Answer Week 1 - Structured Data Retrieval

(Be sure to save this to Drive before starting) We are going to spend the bulk of our time this week retrieving API data into a type of Python variable called JSON that has some structure to it.

Q1 Print the 3rd item in the `countries` list

```
#Q1 Remeber to count from 0 on!
countries[2]
```

```
'Italy'
```

Q2 Print the dogs in the following list, using the slice operator.

```
#Q2

animals = ["Garfield","Odie","Clifford","Nemo"]
print(animals[1:3])
```

```
['Odie', 'Clifford']
```

Q3 Print your favorite dessert to the screen. Assuming your favourite is in this list!

```
#Q3 - Time likes Cake the Best
desserts = ["Pie","Cake","Ice Cream","Sherbert"]
print(desserts[1])
```

```
Cake
```

Q4 Print the contents of the 10th item in the JSON data in the cell below

```
#Q4 - Remember to start from 0!
#You might have a different record in the display
#I've been changing and adding more content to the site
data_index = 9
print(json.dumps(objects_cb_data[data_index],indent=2))
```

```
{
  "title": "How an Iowa School District Used ChatGPT to Ban Books",
  "creator": "Watercutter, A.",
  "date": "2020-01-01",
  "description": "Recalls the story of how ChatGPT was used to aid in a weedi
```

```
  "subject": "week-3;ethics;news",
  "language": "eng",
  "URL": "https://www.wired.com/story/chatgpt-ban-books-iowa-schools-sf-496/"
  "object_thumb": "https://elibtronic.github.io/AIL_Database/objects/ail_010.
  "object_location": "",
  "reference_url": "https://elibtronic.github.io/AIL_Database/items/ail_010.h
}
```


Q5

Run the cell below and try to grab a random item from the data....

```
#Q5

#we pull in a function from the random library
from random import randrange
#we create a random integer somewhere in the range of 0 to length of objects
random_entry = randrange(len(objects_cb_data))
#Now we print the JSON data at that random index
print(json.dumps(objects_cb_data[random_entry],indent=2))
```


```
{
  "title": "Generative AI for the Library and Information Professionals",
  "creator": "IFLA",
  "date": "2024-04-01",
  "description": "List of defitions and further links regarding generative AI
  "subject": "week-3;library;statement;generative-AI",
  "language": "eng",
  "URL": "https://www.ifla.org/generative-ai/",
  "object_thumb": "https://elibtronic.github.io/AIL_Database/objects/ail_011.
  "object_location": "",
  "reference_url": "https://elibtronic.github.io/AIL_Database/items/ail_011.h
}
```


Q5 continued

In the cell below copy and paste the link that will take you to the web display of the random item displayed above

```
#Q5 continued
reference_url = "https://elibtronic.github.io/AIL_Database/items/ail_011.html

print("You can view the web display of this item here: " + reference_url)
```

```
You can view the web display of this item here: https://elibtronic.github.io/
```

Subject Counts

We can now grab all of the subject names and corresponding counts how how often they were used and print them to the screen.

```
#A dictionary variable that will hold our key value combination of
#subject name and count
subject_frequency = {}

#Change JSON data into a dictionary
for item in subject_cb_data:
  subject_frequency[item['subject']] = item['count']


for key,value in subject_frequency.items():
  print("Subject label: "+ str(key) + ", shows up " + str(value) + " times in
```

```
Subject label: generative-ai, shows up 28 times in the data
Subject label: news, shows up 17 times in the data
Subject label: ethics, shows up 13 times in the data
Subject label: library, shows up 13 times in the data
Subject label: blog, shows up 10 times in the data
Subject label: paper, shows up 8 times in the data
Subject label: week-2, shows up 8 times in the data
Subject label: week-3, shows up 7 times in the data
Subject label: week-1, shows up 6 times in the data
Subject label: video, shows up 6 times in the data
Subject label: resource, shows up 6 times in the data
Subject label: statement, shows up 5 times in the data
Subject label: week-4, shows up 5 times in the data
Subject label: critique, shows up 4 times in the data
Subject label: labour, shows up 4 times in the data
Subject label: article, shows up 4 times in the data
Subject label: agi, shows up 2 times in the data
Subject label: chapter, shows up 2 times in the data
Subject label: policy, shows up 2 times in the data
Subject label: industry, shows up 2 times in the data
Subject label: ai, shows up 2 times in the data
Subject label: environment, shows up 2 times in the data
Subject label: book-review, shows up 1 times in the data
Subject label: poll, shows up 1 times in the data
Subject label: openai, shows up 1 times in the data
Subject label: safety, shows up 1 times in the data
Subject label: equity, shows up 1 times in the data
Subject label: llm, shows up 1 times in the data
Subject label: black-box, shows up 1 times in the data
Subject label: machine-learning, shows up 1 times in the data
Subject label: metadata, shows up 1 times in the data
Subject label: chat-gpt, shows up 1 times in the data
Subject label: techbubble, shows up 1 times in the data
Subject label: cryptocurrency, shows up 1 times in the data
Subject label: research-process, shows up 1 times in the data
Subject label: ai-literacy, shows up 1 times in the data
```

```
Subject label: sustainability, shows up 1 times in the data
Subject label: book, shows up 1 times in the data
Subject label: governance, shows up 1 times in the data
Subject label: job security, shows up 1 times in the data
Subject label: literature-review, shows up 1 times in the data
Subject label: cataloguing, shows up 1 times in the data
Subject label: hallucination, shows up 1 times in the data
Subject label: bias, shows up 1 times in the data
Subject label: rag, shows up 1 times in the data
Subject label: indexing, shows up 1 times in the data
Subject label: software, shows up 1 times in the data
```

Q6 Which subject shows up the most in the data?

```
#Q6 - This might also change for you as content in the site changes
# however you can compare it to the display above to confirm that it is worki
# for me here
most_subject = "generative-ai"
print("The subject that comes up the most is " + most_subject)
```

```
The subject that comes up the most is generative-ai
```