

Erick Franco

Cs430p

3/9/2025

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10.1g.5

- Examine the document cleaning code. What kinds of characters are removed when the text is cleaned?
  - `20 text = re.sub(r"\s+", " ", text).strip()`
  - So “\s” and “ ” being empty spaces
- What size chunks is the content split into?
  - `chunk_size=10000`
- What amount of overlap is there between chunks?
  - `chunk_overlap=1000`
- How many documents are loaded at a time into the vector database?
  - `300`

10.1g.6

Each one returned [pdx.edu/visit](http://pdx.edu/visit) and just explained the website every time

```

renv) francose@ada:/cs430-srr0/08 1lm$ python 02.docsearch.py
Database search initialized.
https://www.pdx.edu/visit/
https://www.pdx.edu/computer-science/
The program queries departments in the RAG database that are similar to whatever is entered. A blank query exits the program.
>> Tell me about FireBase
Number of requested results 4 is greater than number of elements in index 3, updating n_results = 3
Query database for: Tell me about FireBase
Closest document match in database: https://www.pdx.edu/computer-science/
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>> Tell me about Terraform
Number of requested results 4 is greater than number of elements in index 3, updating n_results = 3
Query database for: Tell me about Terraform
Closest document match in database: https://www.pdx.edu/visit/
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>> Tell me about Cloud Run
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>> Traceback (most recent call last):
File "/u/franccer/cp430-src/08_1lm/02_docsearch.py", line 29, in <module>
    line = input(">> ")
```

## 10.1g.8

Instead of using whatever data it had it looks through the database and says if it has or doesn't have data about the subject

```
llm>> Tell me about Terraform
Number of requested results 4 is greater than number of elements in index 3, updating n_results = 3
I'm sorry, but this document is about Portland State University and its various departments and programs. It does not contain any information about Terraform.
I don't know the answer to your question.
llm>> Tell me about Cloud Run
Number of requested results 4 is greater than number of elements in index 3, updating n_results = 3
I'm sorry, but this document is about Portland State University and its various tours and programs. It does not contain any information about Cloud Run. I don't know the answer to your question.
llm>> What are the advantages and disadvantages of Firebase?
Number of requested results 4 is greater than number of elements in index 3, updating n_results = 3
I'm sorry, but this document is about Portland State University's Computer Science Department and does not contain information about Firebase. Therefore, I cannot answer your question using the provided context.
llm>> How do you use Terraform?
Number of requested results 4 is greater than number of elements in index 3, updating n_results = 3
I'm sorry, but this document is about Portland State University and does not contain information on how to use Terraform. Therefore, I cannot answer your question.
llm>> Why would you use Cloud Run instead of App Engine?
Number of requested results 4 is greater than number of elements in index 3, updating n_results = 3
I am sorry, but this document is about the Portland State University Department of Computer Science and does not contain any information about Cloud Run or App Engine. Therefore, I cannot answer your question using the provided context.
llm>> What are the advantages and disadvantages of Firebase?
Number of requested results 4 is greater than number of elements in index 3, updating n_results = 3
I'm sorry, but this document is about Portland State University's Computer Science Department and does not contain information about Firebase. Therefore, I cannot answer your question using the provided context.
llm>> Traceback (most recent call last):
  File "/u/francoer/cs430-src/08_llm/03_query.py", line 54, in <module>
    line = input("llm>> ")
    ^^^^^^^^^^^^^^^^^^^
KeyboardInterrupt

(env) francoer@ada:~/cs430-src/08_llm$
```

## 10.1g.11

```
(env) francoer@ada:~/cs430-src/08_llm$ python 04_opanapi_agent.py
Welcome to my XKCD API application. I am configured with these tools generated by the OpenAPIToolkit:
Tool: api_planner = Can be used to generate the right API calls to assist with a user query, like api_planner(query). Should always be called before trying to call the API controller.
Tool: api_controller = Can be used to execute a plan of API calls, like api_controller(plan).
llm>> What is the current xkcd?

> Entering new AgentExecutor chain...
Thought: I should generate a plan to help with this query and then copy that plan exactly to the controller.
Action: api_planner
Action Input: Find the current xkcd comic. This likely involves a single API call to retrieve the latest comic information.
Observation: 1. GET /info.0.json: This call retrieves the current comic and its metadata. This fulfills the user's request.
Thought: I'm ready to execute the API call.
Action: api_controller
Action Input: 1. GET /info.0.json
> Entering new AgentExecutor chain...
Plan: 1. GET /info.0.json
Thought: I need to fetch the current comic's information using the /info.0.json endpoint. I'll use requests.get for this.
Action: requests_get
Action Input:
{
  "url": "http://xkcd.com/info.0.json",
  "params": {},
  "output_instructions": "Extract the 'num', 'title', 'img', 'alt', 'transcript' fields."
}
Observation: {
  "num": 3060,
  "title": "Omniroll",
  "img": "https://imgs.xkcd.com/comics/omniroll.png",
  "alt": "It seems wrong that Fruit by the Foot is only sold by weight or by number of rolls.",
  "transcript": ""
}
Thought:Thought: I have successfully retrieved the comic information. I can now formulate the final answer.
Final Answer: The current XKCD comic is number 3060, titled "Omniroll". The image URL is https://imgs.xkcd.com/comics/omniroll.png, the alt text is "It seems wrong that Fruit by the Foot is only sold by weight or by number of rolls.", and the transcript is empty.
> Finished chain.
Observation: The current XKCD comic is number 3060, titled "Omniroll". The image URL is https://imgs.xkcd.com/comics/omniroll.png, the alt text is "It seems wrong that Fruit by the Foot is only sold by weight or by number of rolls.", and the transcript is empty.
Thought: I am finished executing a plan and have the information the user asked for.
Final Answer: The current XKCD comic is number 3060, titled "Omniroll". The image URL is https://imgs.xkcd.com/comics/omniroll.png, the alt text is "It seems wrong that Fruit by the Foot is only sold by weight or by number of rolls.", and the transcript is empty.
> Finished chain.
(!input: 'What is the current xkcd?', 'output': 'The current XKCD comic is number 3060, titled "Omniroll". The image URL is https://imgs.xkcd.com/comics/omniroll.png, the alt text is "It seems wrong that Fruit by the Foot is only sold by weight or by number of rolls.", and the transcript is empty.")
```

```

llm>> What is the image link of the current xkcd?

> Entering new AgentExecutor chain...
Thought: I should generate a plan to help with this query and then copy that plan exactly to the controller.
Action: api_planner
Action Input: Find the API call to get the current xkcd's image link. Assuming an API endpoint exists like /xkcd that returns JSON with an 'img' field
Observation: Plan: Sorry, this API does not provide information about xkcd comics or image links. The available endpoints only fetch comic information via ID
or the current comic, but don't offer the functionality to search for specific comics by name or other attributes.
Thought: I am finished executing a plan and have the information the user asked for or the data the user asked to create
Final Answer: I cannot fulfill this request. The available API does not provide the necessary information.

> Finished chain.
{'input': 'What is the image link of the current xkcd?', 'output': 'I cannot fulfill this request. The available API does not provide the necessary informati
on.'}
llm>> What was xkcd 327 about?

> Entering new AgentExecutor chain...
Thought: I should generate a plan to help with this query and then copy that plan exactly to the controller.
Action: api_planner
Action Input: Find the information about xkcd comic 327. Assume an API endpoint exists like /xkcd/{comic number} that returns comic details.
Observation: Plan: 1. GET /327/info.0.json to fetch information about xkcd comic 327.
Thought: I'm ready to execute the API calls.
Action: api_controller
Action Input: 1. GET /327/info.0.json to fetch information about xkcd comic 327.

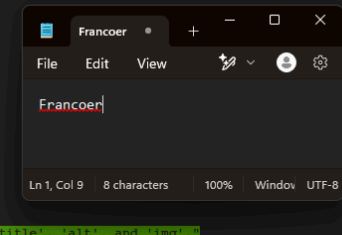
> Entering new AgentExecutor chain...
Plan: 1. GET /327/info.0.json to fetch information about xkcd comic 327.

Thought: I need to construct a request to fetch the comic information using the 'requests.get' tool.
Action: requests.get
Action Input:
{
  "url": "http://xkcd.com/327/info.0.json",
  "params": {},
  "output instructions": "Extract the title, alt text, and image URL. Return them as a dictionary with keys 'title', 'alt', and 'img'."
}
Observation: {
  "title": "Exploits of a Mom",
  "alt": "Her daughter is named Help I'm trapped in a driver's license factory.",
  "img": "https://imgs.xkcd.com/comics/exploits_of_a_mom.png"
}
Thought: I have successfully fetched the comic information. I am finished.
Final Answer: {
  "title": "Exploits of a Mom",
  "alt": "Her daughter is named Help I'm trapped in a driver's license factory.",
  "img": "https://imgs.xkcd.com/comics/exploits_of_a_mom.png"
}

> Finished chain.
Observation: {
  "title": "Exploits of a Mom",
  "alt": "Her daughter is named Help I'm trapped in a driver's license factory.",
  "img": "https://imgs.xkcd.com/comics/exploits_of_a_mom.png"
}
Thought: I am finished executing a plan and have the information the user asked for.
Final Answer: xkcd 327 was titled "Exploits of a Mom". The alt text was "Her daughter is named Help I'm trapped in a driver's license factory." The image UR
l is https://imgs.xkcd.com/comics/exploits_of_a_mom.png

> Finished chain.
{'input': 'What was xkcd 327 about?', 'output': 'xkcd 327 was titled "Exploits of a Mom". The alt text was "Her daughter is named Help I\'m trapped in a driv
er\'s license factory." The image URL is https://imgs.xkcd.com/comics/exploits_of_a_mom.png'}
llm>>

```



## 10.2g.6

```
NAME: asia-east1
TYPE: compute.v1.subnetwork
STATE: COMPLETED
ERRORS: []
INTENT:

NAME: asia1-vm
TYPE: compute.v1.instance
STATE: COMPLETED
ERRORS: []
INTENT:

NAME: e1-vm
TYPE: compute.v1.instance
STATE: COMPLETED
ERRORS: []
INTENT:

NAME: eul-vm
TYPE: compute.v1.instance
STATE: COMPLETED
ERRORS: []
INTENT:

NAME: europe-west1
TYPE: compute.v1.subnetwork
STATE: COMPLETED
ERRORS: []
INTENT:

NAME: networking101
TYPE: compute.v1.network
STATE: COMPLETED
ERRORS: []
INTENT:

NAME: us-east5
TYPE: compute.v1.subnetwork
STATE: COMPLETED
ERRORS: []
INTENT:

NAME: us-west-s1
TYPE: compute.v1.subnetwork
STATE: COMPLETED
ERRORS: []
INTENT:

NAME: us-west-s2
TYPE: compute.v1.subnetwork
STATE: COMPLETED
ERRORS: []
INTENT:

NAME: w1-vm
TYPE: compute.v1.instance
STATE: COMPLETED
ERRORS: []
INTENT:

NAME: w2-vm
TYPE: compute.v1.instance
STATE: COMPLETED
ERRORS: []
INTENT:
francoer@cloudshell:~/networking101 (cloud-franco-francoer)$
```

- Take a screenshot of the output to include in your lab notebook. How many networks, subnetworks, and VM instances have been created?
  - 5 Instances, 5 subnetworks, and 1 network

- Visit the web console for VPC network and show the network and the subnetworks that have been created. Validate that it has created the infrastructure in the initial figure. Note the lack of firewall rules that have been created.

cloud-Franco-Francoer

vpc

X

Search

4

networks / Network: networking101

←

VPC network details

DELETE VPC NETWORK

SH

networking101

<

OVERVIEW

SUBNETS

STATIC INTERNAL IP ADDRESSES

FIREWALLS

FIREWALL ENDPOINTS

ROUTES

Subnets

ADD SUBNET

MANAGE FLOW LOGS

Filter Enter property name or value

<input type="checkbox"/>	Name ↑	Region	Stack Type	Primary IPv4 range	Secondary IPv4 ranges	IPv6 ranges	Res
<input type="checkbox"/>	asia-east1	asia-east1	IPv4 (single-stack)	10.40.0.0/16			Nor
<input type="checkbox"/>	europa-west1	europa-west1	IPv4 (single-stack)	10.30.0.0/16			Nor
<input type="checkbox"/>	us-east5	us-east5	IPv4 (single-stack)	10.20.0.0/16			Nor
<input type="checkbox"/>	us-west-s1	us-west1	IPv4 (single-stack)	10.10.0.0/16			Nor
<input type="checkbox"/>	us-west-s2	us-west1	IPv4 (single-stack)	10.11.0.0/16			Nor

Reserved proxy-only subnets for load balancing

<input type="checkbox"/>	Name	Region ↑	IP address ranges	Gateway	Role	Purpose
No rows to display						

cloud-Franco-Francoer

comp

X

Search

4

?

VM instances

CREATE INSTANCE

IMPORT VM

REFRESH

LEARN

INSTANCES

OBSERVABILITY

INSTANCE SCHEDULES

ⓘ

Your project's VMs use global DNS names by default. To reduce the risk of cross-regional outages, we recommend you use zonal DNS instead. [Learn more](#)

USE ZONAL DNS

DISMISS

VM instances

Filter Enter property name or value

<input type="checkbox"/>	Status	Name ↑	Zone	Recommendations	In use by	Internal IP	External IP	Connect
<input type="checkbox"/>	✓	asia1-vm	asia-east1-b			10.40.0.2 (nic0)	35.194.211.80 (nic0)	SSH ▾ ⋮
<input type="checkbox"/>	⊙	course-vm	us-west1-b			10.138.0.2 (nic0)		SSH ▾ ⋮
<input type="checkbox"/>	✓	e1-vm	us-east5-a			10.20.0.2 (nic0)	34.162.188.1 (nic0)	SSH ▾ ⋮
<input type="checkbox"/>	✓	eu1-vm	europa-west1-d			10.30.0.2 (nic0)	34.76.195.146 (nic0)	SSH ▾ ⋮
<input type="checkbox"/>	✓	w1-vm	us-west1-b			10.10.0.2 (nic0)	34.83.252.87 (nic0)	SSH ▾ ⋮
<input type="checkbox"/>	✓	w2-vm	us-west1-b			10.11.0.100 (nic0)	34.169.98.193 (nic0)	SSH ▾ ⋮

Related actions

HIDE

- Click on the **ssh** button for one of the VMs and attempt to connect. Did it succeed?
  - No the connection to the proxy failed

## 10.2g.8

cloud-Franco-Francoer

vpc

Search

4

?

VPC networks / Network: networking101

← VPC network details

DELETE VPC NETWORK

networking101

<

OVERVIEW

SUBNETS

STATIC INTERNAL IP ADDRESSES

FIREWALLS

FIREWALL ENDPOINTS

ROUTES

VPC >

ADD FIREWALL RULE

DELETE

Filter

Enter property name or value

?

⋮

<input type="checkbox"/>	Name	Enforcement order	↑	Type	Deployment scope	Rule priority	Target	
	▼ vpc-firewall-rules	1		VPC firewall rules	Global			
<input type="checkbox"/>	<a href="#">networking-firewall-allow-icmp</a>			Ingress firewall rule	Global	1000	Appl.	✓
<input type="checkbox"/>	<a href="#">networking-firewall-allow-internal</a>			Ingress firewall rule	Global	1000	Appl.	✓
<input type="checkbox"/>	<a href="#">networking-firewall-allow-ssh</a>			Ingress firewall rule	Global	1000	Appl.	✓



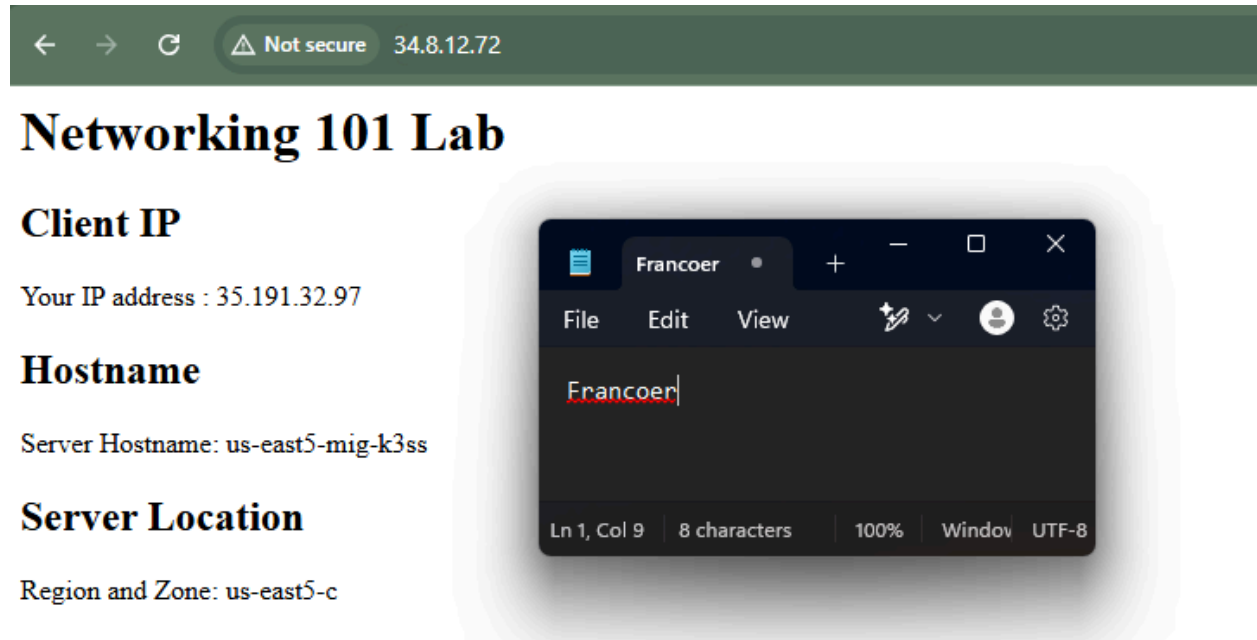
## 10.2g.9

Location pair	Ideal latency	Measured latency
us-west1 us-east5	~45 ms	~57
us-west1 europe-west1	~93 ms	~140
us-west1 asia-east1	~114 ms	~131
us-east5 europe-west1	~76 ms	~94
us-east5 asia-east1	~141 ms	~178
europe-west1 asia-east1	~110 ms	~250

## 10.2g.16

- Are the instances in the same availability zone or in different ones?
  - Different zones
- List all availability zones that your servers show up in for your lab notebook.
  - Region and Zone: us-east5-c
  - Region and Zone: europe-west1-d

10.2g.19



← → ↻ ⚠ Not secure 34.8.12.72

## Networking 101 Lab

### Client IP

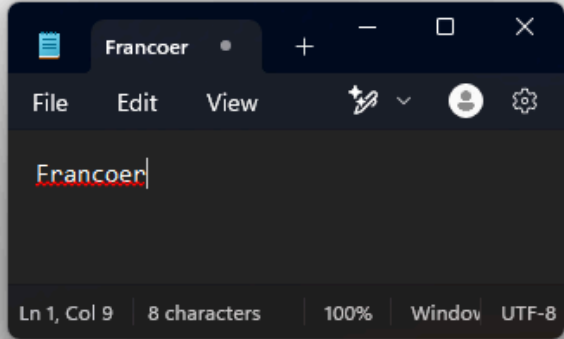
Your IP address : 35.191.32.97

### Hostname

Server Hostname: us-east5-mig-k3ss

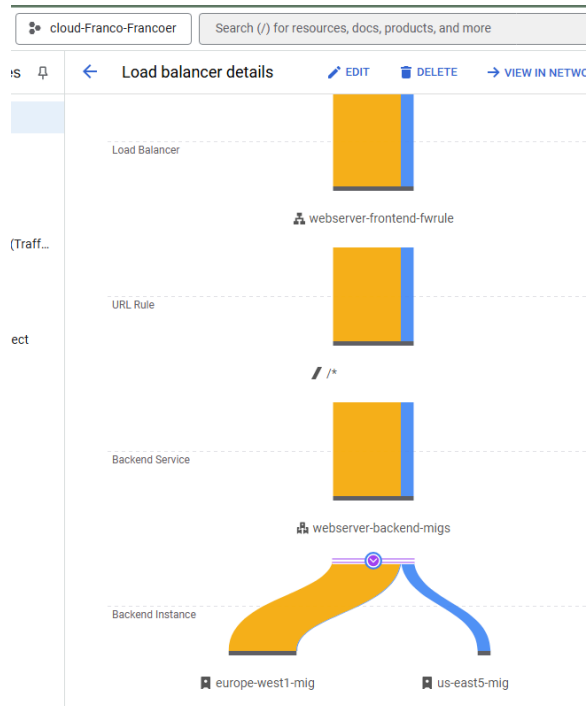
### Server Location

Region and Zone: us-east5-c

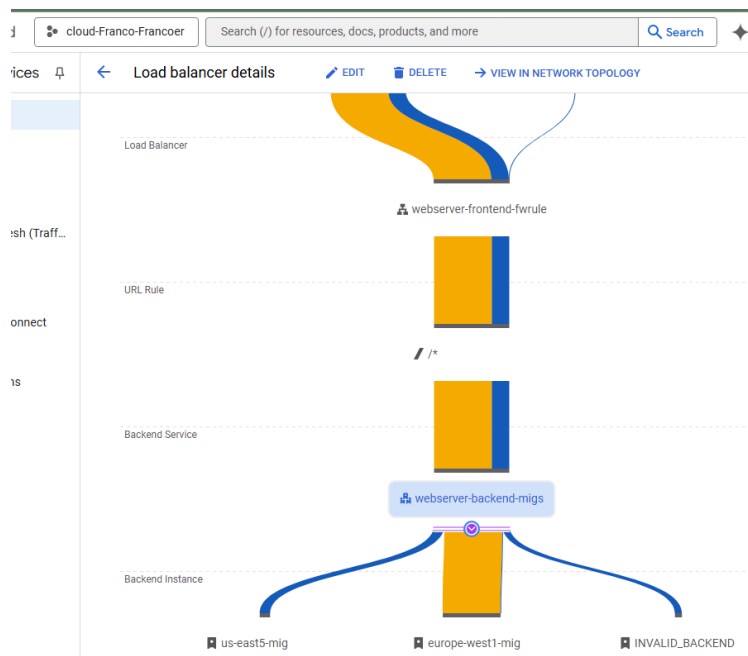


- Which availability zone does the server handling your request reside in?
  - us-east5-c

## 10.2g.20



Nothing happened after 20 min



## 10.2g.21

