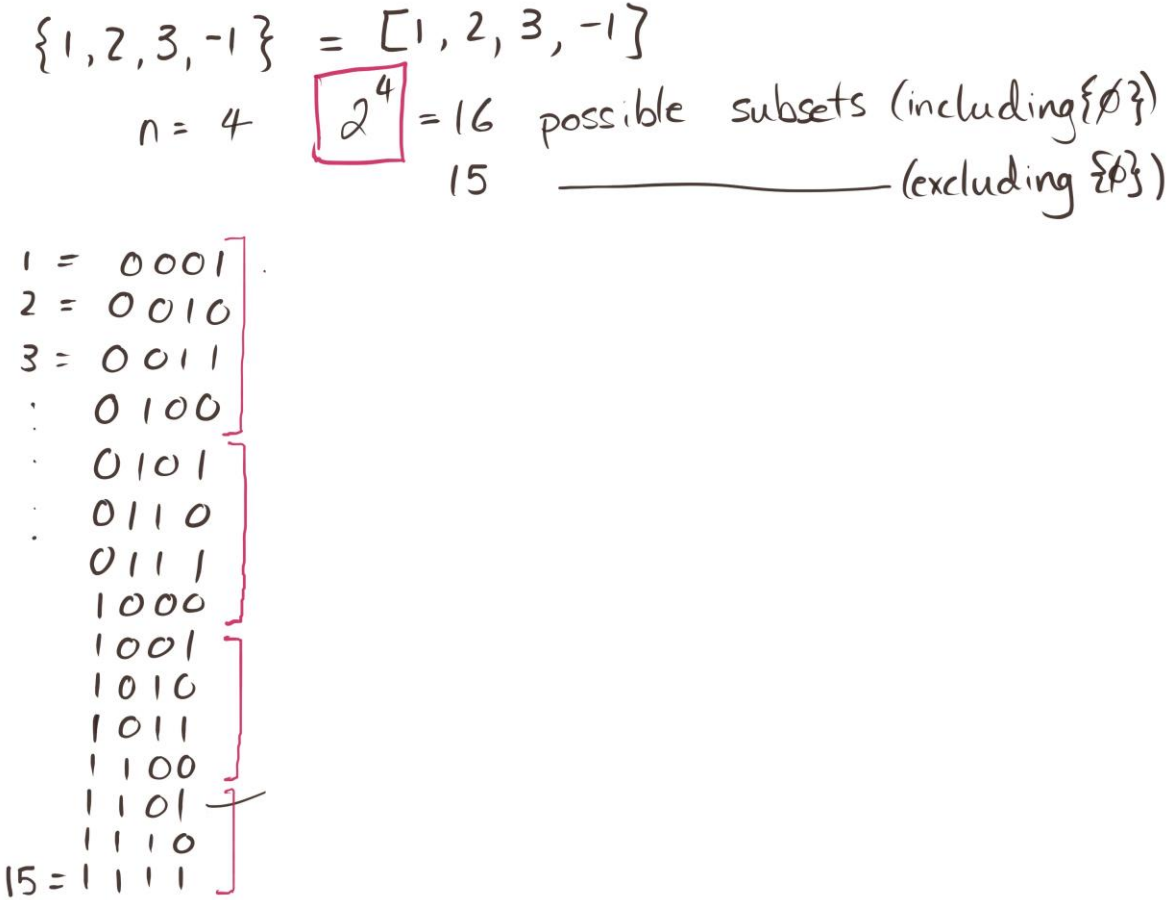
Assignment 2 Question 1

- What is void test(long comb){…} doing?



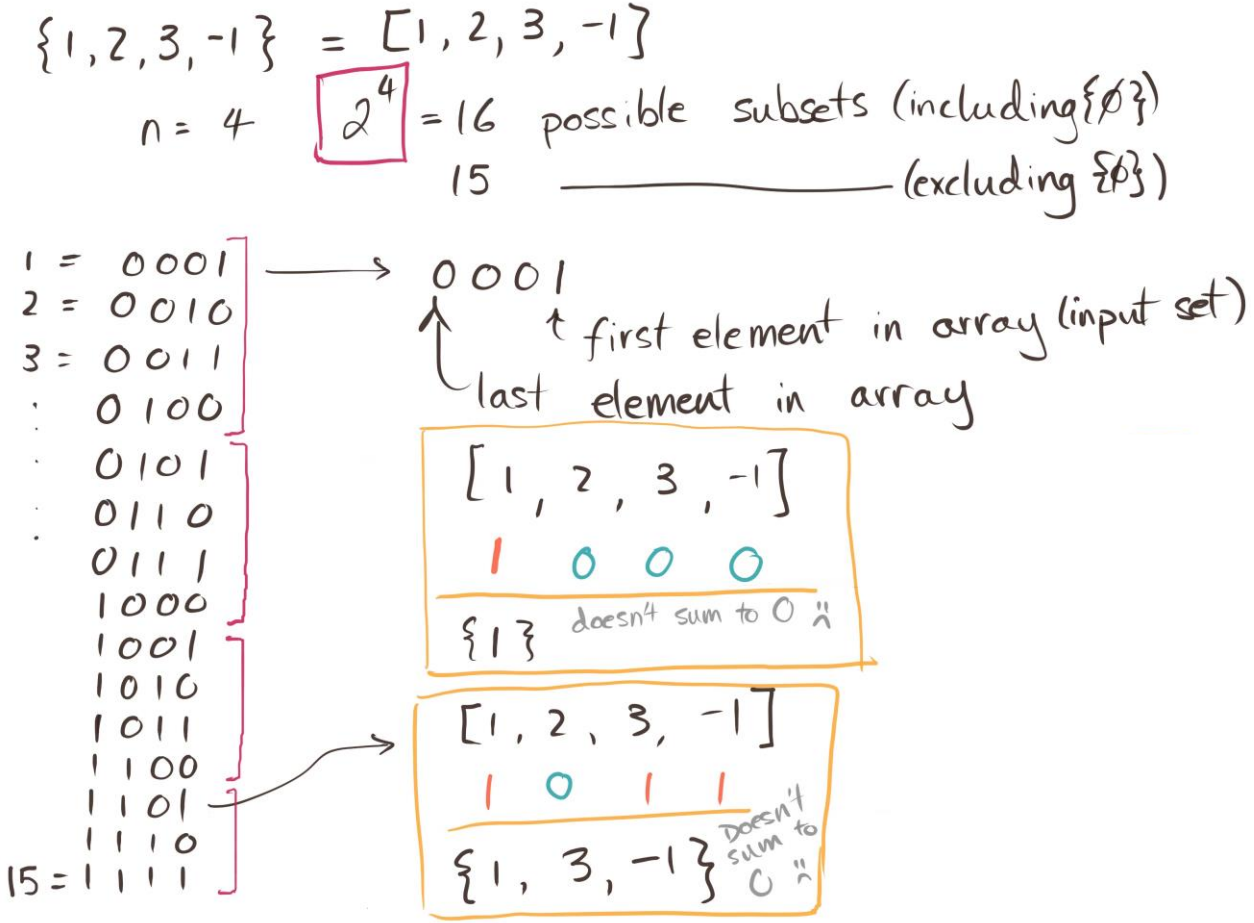
Assignment 2 Question 1

- What is void test(long comb){…} doing?



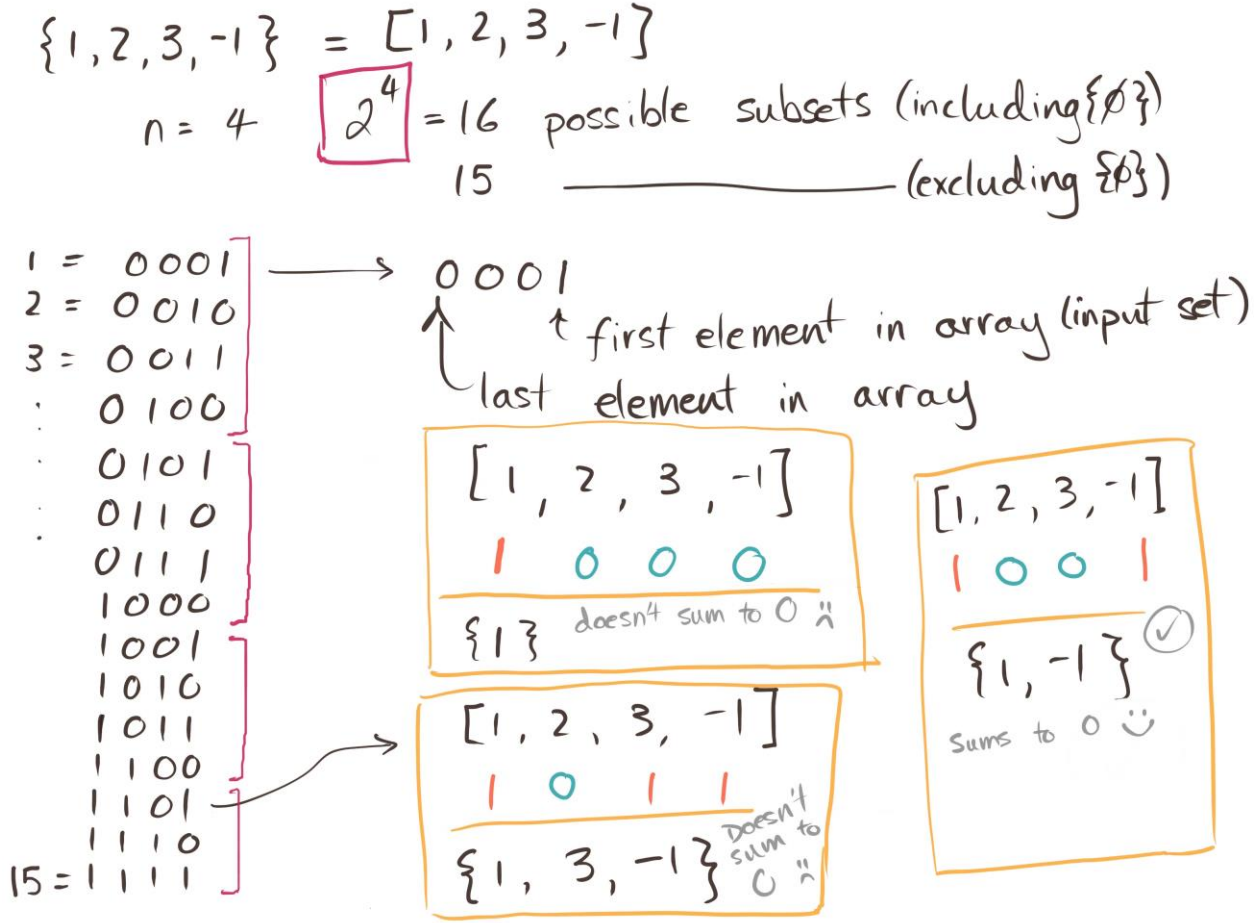
Assignment 2 Question 1

- What is void test(long comb){…} doing?



Assignment 2 Question 1

- What is void test(long comb){…} doing?




```
#include <bitset>

std::cout << std::bitset<32>(n) ;
```

Assignment 2 Question 1

- What is void test(long comb){…} doing?
- Hints:
  - Divide up the number of subsets amongst the threads
  - Use a **global array** that stores the output of each thread. Each thread gets it's own location in the array to put it's output.
  - The size of this array = maximum number of threads (32)
  - Sum the array for total number of subsets
- Reminder:
  - Error handling for inputs
  - Comment your code. Pavol's comments doesn't count towards your comments.

For a set of size n, there's 2^n total number of subsets (including the empty set)

```
#include <math.h>

ceil() and floor()
```

Assignment 2 Question 3

Check to see if an dirent is a directory

- if (de -> d_type != DT_DIR)

Assignment 2 Question 4

Pair in C++

- pair <int, string>
- pair <int, int>

Or create your own struct

Sorting in C++ (See review of C++ slide/code from W1D2)

Hint

- Use a vector of pairs to store output of digest
- Or use a dictionary

Next time

- Open tutorial for Assignment 2 help?
- Other topics?