

CS 160

CS Orientation

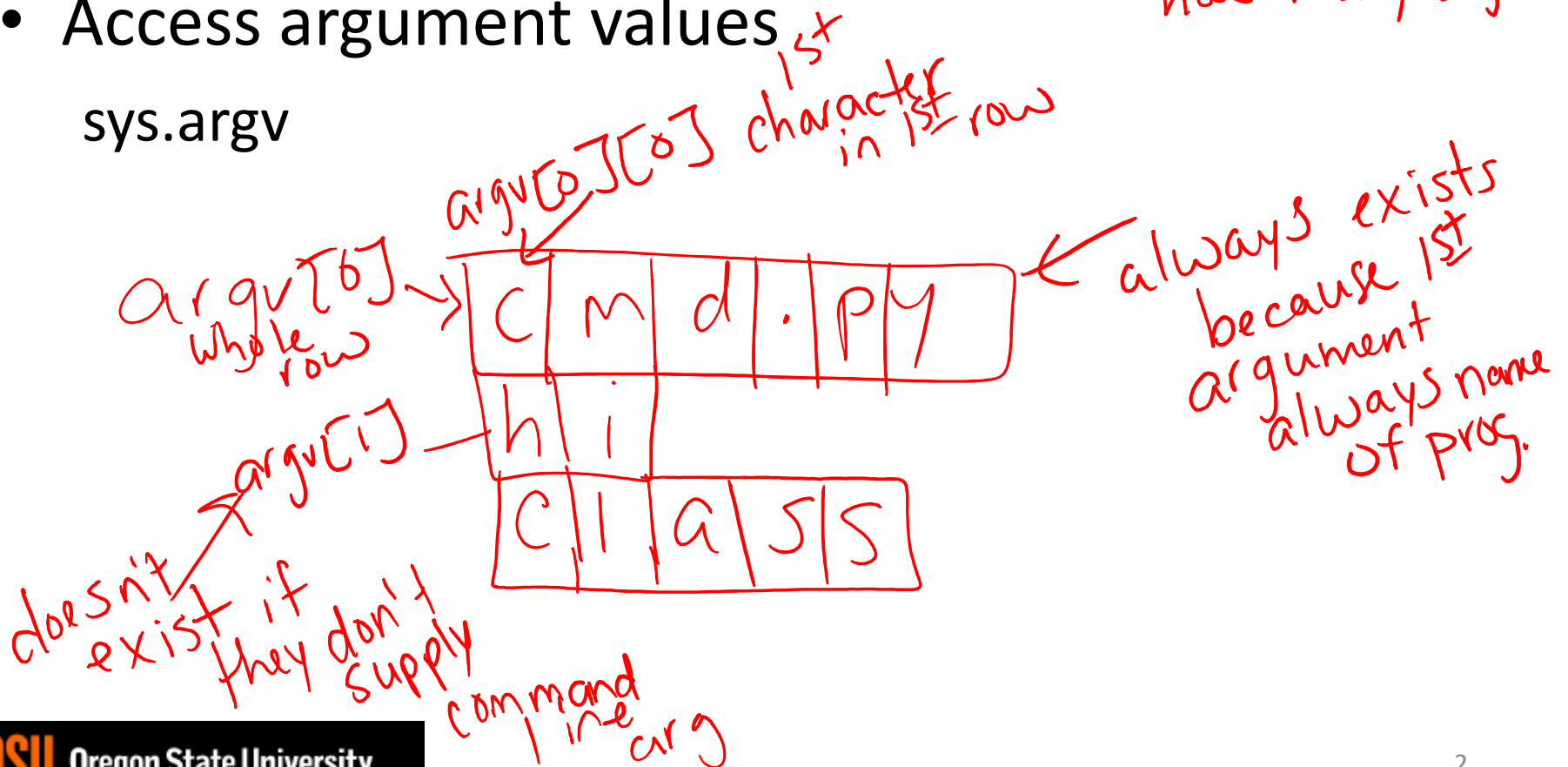
Command-line Args and File I/O

Command-line Args

- Import **sys** module
- Access argument values

`sys.argv`

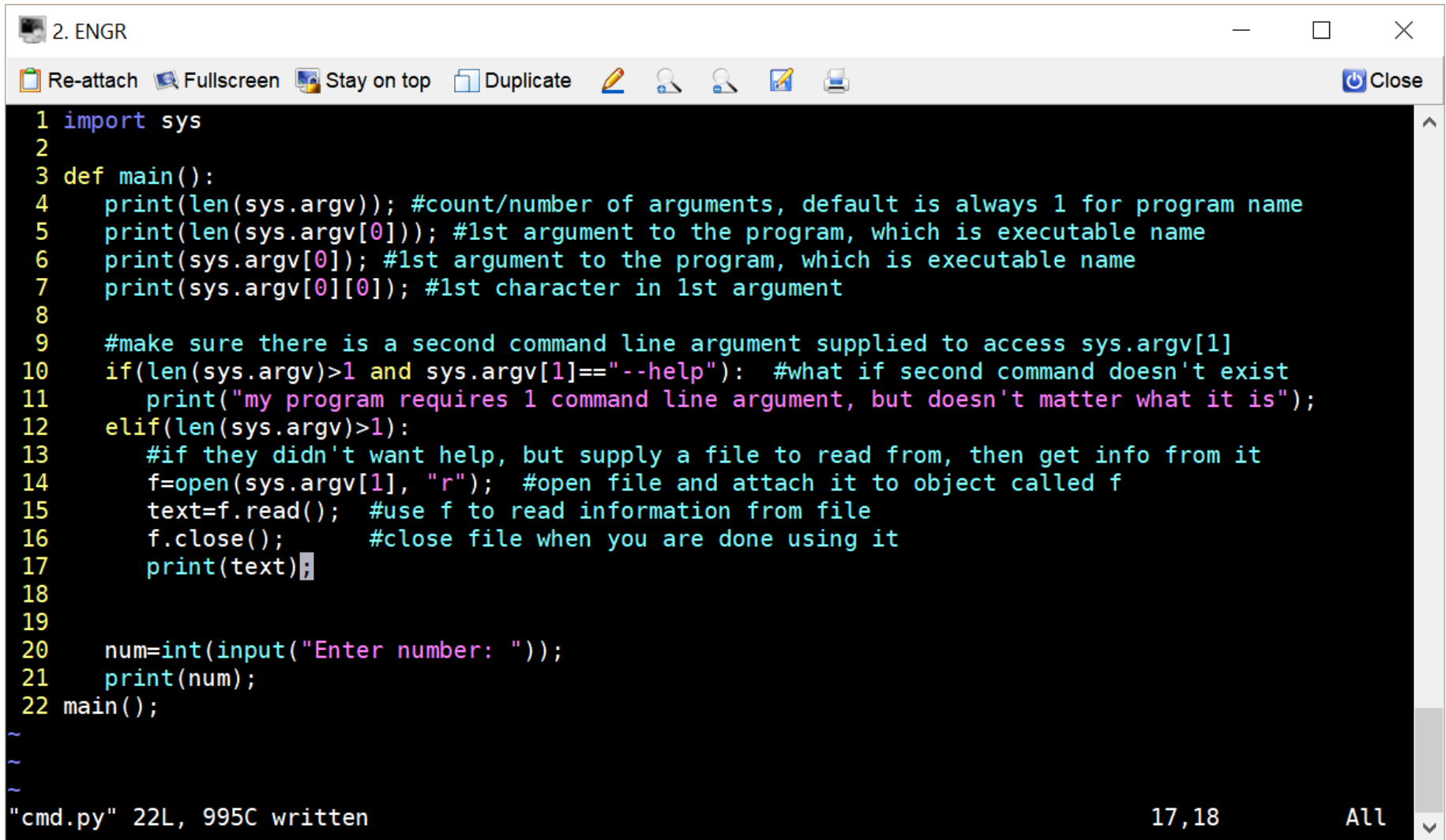
`len(sys.argv)`
How many rows/
how many args.



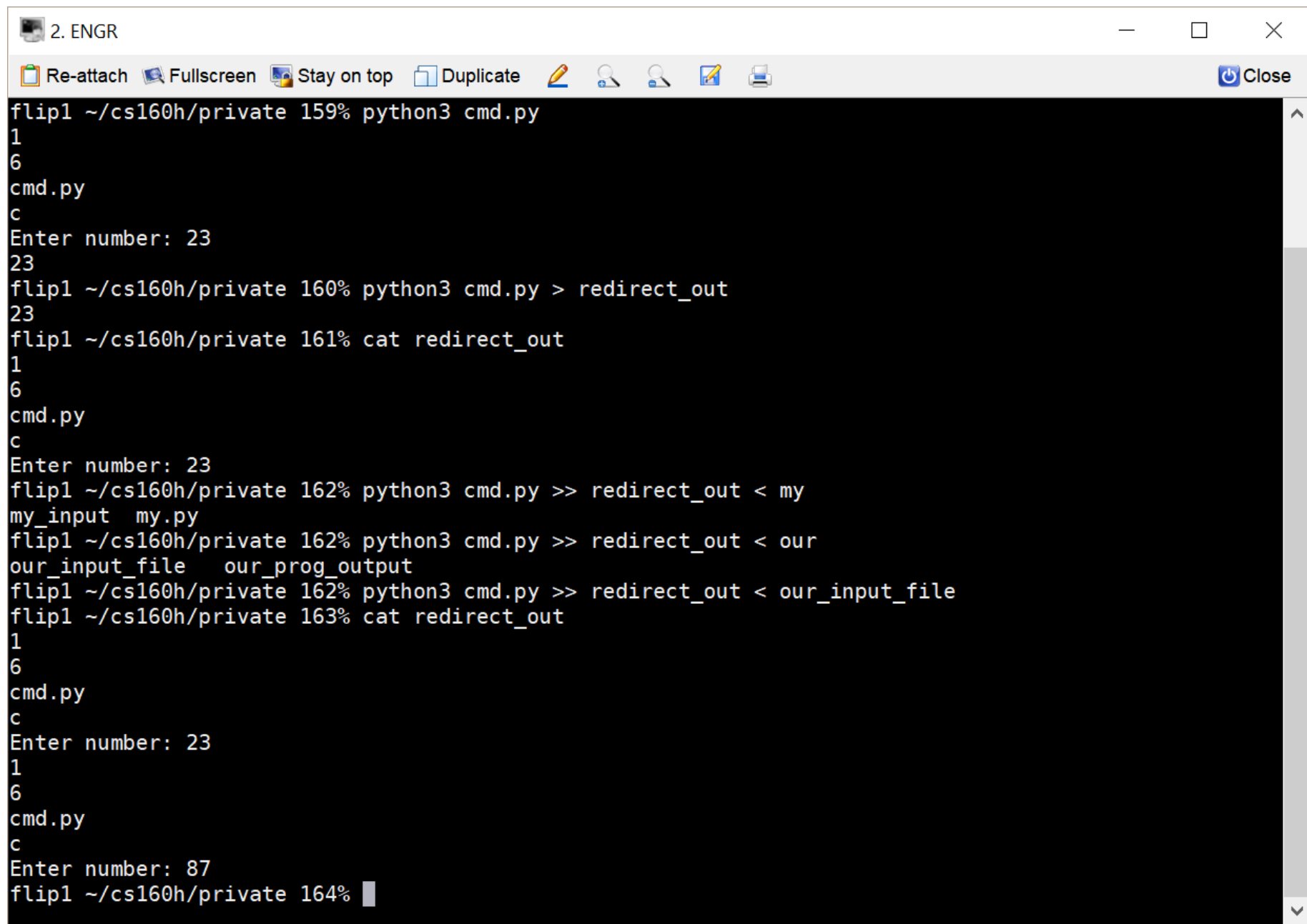
File I/O

- Open file (read, write, append)
- Attach to object
 - `f=open("filename", "r")`
- Read/Write to the file
 - `f.read()` vs. `f.readline()`
 - `f.write()`
- Close file
 - `f.close()`

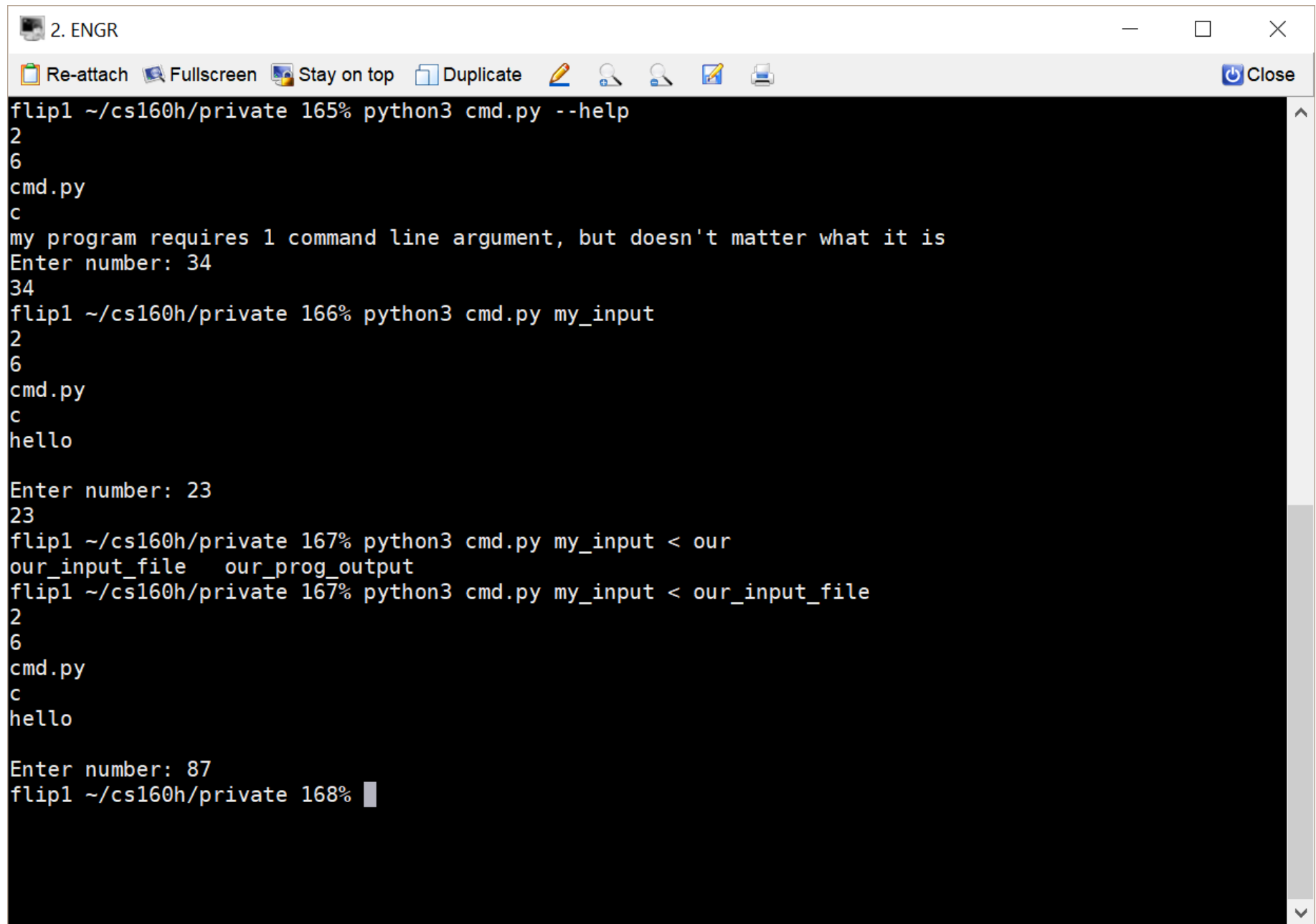
Demo...



```
1 import sys
2
3 def main():
4     print(len(sys.argv)); #count/number of arguments, default is always 1 for program name
5     print(len(sys.argv[0])); #1st argument to the program, which is executable name
6     print(sys.argv[0]); #1st argument to the program, which is executable name
7     print(sys.argv[0][0]); #1st character in 1st argument
8
9     #make sure there is a second command line argument supplied to access sys.argv[1]
10    if(len(sys.argv)>1 and sys.argv[1]=="--help"): #what if second command doesn't exist
11        print("my program requires 1 command line argument, but doesn't matter what it is");
12    elif(len(sys.argv)>1):
13        #if they didn't want help, but supply a file to read from, then get info from it
14        f=open(sys.argv[1], "r"); #open file and attach it to object called f
15        text=f.read(); #use f to read information from file
16        f.close(); #close file when you are done using it
17        print(text)
18
19
20    num=int(input("Enter number: "));
21    print(num);
22 main();
~
~
~
"cmd.py" 22L, 995C written 17,18 All
```



```
2. ENGR
Re-attach Fullscreen Stay on top Duplicate
flip1 ~/cs160h/private 159% python3 cmd.py
1
6
cmd.py
c
Enter number: 23
23
flip1 ~/cs160h/private 160% python3 cmd.py > redirect_out
23
flip1 ~/cs160h/private 161% cat redirect_out
1
6
cmd.py
c
Enter number: 23
flip1 ~/cs160h/private 162% python3 cmd.py >> redirect_out < my
my_input my.py
flip1 ~/cs160h/private 162% python3 cmd.py >> redirect_out < our
our_input_file our_prog_output
flip1 ~/cs160h/private 162% python3 cmd.py >> redirect_out < our_input_file
flip1 ~/cs160h/private 163% cat redirect_out
1
6
cmd.py
c
Enter number: 23
1
6
cmd.py
c
Enter number: 87
flip1 ~/cs160h/private 164%
```



```
2. ENGR
Re-attach Fullscreen Stay on top Duplicate
flip1 ~/cs160h/private 165% python3 cmd.py --help
2
6
cmd.py
c
my program requires 1 command line argument, but doesn't matter what it is
Enter number: 34
34
flip1 ~/cs160h/private 166% python3 cmd.py my_input
2
6
cmd.py
c
hello

Enter number: 23
23
flip1 ~/cs160h/private 167% python3 cmd.py my_input < our
our_input_file our_prog_output
flip1 ~/cs160h/private 167% python3 cmd.py my_input < our_input_file
2
6
cmd.py
c
hello

Enter number: 87
flip1 ~/cs160h/private 168%
```