An evil-genius guide to computer programming

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Passing values to templates in flask

https://replit.com/@lemire/LikelyBisqueServices#main.py

- main.py
- images/static/football.jpog
- templates/base.html
- templates/final.html
- templates/leagus.html

```python
from flask import Flask, render_template

app = Flask(__name__)

@app.route("/")
def index():
  pic1 = "static/images/football.jpg"
  return render_template("base.html", user_image=pic1)

app.run(host='0.0.0.0', port=8080)
```

```
<body>

<h3>What's Your Name?</h3>

<p>  <a href="daniel">maybe it is daniel?</a></p>

<img src="{{ user_image }}" height="500px" width="500px">

</body>
</html>
```

```
@app.route('/<name>')
def name_output(name):
        pic1 = "static/images/football.jpg"
        return  render_template("leagus.html", user_image=pic1, username = name)
```

```
<html>
<body>
<p>Hello  {{username}}. Which football league do you support?</p>
<p>Maybe it is <a href="league/dong">dong</a>?</p>

  <img src="/{{ user_image }}" height="750px" width="750px">

</body>
</html>
```

```
@app.route('/league/<League>')
def league_inquiry(League):
  pic1 = "static/images/football.jpg
  return render_template("final.html", user_image=pic1, league = League)
```

```
<html>
<body>
    <h2>{{ league }}</h2>

    <img src="/{{ user_image }}" height="750px" width="750px">

</body>
</html>
```

Week 4

Dig For Treasure

```
import sqlite3

with sqlite3.connect("img.db") as con:
    print(con.execute("SELECT 1 + 2").fetchall())
```

will print `3`

```
with sqlite3.connect("img.db") as con:
    con.execute("CREATE TABLE IF NOT EXISTS accounts (account_number INTEGER, amount DECIMAL, PRIMARY KEY(account_number))")
    try:
        print(con.execute("INSERT INTO accounts (account_number, amount) values (12334, 1.50)").fetchall())
    except:
        pass
    print(con.execute("SELECT * FROM accounts").fetchall())
```

Prints `[(12334, 1.5)]`

```
with sqlite3.connect("img.db") as con:
    con.execute("CREATE TABLE IF NOT EXISTS accounts (account_number INTEGER, amount DECIMAL, PRIMARY KEY(account_number))")
    print(con.execute("UPDATE accounts SET amount = amount + 10 WHERE account_number = 12334").fetchall())
    print(con.execute("SELECT * FROM accounts").fetchall())
```

Prints `[(12334, 11.5)]`

```
import pandas as pd

with sqlite3.connect("img.db") as con:
    df = pd.read_sql_query('SELECT * FROM accounts',con)
    print(df)
    print(df.keys())
    print(sum(df["amount"]))
```

Prints `11.5`

```
dataset = pd.read_csv("tbs-pssd-compendium-salary-disclosed-2021-en-utf-8-2022-03-25.csv")
print(dataset.head(5))
```

	Sector	Last Name	First Name	Salary	Benefits	Employer	Job Title	Year	_docID
0	Colleges	Aarts	Cheri	115618.46	74.25	Fanshawe College Of Applied Arts and Technology	Professor	2021	0
1	Colleges	Aaslepp	Drew	114506.79	124.66	Humber College Institute Of Technology and Adv...	Professor	2021	1
2	Colleges	Abba	Corinne	106770.74	124.45	George Brown College Of Applied Arts and Techn...	Librarian	2021	2
3	Colleges	Abbott	Brian	107378.44	124.61	Conestoga College Institute Of Technology and ...	Professor	2021	3
4	Colleges	Abbott	Kathleen	162873.26	428.40	George Brown College Of Applied Arts and Techn...	Associate Dean, Centre for Continuous Learning	2021	4

```
print(dataset.shape)
```

(244390, 9)

```
print(dataset.keys())
```

```
Index(['Sector', 'Last Name', 'First Name', 'Salary', 'Benefits', 'Employer',
       'Job Title', 'Year', '_docID'],
      dtype='object')
```

```
dataset["total"] = dataset['Salary'].astype(float) + dataset['Benefits'].astype(float)
print(dataset.head(5))
```

```
     Sector Last Name First Name     Salary  ...                                      Job Title  Year _docID      total
0  Colleges     Aarts      Cheri  115618.46  ...                                      Professor  2021      0  115692.71
1  Colleges   Aaslepp       Drew  114506.79  ...                                      Professor  2021      1  114631.45
2  Colleges      Abba    Corinne  106770.74  ...                                      Librarian  2021      2  106895.19
3  Colleges    Abbott      Brian  107378.44  ...                                      Professor  2021      3  107503.05
4  Colleges    Abbott   Kathleen  162873.26  ...  Associate Dean, Centre for Continuous Learning  2021      4  163301.66
```

```
pd.options.display.float_format = '${:,.2f}'.format
print(dataset.head(5))
```

```
     Sector Last Name First Name      Salary  ...                                  Job Title  Year _docID       total
0  Colleges     Aarts      Cheri $115,618.46  ...                                  Professor  2021      0 $115,692.71
1  Colleges   Aaslepp       Drew $114,506.79  ...                                  Professor  2021      1 $114,631.45
2  Colleges      Abba    Corinne $106,770.74  ...                                  Librarian  2021      2 $106,895.19
3  Colleges    Abbott      Brian $107,378.44  ...                                  Professor  2021      3 $107,503.05
4  Colleges    Abbott   Kathleen $162,873.26  ...  Associate Dean, Centre for Continuous Learning  2021      4 $163,301.66
```

```
import numpy as np
salarypertitle = dataset.groupby("Job Title").agg({'total':[np.size,np.mean]})
```

```
                         total
                          size         mean
Job Title
1st Class Constable         43 $113,120.93
1st Class Engineer           1 $104,608.40
1st Class Fire Fighter     120 $115,750.01
1st Class Firefighter      167 $116,845.78
2nd Class Constable          1 $104,615.46
```

```
largecount = salarypertitle[salarypertitle[("total","size")]>200]
```

```
                                    total
                                     size        mean
Job Title
Advanced Care Paramedic                790 $114,485.29
Assistant Crown Attorney               814 $184,286.98
Assistant Curriculum Leader Secondary  880 $108,051.92
Assistant Professor                   1652 $129,952.33
Associate Professor                   3252 $158,353.72
```

```
largecount.sort_values(("total","mean"),ascending=False)
```

```
                                          total
                                           size        mean
Job Title
Judge                                      347 $307,699.57
Physician                                  322 $212,869.29
Counsel                                    623 $190,756.19
Chief Administrative Officer               276 $186,512.74
```

```
salarypertitle = dataset.groupby("Job Title").agg({'total':[np.size,np.mean]})
salarypertitle = salarypertitle[salarypertitle[("total","size")]>200].sort_values(("total","mean"),ascending=False)
print(salarypertitle.head(10))
```

```
---


```Python
salarypertitle = dataset.groupby("Job Title").agg({'total':[np.size,np.max]})
salarypertitle = salarypertitle[salarypertitle[("total","size")]>200].sort_values(("total","amax"),ascending=False)
print(salarypertitle.head(10))
```
```

Job Title	total size	amax
Chief Executive Officer	324	$654,613.06
Associate Professor	3252	$623,459.23
Professor	7761	$522,836.98
Director	585	$513,101.52
Physician	322	$443,749.84
Chief Administrative Officer	276	$413,910.21
Judge	347	$378,378.95
Lecturer	285	$342,357.20
Faculty	565	$338,497.96
Operator	766	$324,161.05

```
profsalary = dataset[dataset['Job Title'].str.contains("Prof")]
print(profsalary.sort_values("total",ascending=False)[["Last Name", "First Name", "Employer", "total"]].head(10))
```

	Last Name	First Name	Employer	total
227267	Emerson	Claudia	McMaster University	$623,459.23
235490	Mitchell	William	University Of Toronto	$564,065.02
228799	Golden	Brian	University Of Toronto	$549,803.80
243963	Yoo	John	University Of Western Ontario	$542,466.59
225824	Dacin	Tina	Queen’s University	$541,461.96
226617	Doidge	Craig Andrew	University Of Toronto	$540,645.34
238535	Reznick	Richard	Queen’s University	$522,836.98
237592	Philpott	Jane	Queen’s University	$508,008.62
228517	Gertler	Meric	University Of Toronto	$497,751.20
233084	Lenton	Rhonda, L.	York University	$494,683.14

```
genderstat =  pd.read_csv("us-likelihood-of-gender-by-name-in-2014.csv")
print(genderstat[["sex","name"]].head())
```

```
  sex     name
0   F   Elaine
1   F    Cathy
2   F    Heidi
3   F    Vicki
4   F  Melinda
```

```
datasetwithgender = pd.merge(dataset,genderstat,left_on="First Name", right_on="name")
print(datasetwithgender.groupby(["sex"]).agg({'total':[np.mean,np.max,np.median]}))
```

```
           total
            mean           amax      median
sex
F   $118,530.40 $1,527,441.40 $107,026.77
M   $129,955.95 $1,635,785.84 $117,675.63
```

```
waterlooprof = datasetwithgender[datasetwithgender['Employer'] == "University Of Waterloo"]
print(waterlooprof.groupby(["sex"]).agg({'total':[np.mean,np.max,np.median]}))
```

```
           total
            mean         amax      median
sex
F   $148,057.31 $340,825.95 $135,983.78
M   $160,769.90 $343,058.80 $154,489.34
```

https://replit.com/@lemire/ProperMagentaCosmos#main.py

Homework

Use pandas to do some analysis.