Input/Output to Files

Files

- Before we can use a file in Python it must be *attached*.

- In Unix (at least) the three standard files are automatically attached.

  - They do not have have to be attached explicitly.

- Others must be attached by the programmer.

Open a File

- To attach a file to our process we *open* it.
- Files are identified by some form of *file descriptor.*
- Python

```
fp=open("filename")
fin=open("filename",r)
fout=open("filename",w)
```

Reading from a File

- Python

  f=open("filename",r)

  f.read(<n>)

  f.readline(<n>)

  <n> is optional and means number of bytes

- Python reads only *strings*. You must parse the line or lines yourself.

  – Useful function

    split(s)

Writing to a File

- Python

  `print >> f, "Format string" % (x,y)`

  The print function adds an EOL at the end of the string.

  or

  `f.write(s)`

- Python writes only strings so you must create a string for each line of output, including the EOL symbol \n where you want it.

csv module for Python

- The csv module is one of the standard modules in Python

- http://docs.python.org/library/csv.html

- Write csv as follows:

```
import csv
data_file=csv.writer(open("output.csv","wb"), \
                          delimiter=",")
```

  – Use the b with w whether you need it or not

```
data_file.writerow([val1,val2])
```