Reading a file

Here's the tutorial:

https://www.youtube.com/watch?v=q5uM4VKywbA (https://www.youtube.com/watch?v=q5uM4VKywbA)

In [13]:
```
import csv
with open('names.csv', 'r') as csv_file:
    csv_reader = csv.reader(csv_file)     # Reads a line
    for line in csv_reader:
        print(line)
```

```
['first_name', 'last_name', 'email']
['John', 'Doe', 'john-doe@bogusemail.com']
['Mary', 'Smith-Robinson', 'maryjacobs@bogusemail.com']
['Dave', 'Smith', 'davesmith@bogusemail.com']
['Jane', 'Stuart', 'janestuart@bogusemail.com']
['Tom', 'Wright', 'tomwright@bogusemail.com']
```

If we only want tp see the list of the emails

In [14]:
```
import csv
with open('names.csv', 'r') as csv_file:
    csv_reader = csv.reader(csv_file)     # Reads a line
    next(csv_reader)     # Skips over the first line
    for line in csv_reader:
        print(line[2])     # Only reads emails
```

```
john-doe@bogusemail.com
maryjacobs@bogusemail.com
davesmith@bogusemail.com
janestuart@bogusemail.com
tomwright@bogusemail.com
```

Writing to a file

In [15]:
```
import csv
with open('names.csv', 'r') as csv_file:
    csv_reader = csv.reader(csv_file)
    with open('new_names.csv', 'w') as new_file:
        csv_writer = csv.writer(new_file, delimiter = '\t')
        # delimiter will replace commas by tabs here
        for line in csv_reader:
            csv_writer.writerow(line)
```

Now, if we try to read this file without explicitly mentioning the tab delimiter, Python will read every line as a single string.

In [16]:
```
import csv
with open('new_names.csv', 'r') as csv_file:
    csv_reader = csv.reader(csv_file)
    for line in csv_reader:
        print(line)
```

```
['first_name\tlast_name\temail']
[]
['John\tDoe\tjohn-doe@bogusemail.com']
[]
['Mary\tSmith-Robinson\tmaryjacobs@bogusemail.com']
[]
['Dave\tSmith\tdavesmith@bogusemail.com']
[]
['Jane\tStuart\tjanestuart@bogusemail.com']
[]
['Tom\tWright\ttomwright@bogusemail.com']
[]
```

To solve the problem, mention the delimiter:

In [17]:
```
import csv
with open('new_names.csv', 'r') as csv_file:
    csv_reader = csv.reader(csv_file, delimiter = '\t')
    for line in csv_reader:
        print(line)
```

```
['first_name', 'last_name', 'email']
[]
['John', 'Doe', 'john-doe@bogusemail.com']
[]
['Mary', 'Smith-Robinson', 'maryjacobs@bogusemail.com']
[]
['Dave', 'Smith', 'davesmith@bogusemail.com']
[]
['Jane', 'Stuart', 'janestuart@bogusemail.com']
[]
['Tom', 'Wright', 'tomwright@bogusemail.com']
[]
```

Using dictionary

Read

In [18]:
```
import csv
with open('names.csv', 'r') as csv_file:
    csv_reader = csv.DictReader(csv_file)     # Reads a line
    for line in csv_reader:
        print(line)
```

```
{'first_name': 'John', 'last_name': 'Doe', 'email': 'john-doe@boguse
mail.com'}
{'first_name': 'Mary', 'last_name': 'Smith-Robinson', 'email': 'mary
jacobs@bogusemail.com'}
{'first_name': 'Dave', 'last_name': 'Smith', 'email': 'davesmith@bog
usemail.com'}
{'first_name': 'Jane', 'last_name': 'Stuart', 'email': 'janestuart@b
ogusemail.com'}
{'first_name': 'Tom', 'last_name': 'Wright', 'email': 'tomwright@bog
usemail.com'}
```

Now it is more organised. We can easily print out the email field:

In [19]:
```
import csv
with open('names.csv', 'r') as csv_file:
    csv_reader = csv.DictReader(csv_file)     # Reads a line
    for line in csv_reader:
        print(line['email'])
```

```
john-doe@bogusemail.com
maryjacobs@bogusemail.com
davesmith@bogusemail.com
janestuart@bogusemail.com
tomwright@bogusemail.com
```

Write

In [20]:
```
import csv
with open('names.csv', 'r') as csv_file:
    csv_reader = csv.DictReader(csv_file)
    with open('new_names.csv', 'w') as new_file:
        fieldnames = ['first_name', 'last_name', 'email']
        csv_writer = csv.DictWriter(new_file, fieldnames = fieldnames,
delimiter = '\t')
        # To write the field names as headers
        csv_writer.writeheader()
        for line in csv_reader:
            csv_writer.writerow(line)
```

If we want, we can only add whatever field we want to add.

In [21]:
```
import csv
with open('names.csv', 'r') as csv_file:
    csv_reader = csv.DictReader(csv_file)
    with open('new_names2.csv', 'w') as new_file:
        fieldnames = ['first_name', 'last_name']
        csv_writer = csv.DictWriter(new_file, fieldnames = fieldnames,
delimiter = '\t')
        # To write the field names as headers
        csv_writer.writeheader()
        for line in csv_reader:
            del line['email']
            csv_writer.writerow(line)
```

In [ ]:
```

```