1.2.6. Input and Output

To be exhaustive, here are some information about input and output in Python. Since we will use the Numpy methods to read and write files, **you may skip this chapter at first reading**.

We write or read **strings** to/from files (other types must be converted to strings). To write in a file:

```
>>> f = open('workfile', 'w') # opens the workfile file
>>> type(f)
<type 'file'>
>>> f.write('This is a test \nand another test')
>>> f.close()
```

To read from a file

```
In [1]: f = open('workfile', 'r')

In [2]: s = f.read()

In [3]: print(s)
This is a test
and another test

In [4]: f.close()
```

See also: For more details: https://docs.python.org/tutorial/inputoutput.html

1.2.6.1. Iterating over a file

```
In [6]: f = open('workfile', 'r')

In [7]: for line in f:
   ...:     print line
   ...:
This is a test

and another test

In [8]: f.close()
```

1.2.6.1.1. File modes

- Read-only: `r`
- Write-only: `w`
  - Note: Create a new file or *overwrite* existing file.
- Append a file: `a`
- Read and Write: `r+`
- Binary mode: `b`
  - Note: Use for binary files, especially on Windows.