

Computer Programming 2

2024/03/13 Andy Hung

Outline

- HW01 solution
- HW02
- Git
- EX01

HW01 solution

```
1  #include <iostream>
2  #include <vector>
3  #include <limits> // For numeric_limits
4
5  using namespace std;
6
7  int main() {
8      int N; // Number of days
9      cin >> N;
10
11     vector<int> prices(N); // Array to store the prices
12     for(int i = 0; i < N; i++) {
13         cin >> prices[i];
14     }
15
16     // Initialize variables for the minimum price so far and the maximum profit
17     int min_price = numeric_limits<int>::max();
18     int max_profit = 0;
```

HW02

Description

You are given n arrays, each array is sorted in ascending order. Merge all arrays into one sorted array in ascending order.

Input

First line includes a number n , means there are n arrays. Then there are n sections, each section includes a number k in the first line, and k numbers separated in space in the second line.

Technical Specification:

- $0 \leq n \leq 10^4$
- $0 \leq k \leq 500$
- $-10^4 \leq num \leq 10^4$

HW02

Output

Merge all arrays into one sorted array in ascending order.

```
3
3
1 4 5
3
1 3 4
2
2 6
```

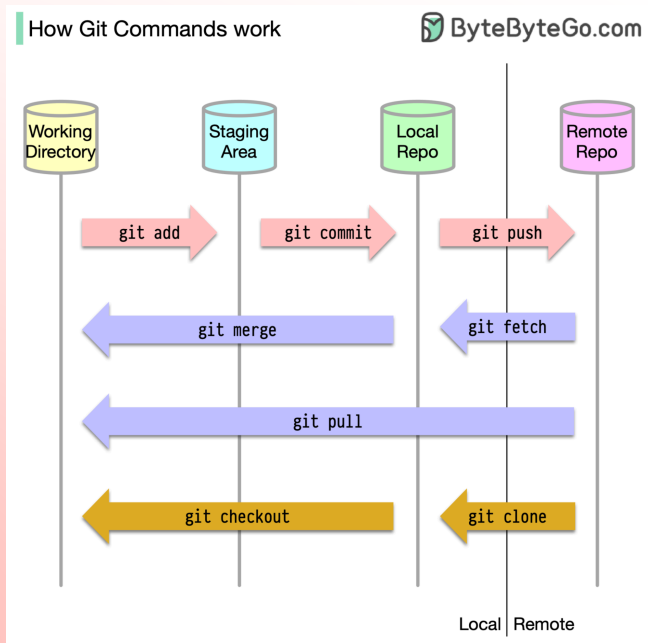
```
1 1 2 3 4 4 5 6
```

Tips

Do not use `qsort` or `std::sort` or other sorting methods.

Git

- A distributed version control system (VCS)
- Manage and track changes in source code during the development process



What if not git?

▼	[redacted]-1.8.0.zip	2017年11月19日	⋮
▼	[redacted] 20200507.rar	2020年5月6日	⋮
▼	[redacted] 20200922.rar	2020年9月22日	⋮
▼	[redacted] 20211001.rar	2021年10月1日	⋮
▼	[redacted] 20211203.rar	2022年1月14日	⋮
▼	[redacted] 201903014.rar	2019年3月19日	⋮
▼	[redacted] 20180627成功版.rar	2018年7月8日	⋮
▼	[redacted] 11.20.zip	2017年11月19日	⋮
W	[redacted] 系統文件20190403.docx	2019年4月2日	⋮

Install Git

- Windows: Git Bash
- Ghost: Included
- Mac:

```
brew install git
```

- Linux(Ubuntu/Debian):

```
sudo apt install git
```


Github

- One of the largest repository hosting service.
- Have bunch of tools help developers.
 - Pull requests
 - Issues
 - Wiki

Tips

Git != Github

Setup your Github's git setting

Tips

Password is not allowed when using github via git cli.

- SSH: Adding a new SSH key to your GitHub account
 - Generating a new ssh-key
 - Highly recommend generate a new one even you may already have one

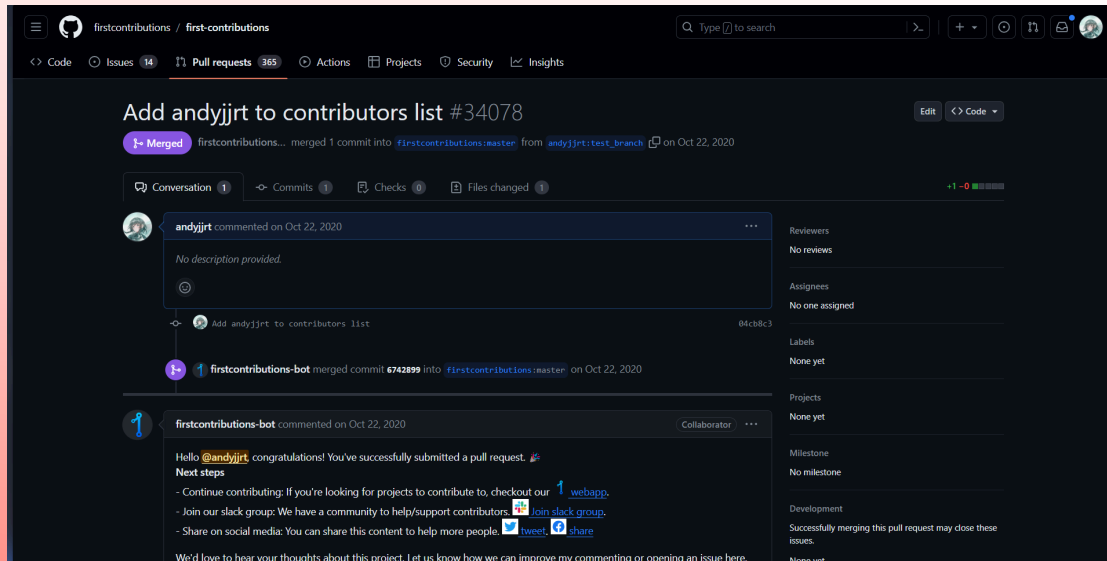
```
$ ssh -T git@github.com
```

```
Hi andyjjrt! You've successfully authenticated, but GitHub does not provide shell access.
```

- HTTPS: Managing your personal access tokens

EX01: Github First Contribution

- Follow the instructions: First Contributions
- In your PR, please leave your **student ID** in the comment.
- Copy the PR link, and submit ex01



Useful links

- [System Design 101](#)

Thanks for listening