

## Reading Data From a File

### 1. Reading an entire file

First, you have to open the file:

```
f = open("datafile.txt","r")
```

NB: `open("filename","mode")`

Then print the contents:

```
print ( f.read() )
```

Finally, close the file. This is easy to forget but VERY IMPORTANT

```
f.close()
```

### 2. Reading a file line by line

```
#Print just one line
```

```
f = open("datafile.txt","r")
```

```
print ( f.readline() )
```

```
f.close()
```

```
#Print one line at a time
```

```
f = open("datafile.txt","r")
```

```
print( "Line 1:",f.readline() )
```

```
print( "Line 2:",f.readline() )
```

```
print( "Line 3:",f.readline() )
```

```
f.close()
```

### 3. Use a loop to print individual lines

```
#this is useful if you don't know how long your file is going to be
f = open("datafile.txt", "r")
line = f.readline()      #read one line and store as 'line'
while (line):            #continue to loop as long as line is not empty
    print (line)         #print the line out
    line = f.readline()  #get the next line
f.close()
```

### 4. Use a loop and a split to print individual data

```
f = open("datafile.csv", "r")
line = f.readline()      #read one line and store as 'line'
while (line):            #continue to loop as long as line is not empty
    data = line.split(",") #split the data wherever you see a comma
    print ("Name:", data[0])      #print out the 1st piece of data
    print ("Tutor Group:", data[1]) #print out the 2nd piece of data
    print ("Grade", data[2])     #print out the 3rd piece of data
    line = f.readline()
f.close()
```