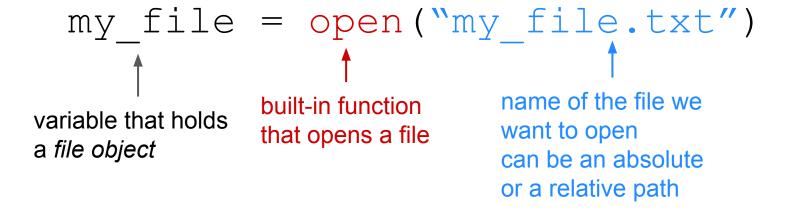# File Input / Output

Python & Files

Python can be used to open files, read them, and do things with the data.

e.g. At the end of the month, you can use Python to open the budget.csv file, calculate the monthly revenue, and send a report to the manager.

Opening Files in Python

```python
my_file = open("my_file.txt")
```

variable that holds
a *file object*

built-in function
that opens a file

name of the file we
want to open
can be an absolute
or a relative path

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Demo Time!

There is a file called `class_grades.txt` of everyone's grade percentage in the class.

Let's use that file to print out a letter grade for each person.

Reading a File in Python

You can use some *methods* on a file to read the contents into different forms.

```
my_file = open("my_file.txt")
my_file.read()        ⇐  reads entire file
my_file.readline()    ⇐  reads one line of the file
my_file.readlines()   ⇐  reads all lines into a list
```

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Closing a File in Python

When you are done using a file, you have to close it using the close method.

```
my_file = open("my_file.txt")
my_file.close()   ⇐   closes the file
```

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File Workflow for Python

1. Open a file
2. Read the file (and probably save to variable)
3. Close the file
4. Do things with the data from the file (probably using the variable from #2)

Exercise Time!

Do the exercises in the File I/O document.