I/O

by Deborah R. Fowler

KEY CONCEPTS

- variables
- truth statements
- looping
- functions
- I/O
- lists
- classes/objects
- OOP

- I/O
- strings

```
>>>
>>> test = input("Please enter a number ")
Please enter a number 5
>>> print(test)
5
>>>
```

open

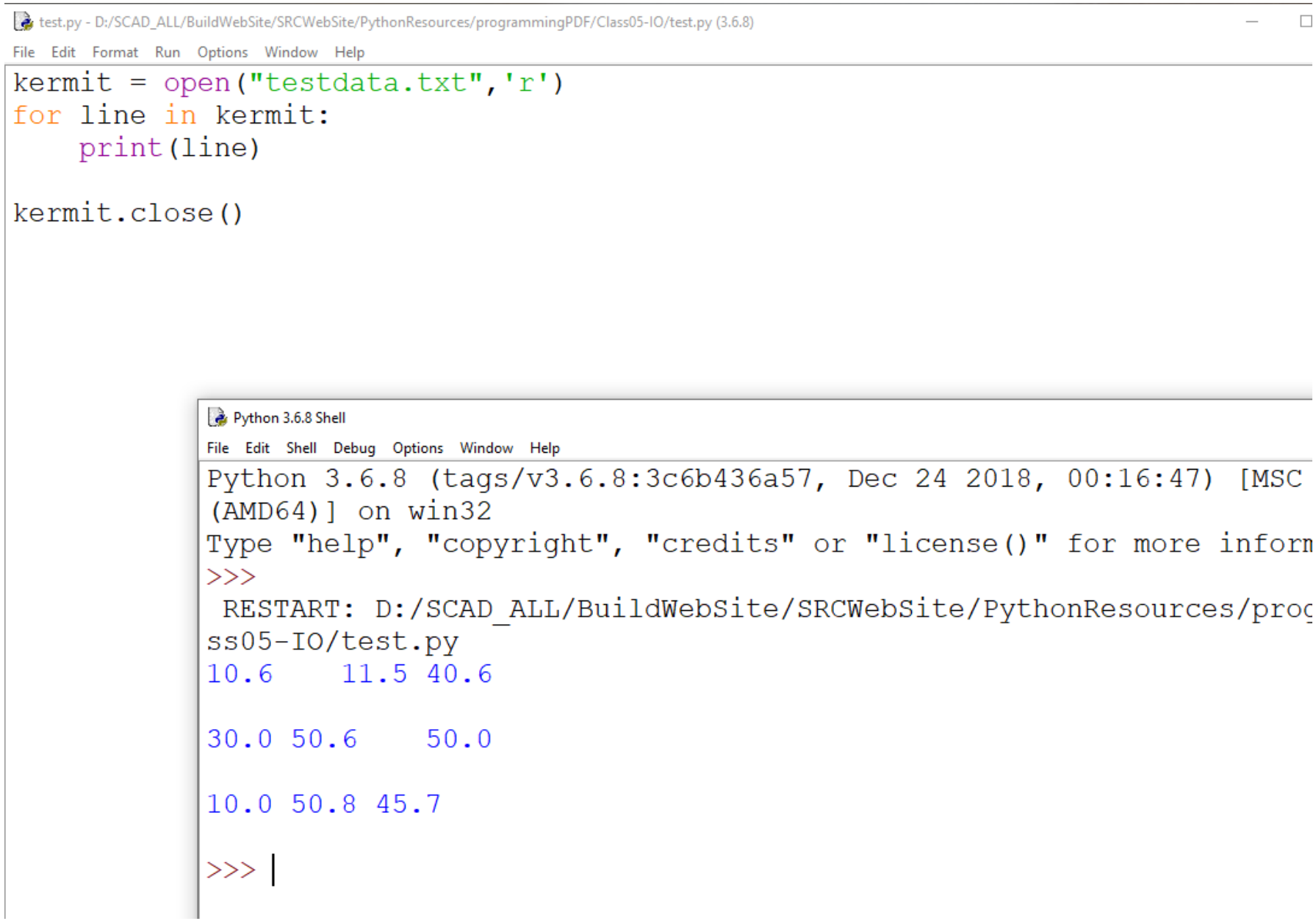
close

```
fileVar = open(filename,’r’)

OR

fileVar = open(filename,’w’)

fileVar.close()
```

DO NOT USE ABSOLUTE PATHS!

```
>>>
>>> kermit = open("C:/Users/Deborah/Desktop/testdata.txt",'r')
>>>
```

RELATIVE VERSUS ABSOLUTE PATHS


test.py - D:/SCAD_ALL/BuildWebSite/SRCWebSite/PythonResources/programmingPDF/Class05-IO/test.py (3.6.8)
File Edit Format Run Options Window Help
kermit = open("testdata.txt",'r')
for line in kermit:
print(line)
kermit.close()
Python 3.6.8 Shell
File Edit Shell Debug Options Window Help
Python 3.6.8 (tags/v3.6.8:3c6b436a57, Dec 24 2018, 00:16:47) [MSC
(AMD64)] on win32
Type "help", "copyright", "credits" or "license()" for more inform
>>>
RESTART: D:/SCAD_ALL/BuildWebSite/SRCWebSite/PythonResources/proc
ss05-IO/test.py
10.6 11.5 40.6
30.0 50.6 50.0
10.0 50.8 45.7
>>>

test1.py - D:/SCAD_ALL/BuildWebSite/SRCWebSite/PythonResources/programmingPDF/Class05-IO/test1.py (3.6.8)

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```
kermit = open("testdata.txt",'r')
for line in kermit:
    values = line.split()
    print(values)

kermit.close()
```

Python 3.6.8 Shell

File Edit Shell Debug Options Window Help

```
Python 3.6.8 (tags/v3.6.8:3c6b436a57, Dec 24 2018, 00:16:47) [MS
(AMD64)] on win32
Type "help", "copyright", "credits" or "license()" for more infc
>>>
 RESTART: D:/SCAD_ALL/BuildWebSite/SRCWebSite/PythonResources/pr
ss05-IO/test1.py
['10.6', '11.5', '40.6']
['30.0', '50.6', '50.0']
['10.0', '50.8', '45.7']
>>>
```

```
kermit = open("testdata.txt",'r')
```

```
kermit = open("testdata.txt",'r')
for line in kermit:
    values = line.split()
    print(line)
    print('First Element', values[0])

kermit.close()
```

values[0]

```
Python 3.6.8 Shell
File  Edit  Shell  Debug  Options  Window  Help
Python 3.6.8 (tags/v3.6.8:3c6b436a57, Dec 24 2018, 00:16:47)
(AMD64)] on win32
Type "help", "copyright", "credits" or "license()" for more i
>>>
 RESTART: D:/SCAD_ALL/BuildWebSite/SRCWebSite/PythonResources
ss05-IO/test2.py
10.6    11.5 40.6

First Element 10.6
30.0 50.6    50.0

First Element 30.0
10.0 50.8 45.7

First Element 10.0
>>>
```

In Programming start counting at ZERO

Strings

test3.py - D:/SCAD_ALL/BuildWebSite/SRCWebSite/PythonResources/programmingPDF/Class05-IO/test3.py (3.6.8)

File Edit Format Run Options Window Help

```
kermit = open("testdata.txt",'r')
for line in kermit:
    values = line.split()
    print(line)
    print(values[0] + values[1])

kermit.close()
```

print(values[0] + values[1])

would result in a
string that was **concatentated**

Python 3.6.8 Shell

File Edit Shell Debug Options Window Help

```
Python 3.6.8 (tags/v3.6.8:3c6b436a57, Dec 24 2
(AMD64)] on win32
Type "help", "copyright", "credits" or "license
>>>
 RESTART: D:/SCAD_ALL/BuildWebSite/SRCWebSite/I
ss05-IO/test3.py
10.6    11.5 40.6

10.611.5
30.0 50.6    50.0

30.050.6
10.0 50.8 45.7

10.050.8
>>>
```

test4.py - D:/SCAD_ALL/BuildWebSite/SRCWebSite/PythonResources/programmingPDF/Class05-IO/test4.py (3.6.8)

File Edit Format Run Options Window Help

```
kermit = open("testdata.txt",'r')
for line in kermit:
    values = line.split()
    print(line)
    print(float(values[0]) + float(values[1]))

kermit.close()
```

using float(argument) to convert

would result in 22.1

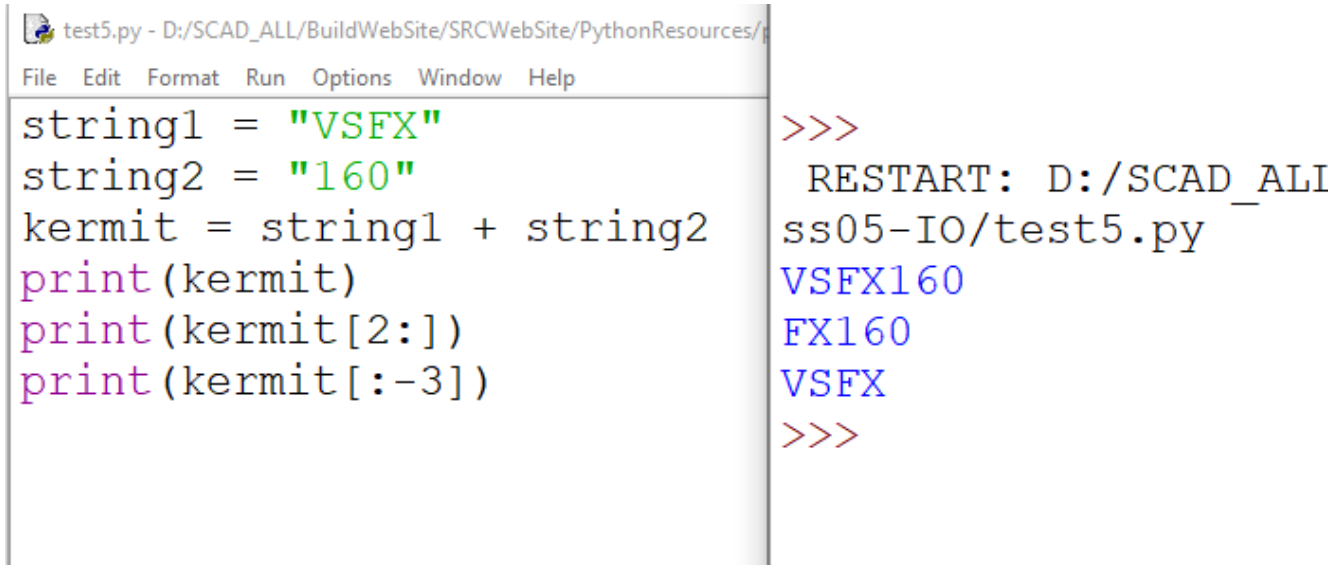
Python 3.6.8 Shell

File Edit Shell Debug Options Window Help

```
Python 3.6.8 (tags/v3.6.8:3c6b436a57,
(AMD64)] on win32
Type "help", "copyright", "credits" c
>>>
 RESTART: D:/SCAD_ALL/BuildWebSite/SR
ss05-IO/test4.py
10.6    11.5 40.6

22.1
50.0 50.6    50.0

80.6
10.0 50.8 45.7

60.8
>>>
```

Positive from left

Negative from right

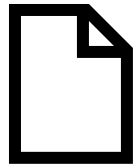


In-class Exercise

Create a .txt file with a few lines of data
Create a script to read the file and write out the second element of each line

Summary of I/O (Input/Output)

input 

open
close 

strings are manipulatable

Homework:

Continue working on your quilting exercise due Class 6 – next class

Consider adding user input