DS and OOP

Putty

Please connect to:

linux1.cs.nctu.edu.tw
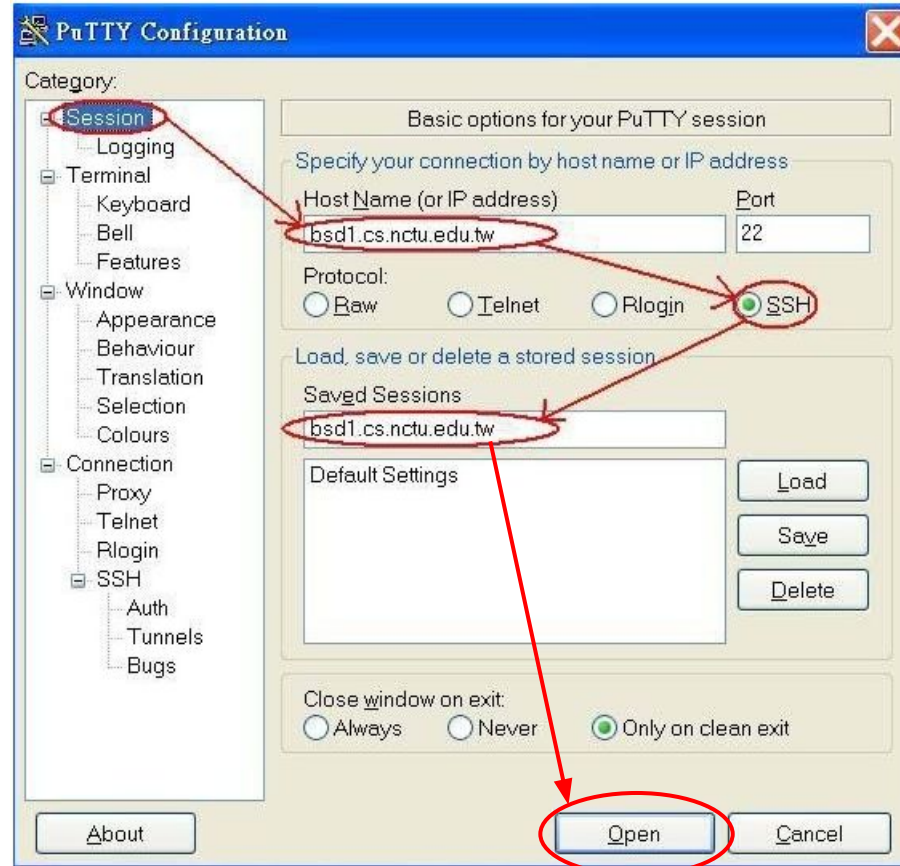
linux2.cs.nctu.edu.tw

linux3.cs.nctu.edu.tw

linux4.cs.nctu.edu.tw

linux5.cs.nctu.edu.tw
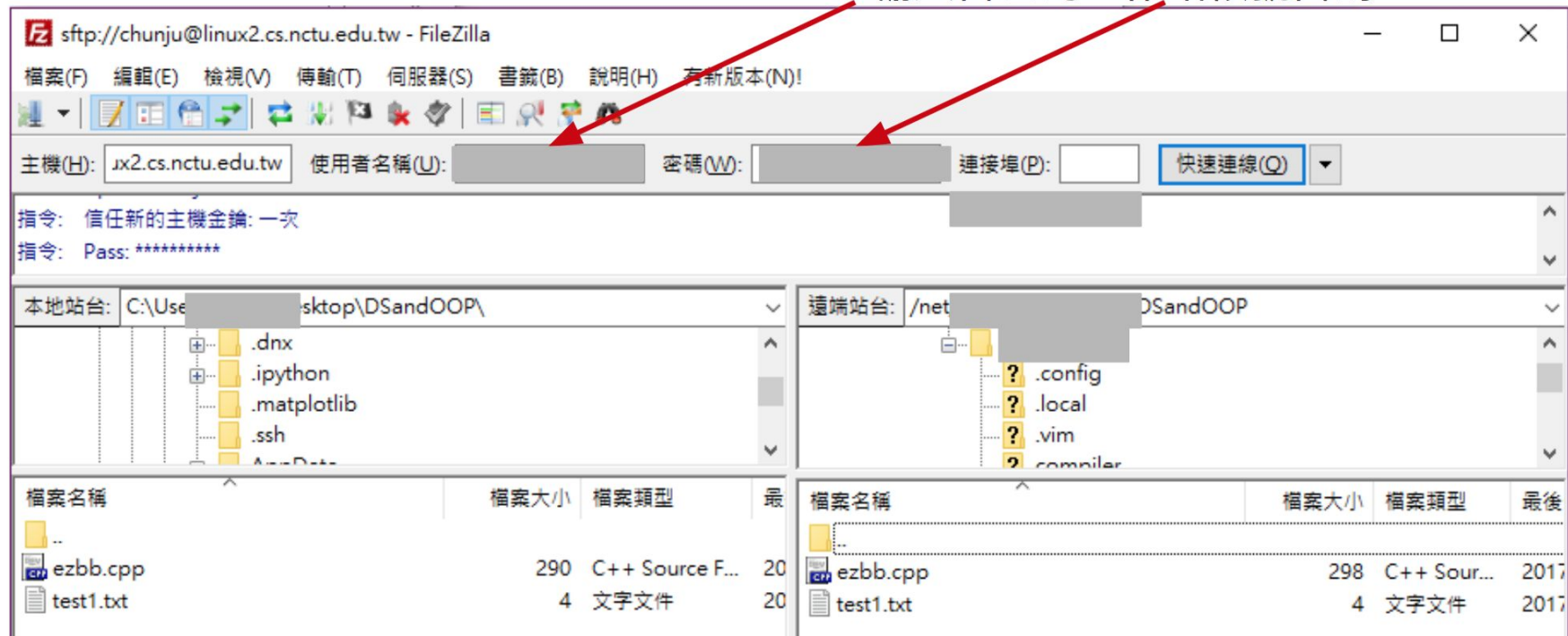
linux6.cs.nctu.edu.tw

Download:

https://goo.gl/bFz961

More Settings:

https://goo.gl/y5zc2d

Upload to Work Station

輸入自己的工作站帳號密碼

Question

Given two positive integers which are less than 2^31, please find the

Greatest Common Divisor and do the **prime factorization of GCD**.

File format

input file format:

    # of testing data

    [positive integer1] [positive integer2]

    (2 positive integers are seperated by space.)

output format:

    Greatest Common Divisor = prime factorization of GCD

Example

3 testing data

output:

8=2^3   //用cout印出來即可

12=2^2*3

17=17


```
1   3
2   8    16
3   36  24
4   17  51
```

Requirements

1. Read from command line and output to stdout
2. Use your workstation to run your code

Linux command

command you may use: cd, ls, g++ [-o outputfilename], ./[outputfilename]

```
16:17          @linux2 [~/          ] >ls
ezbb.cpp  test1.txt
16:18          @linux2 [~/          ] >g++ ezbb.cpp
16:18          @linux2 [~/          ] >ls
a.out*   ezbb.cpp  test1.txt
16:18          @linux2 [~/          ] >./a.out
10
```

How to read from command line

```
1 #include <fstream>
2
3 int main(int argc, char **argv)
4 {
5     fstream fin;
6     fin.open(argv[1] , ios::in);
7 }
```

[C/C++] argc 和 argv 引數的應用

寫程式的時候常常可以看到main函數裡面的argc和argv這兩個變數。

```
int main(int argc, char **argv)
```

但這兩個變數有什麼應用呢？這兩個是用來傳遞參數到程式裡面。
舉例來說：

```
./a.out      CCC      aaa      bbb
argv[0]   argv[1]   argv[2]   argv[3], argc=4
```

Reference

Putty:

https://help.cs.nctu.edu.tw/help/index.php/HOWTO_-_%E4%BD%BF%E7%94%A8PuTTY%E7%99%BB%E5%85%A5%E7%B3%BB%E4%B8%8A%E5%B7%A5%E4%BD%9C%E7%AB%99

Filezilla:

https://help.cs.nctu.edu.tw/help/index.php/HOWTO_-_%E9%80%A3%E4%B8%8A%E7%B3%BB%E4%B8%8A%E5%B7%A5%E4%BD%9C%E7%AB%99%E7%9A%84_FTP

Command line:

http://crasseux.com/books/ctutorial/argc-and-argv.html