

# Lab #02-2

Date: 2014/02/28

# Use command to get file input

- Let's see an example
- I want to write a program to add numbers together
- Problem definition:

for each testing data, you will read a integer  
 $1 \leq N \leq 100$ , then you need to add N integer  
together after N

# Use command to get file input

- Sample input:
  - 3 9 8 0
  - 5 9 8 0 6 7
  - 8 110 180 234 157 196 48 112 76
- Sample output:
  - 17
  - 30
  - 1113



# Use command to get file input

- I finish the code and I want to know whether the program is correct!
- You can just type testing data each time, but if you write the program with a lot of bugs in it, this process will repeat many times and be annoying!

# Use command to get file input




It is much easier when you have a lot of testing data.

1. Check your exe file and input.txt is in the same directory
2. shift + right click in the directory and choose “在此處開啟命令視窗”
3. Type “yourExeFile.exe < input.txt”
4. Get the execute results
  - (with Mac or Linux you can use terminal in the system)



# Example

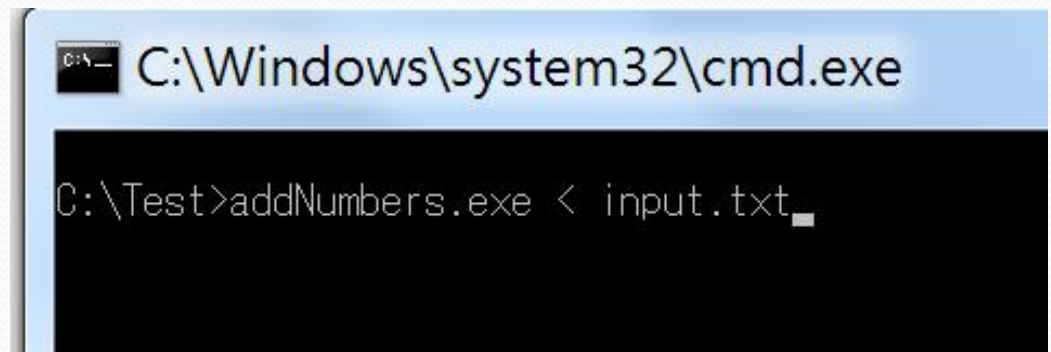
- Type your testing data in a text file

名稱	修改日期	類型
 addNumbers.cpp	2014/2/28 上午 01...	C++ Source File
 addNumbers.exe	2014/2/28 上午 01...	應用程式
 input.txt	2014/2/28 上午 01...	文字文件

```
input.txt
1 3 9 8 0
2 5 9 8 0 6 7
3 8 110 180 234 157 196 48 112 76
```

# Example

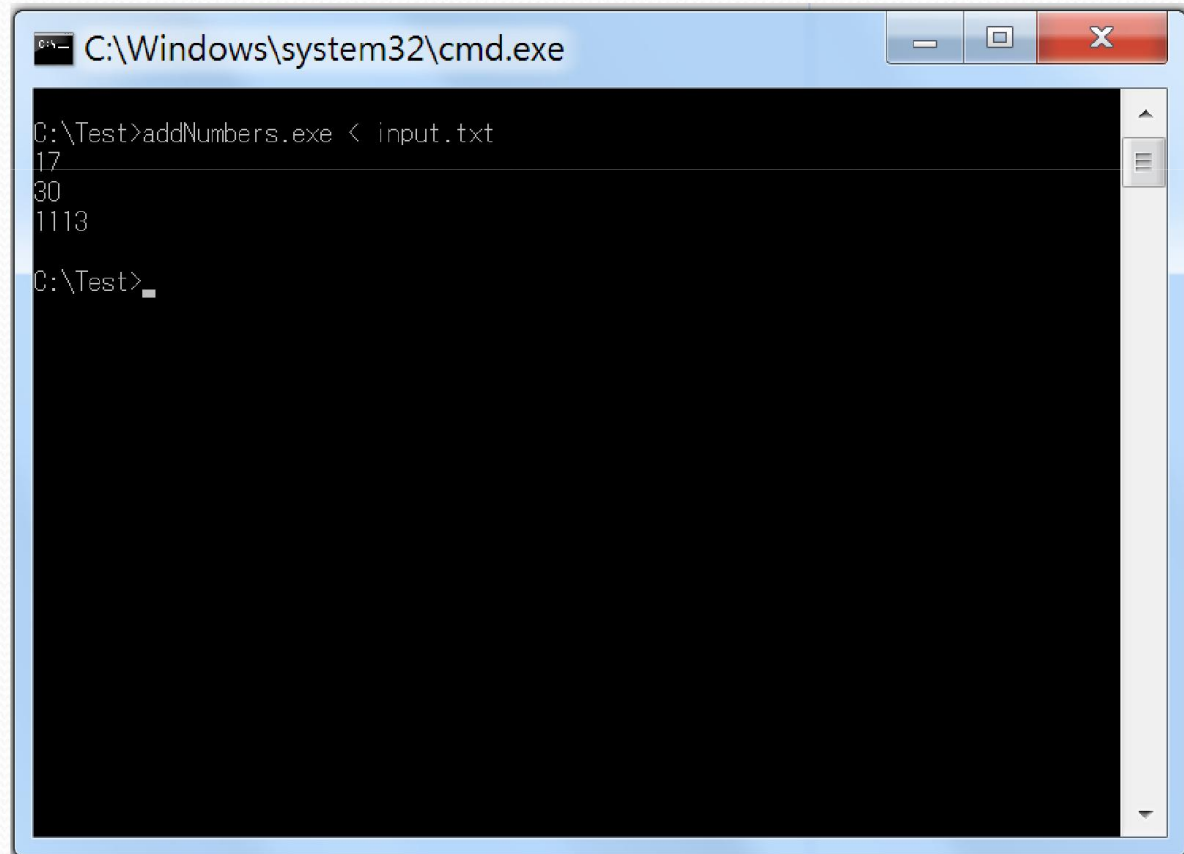
- shift + right click in the directory and choose “在此處開啟命令視窗”
- You will see a command line console, type “yourExeFile.exe < input.txt”





# Example

- And you will see the output of the program you wrote!

A screenshot of a Windows command prompt window. The title bar at the top reads "C:\Windows\system32\cmd.exe" and includes standard minimize, maximize, and close buttons. The command prompt shows the following text:

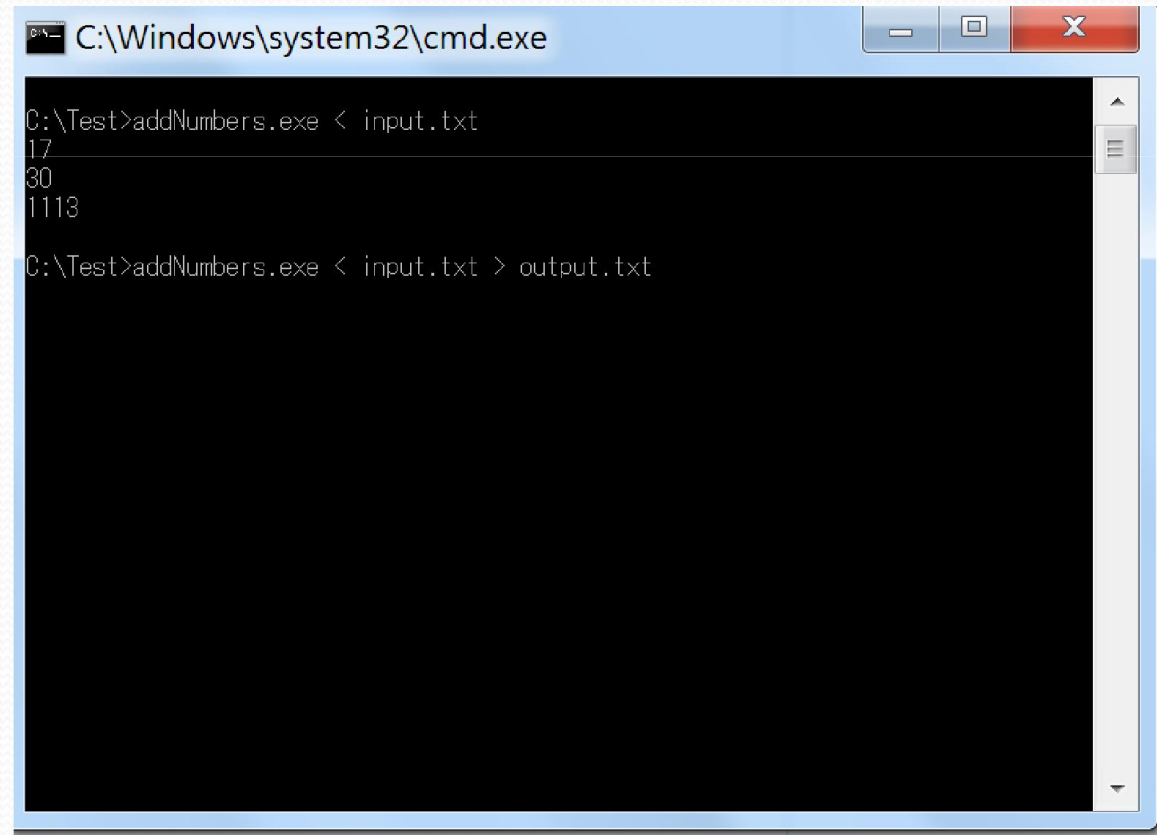
```
C:\Test>addNumbers.exe < input.txt  
17  
30  
1113  
C:\Test>_
```

The output of the program is displayed on three lines: "17", "30", and "1113". The cursor is on the line "C:\Test>\_".



# Example

- Or you can type “yourExeFile.exe < input.txt > output.txt”



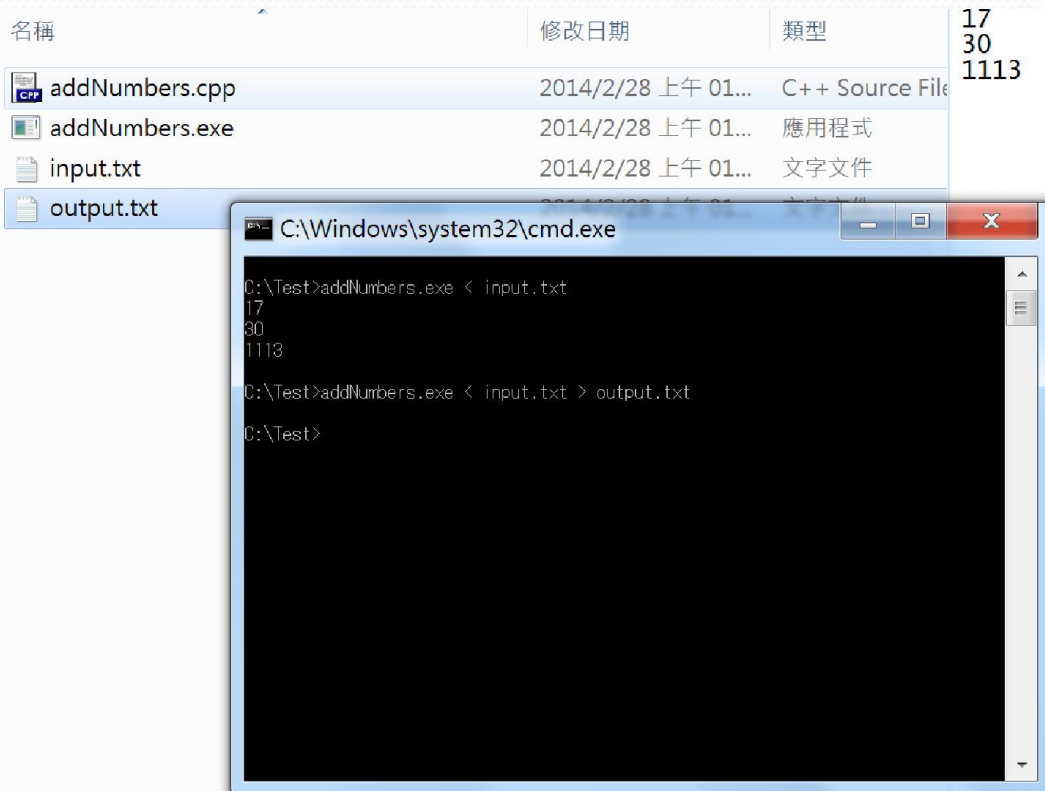
A screenshot of a Windows command prompt window titled "C:\Windows\system32\cmd.exe". The window has a blue title bar with standard Windows window controls (minimize, maximize, close). The command prompt shows the following text:

```
C:\Test>addNumbers.exe < input.txt
17
30
1113
C:\Test>addNumbers.exe < input.txt > output.txt
```

The first command, `addNumbers.exe < input.txt`, is followed by three lines of output: `17`, `30`, and `1113`. The second command, `addNumbers.exe < input.txt > output.txt`, is entered but produces no visible output in the screenshot.

# Example

- And the executing result will store into a file







# Past problem!

- You can do the PD homework 2013 in your free time now!

# Past problem

Hi, r01725007 ▾

- Past Problems
- Change Password
- Logout

PDOGS   Past Problem Set   Submit Past HW   Past Scores   Hi, r01725007 ▾

## Past Problems

**PD 2013**

Class Homework

<a href="#">PD13-03</a>	<a href="#">PD13-04a</a>	<a href="#">PD13-04b</a>
<a href="#">PD13-05</a>	<a href="#">PD13-08a</a>	<a href="#">PD13-08b</a>
<a href="#">PD13-09</a>	<a href="#">PD13-10</a>	<a href="#">PD13-11</a>
<a href="#">PD13-12</a>	<a href="#">PD13-13</a>	

Lab Exam

<a href="#">EX13-01</a>	<a href="#">EX13-02a</a>	<a href="#">EX13-02b</a>
<a href="#">EX13-03a</a>	<a href="#">EX13-03b</a>	<a href="#">EX13-03c</a>



# Alogorithm - isPrime

```
int candidate = 0, divisor = 2;
bool isPrime = true;
cin >> candidate;
while(divisor < candidate){
    if(candidate % divisor == 0){
        isPrime = false;
        break;
    }
    divisor = divisor + 1;
}
cout << isPrime;
```

# Alogorithm - isPrime

```
int candidate = 0, divisor = 2;
bool isPrime = true;
cin >> candidate;
while(divisor <= floor(sqrt(candidate))) {
    if(candidate % divisor == 0) {
        isPrime = false;
        break;
    }
    divisor = divisor + 1;
}
cout << isPrime;
```



# Algorithm - isPrime

- Is there any way to speed up the program?