exemple of web application with Python's Flask web framework using Docker and docker-compose

what is this project about ?

The main goal of this project is to demonstrate how to build, test, and deploy microservices-based web applications using containerization tools like Docker and Docker Compose.

The project consists of two microservices: news and weather. The news service provides an API endpoint to fetch the latest news headlines from various news sources using the NewsAPI. The weather service provides an API endpoint to fetch the current weather information for a given city using the OpenWeatherMap API. + image



Tools used

Flask

is a lightweight and flexible web framework for Python that is used to build web applications. It provides a simple and easy-to-use interface for handling web requests and generating responses. Flask is often used to build RESTful APIs and web services.

Docker

is a containerization platform that allows developers to package their applications and dependencies into portable containers. Containers provide a way to run applications consistently across different environments, which helps to ensure that the application behaves the same way in development, testing, and production. Docker containers can be easily deployed to cloud platforms like AWS, Azure, and Google Cloud.

Docker-compose

is used to define and run multi-container Docker applications. The docker-compose.yml file defines the services that make up the application, including the News and Weather services, their respective databases, and the NGINX reverse proxy.

Postman

is a popular API development tool that allows developers to create, test, and document APIs easily.

Steps followed

1)Creating flask services

master_assistant.py

The "/weather" route expects a query parameter called "city", retrieves it from the request object using request.args.get('city'), and sends a GET request to a separate service (which must be running on the network at address "weather:3002") to retrieve the current weather for the specified city. The response from the weather service is returned to the client in JSON format.

The "/news" route expects a query parameter called "country", retrieves it from the request object using request.args.get('country'), and sends a GET request to another separate service (which must be running on the network at address "news:3003") to retrieve the latest news headlines for the specified country. The response from the news service is also returned to the client in JSON format.

If the "city" or "country" query parameters are not in the expected format (either an invalid string or a number), an error message is returned to the client.

Activitie	es.	💐 Visual Studio Code				رىل 29 23:12	⊈ أف			e	fr 💎	₿ ◀) +	98 %
					master_assista	nt.py - archiProje	t - Visual Studio	Code					
	File E	dit Selection View Go	Run Terminal Help										
	G	EXPLORER ····	🍦 master_assistant.py 🗙	🔹 weather.py	≡ requirements.txt	🍨 bpmn.py	🍨 news.py	🛱 nginx.conf	🗇 Dockerfile	🐲 Dockerfile.news	🗇 Dockerf	ile.w ₽~	□ …
A	- U	✓ ARCHIPROJECT	python_service > 🏘 mas	ter_assistant.py >	<i>0</i> .			Į.		5			
	Q	> .history	1 from flask :	import Flask, re	equest								
T	-	> .vscode	<pre>2 from flask_</pre>	restful import #	\pi							Party and	
	80	> anotherproj	3 import reque	ests								Public (1) and any party of	
-	2	\sim python service	4										
		- pychon_service	5 app = Flask	(name)									
	å	Run and Debug (Ctrl+Shift+D)) 6 api = Api(ap 7	ob)									
>		< docker-compose.yml	8 @app.route('/weather')									
	ВU	🐲 Dockerfile	9 def weather	():									
		Dockerfile.bpmn	10 city =	request.args.get	('city')								
		Dockerfile.news	11 if city	.isdigit():									
	-0	Dockerfile.nginx	12 res	= "City name mu	ist be string e.g. '	Amsterdam, Berl	in'"						
	π	Dockerfile.weather	13 recoond	urn res	("http://waathar.30	02/weather?city	-"+ city)						
\mathbf{x}	Δ	a master assistant ov	15 return	response ison()	(incep.//weather.so	02/weather:city	- + CILY/						
			16	caponac.jaon()									_
	R	a nainy conf	17 @app.route('/news')									
1			18 def news():										
		= requirements.txt	19 country	name = request.	args.get('country')								
110		📽 weather.py	20 if count	try_name.isdigit	() or len(country_n	ame) > 2 :							
<u>.</u>	R		21 res	<pre>p = "Country name</pre>	ne must be string. C	hoose from belo	w: \n\nThe 2-l	etter ISO 3166-	-1 code of the	country you want to	get head		
			22 reti	urn resp	(#btts // 2002 /								
	Toyt	ditor	23 response	e = requests.get	("http://news:3003/	news?country="+	country_name)						
1	TEAL	dicor	24 recurn 1	response.json()									
			26 if name	== ' main ':									
	\sim		27 app.ru	host="0.0.0.0"	,port=3001,debug=Tr	ue,threaded=Tru	e)						
	•••												
DEV		> OUTLINE											
100	Q	> TIMELINE											
	Ø	> CHECKPOINTS											
	sin	> HIDDEN ITEMS											اري
	201	> LOCAL HISTORY											اري
	× 6	0 ▲ 0 🕁 🖞 Connect 🖓	🗟 : CodeStream 🛛 🥏 Live Sha	re Blackbox Quokk	a		Ln 27,	Col 64 Spaces: 4 U	TF-8 LF {} Pytho	n 3.10.8 64-bit 🖗 Go Live	√ Spell	⊘ Prettier	R D

1)Creating flask services

news.py

The code creates an instance of the Flask application and an instance of the API using the Flask instance. It then defines a route '/news' that accepts GET requests.

Inside the news function, the code gets the country name from the query string using the request.args.get() method. It then constructs a URL to request news articles from the NewsAPI service using the country name and the NewsAPI API key.

After that, it sends an HTTP GET request to the constructed URL using the requests module, and returns the JSON response from the NewsAPI service using response.json().

Activiti	es	💐 Visual Studio Code				ىل 29 23:10	۩ أفر			=	fr 💎 🖁 📣	f 98 %
_					news.py	- archiProject - Vi	sual Studio Code					
	File B	dit Selection View G	o Run Terminal Help									
	Ch	EXPLORER ····	🇬 master_assistant.py	weather.py	≣ requirements.txt	🍨 bpmn.py	🍦 news.py 🛛 🗙	🔅 nginx.conf	🗇 Dockerfile	🐲 Dockerfile.news	✤ Dockerfile.w ☆	~ 🔲 …
	ρ	ARCHIPROJECT history	python_service > ♥ new 1 from flask i 2 from flask r	s.py> Import Flask, re	quest							51 - 1040 - 1440
×	ŝ	 > .vscode > anotherproj > python_service 	3 import json 4 import reque	ests	μτ						a na san san san san san san san san san	-99-1
0	∆ 2	>pycache bpmn.py	5 6 app = Flask(7 api = Api(ap	(name) op)								
> _	₿	 docker-compose.yml Dockerfile Dockerfile.bpmn 	<pre>8 9 @app.route(' 10 def news():</pre>	/news')								
1	Ē	 Dockerfile.news Dockerfile.nginx 	11 country_ 12 api_key 13 base_url	<pre>name = request. = "70dcdlc6a0d2 = "<u>http://news</u></pre>	args.get('country') 4ebdb57ff071ff9b8dd api.org/v2/top-head	lc" llines?"						-
×		 Dockerfile.weather master_assistant.py news.py 	14 complete 15 response 16 return r	e_url = base_url e = requests.get response.json()	<pre>+ "country=" + cou (complete_url)</pre>	ntry_name + "&a	apiKey=" + api_	key				
	*	g nginx.conf ≣ requirements.txt	17 18 <u>if name</u> 19 app.rur	== 'main': n(host="0.0.0.0"	,port='3003',thread	led=True,debug=	True)					
Ē	В	BlackBox										
0												
DEV		> OUTLINE										
<u> </u>	8											
	221 ×		더 : CodeStream _ 슈 Live Sha	re Blackbox Ouokk			Ln 18.	Col 1 Spaces: 4	JTF-8 LF () Pytho	n 3.10.864-bit @ Go Liv	e 🗸 Spell 🖉 Prettier	8 0

1)Creating flask services

weather.py

single route '/weather' that retrieves the current weather data for a specified city using the OpenWeatherMap API. It uses the request module to get the city name from the query parameters of the request URL. The OpenWeatherMap API key is stored in a variable called api_key and the base URL for the API is stored in base_url. These values are used to construct a complete URL for the API request which is then made using the requests.get() method. The JSON response from the API is returned as the response from the route. Finally, the _____ variable is used to check if the script is being run directly and the Flask app is run on the local host at port 3002 with debug mode enabled.

Activiti	ies	💐 Visual Studio Code	ې أفريل 23:16 🖨 🗧 🗧 🛱	💎 🔋 🜓 t间 98 %												
_			weather.py - archiProject - Visual Studio Code													
	File	Edit Selection View Go	Go Run Terminal Help													
	Ch	EXPLORER ····	🔹 master_assistant.py 🔹 weather.py x 🗉 requirements.txt 🔹 bpmn.py 🔹 news.py 🔅 nginx.conf 🐲 Dockerfile 🐲 Dockerfile.news 🐲 Doc	ckerfile.w 🕁 🗸 🖽 …												
A			python_service > @ weather.py >													
¥	Q	> .vscode	2 from flask_restful import Api													
	с С	Source Control (Ctrl+Shift+G)	6) 4 import requests													
0	∑ a	>pycache	6 app = Flask(name)													
^ -	₿	 docker-compose.yml Dockerfile 	<pre>9 @app.route('/weather') 10 def weather():</pre>													
1	Ē	 Dockerfile.news Dockerfile.nginx 	<pre>def weather(): city_name = request.args.get('city') api_key = "deb96cff96df7c74e93e62661b91c3c2" base_url = "http://api.openweathermap.org/data/2.5/weather?"</pre>													
×	A	 Dockerfile.weather master_assistant.py news.py 	<pre>14 complete_url = base_url + "appid=" + api_key + "&q=" + city_name v 15 response = requests.get(complete_url) 16 return response.json()</pre>													
1	₿ Ĵ	© nginx.conf ≣ requirements.txt	17 18 ifname == 'main': 19 app.run(host="0.0.0",port='3002',threaded=True,debug=True)													
	Intel	ij IDEA Edu														
/	Ģ															
\mathbf{O}	\Box															
8																
DEV		> OUTLINE														
	8	> TIMELINE > CHECKPOINTS														
::::	224 T															
•••	*	x 0 ∧ 0 → Fi Connect	니 G : CodeStream 중 Live Share Blackbox Quokka Ln 18, Col 1 Spaces: 4 UTF-8 LF (사 Python 3,10.8 64-bit @ Go Live 🗸 Spa	ell 🖉 Prettier 💀 🗅												

what is **RESTful API**?

RESTful API (Representational State Transfer) is a popular architectural style used for designing web services that communicate over HTTP. It defines a set of constraints and principles that developers should follow when creating APIs to enable client-server communication. RESTful APIs use HTTP methods like GET, POST, PUT, and DELETE to perform CRUD (Create, Read, Update, Delete) operations on resources, which can be represented in various formats such as JSON, XML, or plain text.

2)Building Nginx server

setting up a load-balanced web server to handle incoming traffic and distribute it to multiple Python services running on different servers.

2)Dockerize everything

We will create the Dockerfiles for our services. create Docker images for the News and Weather services as well as an Nginx reverse proxy.

Dockerfile.news:

It starts with a Python 3.8 slim-buster base image. Copies the requirements.txt file to install the necessary dependencies for the News service. Installs the dependencies using pip. Exposes port 3003. Copies the news.py file. Sets the command to run the news.py file.

Dockerfile.weather:

It starts with a Python 3.8 slim-buster base image.

Copies the requirements.txt file to install the necessary dependencies for the Weather service.

Installs the dependencies using pip.

Exposes port 3002.

Copies the weather.py file.

Sets the command to run the weather.py file.

Dockerfile.nginx:

It starts with an Nginx base image. Deletes the default Nginx configuration file. Copies the custom Nginx configuration file named "nginx.conf" to the image.

what is image?

In Docker, an image is a lightweight, standalone, and executable package that includes everything needed to run a piece of software, including the code, runtime, libraries, environment variables, and system tools.

Docker images are built from a set of instructions called a Dockerfile, which specifies the application's dependencies, configuration, and other details.

4)Docker-compose

Docker-compose creates a container with our Nginx server, a container for each of the news and weather services and two instances of our main Api master(server).

Activiti	es	🌂 Visual Studio Code	🛱 أفريل 29 23:40		😑 fr	👻 👻 🛿	🔹 🕂 🕈 🛑 100 %
_			requirements.txt - archiProject - Visual Studio Code				
-	File E	Edit Selection View Go	Run Terminal Help		<i></i>		
	Ð	EXPLORER	E requirements.txt x 🍦 news.py 🔅 nginx.conf 🧇 Dockerfile 🗇 Dockerfile.news 🚸 Dockerfile.	weather 🛷 Dockerfile.nginx	👉 docker-	compose.ym	▷ □ …
#		✓ ARCHIPROJECT	python_service > = requirements.txt	×0.			
	ρ	> .history	0 rtask==1.1.2				
Y	-	> .vscode	PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL SOL CONSOLE COMMENTS				+ v ~ x
	20	> anotherproj					
	6	 python_service 	> 5a074d54c853	ce mas	Do noti	Us	F Sudo pyt
\mathbf{O}	2	>pycache	Step 6/6 : CMD python news.py	ter_1	use i	eap	►≥ bash pyt
	\$	docker-compose.yml	> Running in 612f720ba379	python	tina	roduc	- Sudo pyt
_		I Dockerfile	Removing intermediate container 6127/20083/9	serv1	produ	TION I	L 🕑 sudo pyt
-	HC I	Dockerfile news	Successfully built ae0aa488c815	ter 2	deploy	serve	
	-	Dockorfile neiny	Successfully tagged python_service_news:latest	yasmin	ment.	r ins	
		Dockernie.nginx	Recreating python_service_master_1 done	e@yasm	Use	tead.	
0	L⊚	Dockerfile.weather	Recreating python_service_master_2 done	ine-HP	a pro	* De	
		master_assistant.py	Recreating bython service weather 1 done	ok-470	n WSGI	ode:	
-	Д	🗬 news.py	Recreating nginx done	-G2:~/	serve	on	
\mathbf{X}		nginx.conf	Attaching to python_service_weather_1, python_service_news_1, python_service_master_1, python_servi	.ce_master_2, ngi Deskto	r inst	* Ru I	
	6	requirements.txt	NX	p/arch	ead.	nning	
	1	🕏 weather.py	master_2 * Serving riask app = master_assistant= (tazy toading)	ct/pyt	ug mod	ttn·/	
1			master 2 WARNING: This is a development server. Do not use it in a production deployment.	hon se	e: on	/0.0.	
			master_2 Use a production WSGI server instead.	yasmin	* Run	0.0:3	
TE			master_2 * Debug mode: on	e@yasm	ning o	001/	
	R		master_2 * Running on http://0.0.0.0.001/ (Press CIRL+C to quit)	Ine-HP		(Pres	
	D		master_2 * Debugger is active!	ok-470	.0.0:3	L+C t	
-	0		master_2 * Debugger PIN: 223-154-733	-G2:~/	001/ (o qui	
			news_1 * Serving Flask app "news" (lazy loading)	Deskto	Press	t)	
			news_1 * Environment: production	p/arch	CTRL+C	* Re	
-			news_1 Use a production WSGI server instead.	ct/pvt	it)	ing w	
	2		news 1 * Debug mode: on	hon se	* Res	ith s	
			<pre>news_1</pre>	yasmin,	tartin	tat	
	••••		news_1 * Restarting with stat	e@yasm	g with	* De	
9			news 1 * Debugger 15 active!	Ine-HP - ProBo-	stat * Deb	bugge	
			master 1 / * Serving Flask app "master assistant" (lazy loading)	ok-470	ugger	activ	
			master 1 * Environment: production	-G2:~/	is act	e!	
DEV			master_1 WARNING: This is a development server. Do not use it in a production deployment.	Deskto	ive!	* De	
100 M	0		master_1 Use a production WSGI server instead.	p/arch	* Deb	bugge	
	8		master_1 / * Debug mode: on master_1 / * Running on http://0.0.0.0:3001/ (Press CTRI+C to guit)	1Proje	PTN: 3	· 223	
-		CHECKPOINTS	master 1 * Restarting with stat	hon se	21-543	-154-	
	503	> HIDDEN ITEMS	master_1 * Debugger is active!	rvi	-937	733	
	41	> LOCAL HISTORY	master_1 * Debugger PIN: 321-543-937	○ ce\$ 🗌			
	× (⊗0≜0 占 🖯 Connect 🛛	3 : CodeStream 🔗 Live Share Blackbox Quokka Ln 21, Col 16 Sp	aces: 4 UTF-8 LF pip requirements	Go Live	😫 Spell ⊘	Prettier 🔊 🗘

Activit	ies	🌂 Visual Studio Code					23:41	🗘 أفريل 29			😑 fr	❤ ∦	ৰু) 🕂 100 %
						requiren	nents.txt - archiPi	roject - Visual Studio (Code				
	File B	dit Selection View Go	Run Terminal	l Help							<u>.</u>		
>_	CD	EXPLORER ····	≣ requirem	nents.txt $ imes$	🇬 news.py	🔅 nginx.conf	🗇 Dockerfile	Dockerfile.news	🗇 Dockerfile.weather	🗇 Dockerfile.nginx	👉 docker-co	ompose.yml	▷ □ …
_		✓ ARCHIPROJECT	python_service	> ≣ requiren	nents.txt								
	Q	> .history	5 Flask	==1.1.2	1 5 @								<u> </u>
		> .vscode	PROBLEMS OL	UTPUT DEBL	UG CONSOLE TER	AINAL SQL CONSOL	COMMENTS					+	~ ^ X
	مړ	> anotherproj											r≥sudo pvt
\mathbf{X}		> pychol_service	t.sh: ya	asmin ya Gwasm of	asmine@yasmine	-HP-ProBook-470	-G2:~/Desktop/ar	chiProject/python_s	ervice\$ sudo docker lo	gs python_service_ma	ster_1 -	Us	- ≥ bash pyt
	æ	docker-compose.vml	ing /d in	ne-HP [s	sudo] password	for yasmine:						roduc	► Sudo pyt
		✤ Dockerfile	ocker-	ProBo	* Serving Flas * Environment:	k app "master_a	ssistant" (lazy	loading)				tion WSGT	L > sudo pyt
	В	I Dockerfile.news	oint.d -0	G2:~/	WARNING: Thi	s is a developm	ent server. Do r	not use it in a prod	uction deployment.			serve	
		🗇 Dockerfile.nginx	vsubst	eskto /arch	* Debug mode:	tion WSGI serve	r instead.					r ins tead.	
	Ē	🗇 Dockerfile.weather	-on-te ya	asmin	* Running on h	ttp://0.0.0.0:3	001/ (Press CTRL	+C to quit)				* De	
		master_assistant.py	s.sh ir	ne-HP	* Restarting w * Debugger is	active!						ode:	
1	А	news.py	nginx -	ProBo	* Debugger PIN	: 321-543-937						on * Bu I	
		nginx.coni	/dock -0	G2:~/								nning	
	R	weather.py	er-ent De	eskto								on h	
		l succession p	t.sh:	Proya								/0.0.	
	-		Launch si	nine@								0.0:3	
			ocker- e-	-HP-P								(Pres	
	В		entryp ro	oBook								s CTR	
	0		/30-tu 2:	:~/De								o qui	
DEV			ne-wor s	ktop/								t) * Re	
4			ocesse ro	oject								start	
	\sim		s.sh /p	serv								ing w ith s	
			ya	asmin								tat	
+			/dock e	dyasm ne-HP								* De buage	
			rypoin -	ProBo								ris	
			Confia -(k-470 G2:~/								activ e!	
0		> OUTLINE	uratio De	eskto								* De	
	Ø	> TIMELINE	lete; if	Proje								r PIN	
R	0		ready ct	t/pyt								: 223	
	502	> HIDDEN ITEMS	art up	vi								733	
:::	41	> LOCAL HISTORY	• ce	e\$									
	>< (⊗0∆0 🔥 🖯 Connect 🤅	l⇔:CodeStream	S Live Share	Blackbox Quokka				Ln 21, Col 16 Spaces: 4 UT	F-8 LF pip requirements	🖗 Go Live 🗧	😸 Spell 🛛 🖉 Pi	rettier 📯 🗘

Activit	es	🗐 Visual Studio Code						🖨 fr 💎 🖁	🔹 🕩 🕩				
							requiren	nents.txt - archiPı	oject - Visual Studio C	Code			
	File E	dit Selection View Go	Run Term	ninal Help								5	
>_	Сŋ	EXPLORER ····	≣ req	uirements.txt	: 🗙 🍦 ne	ws.py	nginx.conf	🗇 Dockerfile	I Dockerfile.news	I Dockerfile.weather	🗇 Dockerfile.nginx	🗇 docker-compose.yml	
		✓ ARCHIPROJECT	python_ser	vice > ≣ req	uirements.tx	t					λu.		
	Q	> .history	6 Fl	ask==1.1.	2 ifv==1 5	0						L.	
	·	> .vscode	PROBLEMS	OUTPUT	DEBUG CONSC	DLE TERM	INAL SOL CONSOL	E COMMENTS					+ v ~ X
	م	> anotherproj											
	0	\sim python_service	t.sh:	ames}}	Do not	yasmin	e@yasmine-HP-P	roBook-470-G2:~/	Desktop/archiProject	t/python_			F Sudo pyt
	5	>pycache	Launch	nainy	use i	<pre>o servic</pre>	e\$	docke	r logs python_serv	ocker log			F Dash pyt
	Đ.	docker-compose.yml	ocker-	python	produ	yasmin	e@yasmine-HP-P	roBook-470-62:~/	Desktop/archiProject	t/python			F Sudo pyt
	Post	man Dockerfile	entryp	_servi	ction	 docket 	r logs python	0 S					⊆ Sudo pyc
	Ξ	Dockerfile.news	01nt.d /20-en	ce_new	ment	serv1	ce_master_2 -T	vasmine					
TE		Dockerfile.nginx	vsubst	python	Use	* Ser	ving Flask app	"master_assista	nt" (lazy loading)				
	ΓÖ	Remote Explorer yeather	-on-te	_servi	a pro	* Env	ironment: prod	uction	rver Do not use it	in a production deploy	vment		
_	π	master_assistant.py	s.sh	ther 1	n WSGI	Use	a production	WSGI server inst	ead.		ymerre.		
• 🥒	A	e news.py	nginx	python	serve	* Deb	ug mode: on	(0.0.0.0.0001 (Design (TDI) C to muid				
<u> </u>		g nginx.conr	/dock	_servi ce mas	ead.	* Run * Res	tarting with s	/0.0.0.0:3001/ (tat	Press CIRL+C to qui				
	R	= requirements.txt	er-ent	ter_1	* Deb	* Deb	ugger is activ	e!					
$\langle \cdot \rangle$		e weather.py	rypoin	python	ug mod	* Deb	ugger PIN: 223	-154-733					
			Launch	ce mas	* Run								
			ing /d	ter_2	ning o								
	В		ocker- entrvp	yasmin e@vasm	n nttp ://0.0								
			oint.d	ine-HP	.0.0:3								
DEV	\bigcirc		/30-tu	-ProBo	001/ (Press								
D.C.			ker-pr	-G2:	CTRL+C								
	Π		ocesse	yasmin	to qu								
\sim	\square		s.sn nginx	op/arc	* Res								
				yasmin	tartin								
-			/dock er-ent	e@yasm ine-HP	g with								
			rypoin	-ProBo	* Deb								
			t.sh:	ok-470	ugger								
0			uratio	Deskto	ive!								
D++	0		n comp	p/arch	* Deb								
	8		ready	ct/pvt	Ugger PIN: 3								
1000	~7~		for st	hon_se	21-543								
:::	201		art up	o ces	-937								
•••	× (⊗0∆0 ₈ > □Connect 0	⊒ : CodeStream	n 🔗 Live Sh	are Blackbo	x Quokka				Ln 21, Col 16 Spaces: 4 UT	F-8 LF pip requirements	🖗 Go Live 🛭 🍪 Spell 🖉 I	Prettier 🔊 🗘

Activitie	s ×1	Visual Studio Code				23:33 29	ثٍ أفريل 🤇			🖨 fr 💎 🖁	 + 100 %
_					requireme	ents.txt - archiPro	ject - Visual Studio Co	ode			
	ile Edit	t Selection View Go	Run Terminal Help								
	Ch	EXPLORER	🗉 requirements.txt 🗙 🌵 ne	ews.py	nginx.conf	🗇 Dockerfile	🗇 Dockerfile.news	I Dockerfile.weather	🗇 Dockerfile.nginx	🔷 docker-compose.yml	▷ □ …
		ARCHIPROJECT > .history > .vscode > anotherproj > python_service > _pycache docker-compose.yml Dockerfile Dockerfile.news Dockerfile.news Dockerfile.weather master_asistant.py news.py nginx.conf E requirements.txt	python_service > ≣ requirements.t: 6 Flask=11.2 7 Flask-Jsonpify==1.5 8 flask-requests==0.0 9 Flask-RESTful==0.3.(10 Flask-SQLAlchemy==2.1 11 idna==2.10 12 itsdangerous==1.1.0 13 Jinja2==2.11.2 14 MarkupSafe==1.1.1 15 pampy==0.3.0 16 pytz==2020.4 17 requests==2.25.1 18 six==1.15.0 19 SQLAlchemy==1.3.20 20 urllib3==1.26.3 21 Werkzeug==1.0.1	xt .0 .14 8 .4.4							
	B	🗬 weather.py	22						Cr	eate Environment	
	\bigcirc		PROBLEMS OUTPUT DEBUG CONS	SOLE TERMINAL	SQL CONSOLE	COMMENTS			> sud	o-python_service $+ \vee$	· … ∧ ×
	Д 		 yasmine@yasmine-HP-ProBook- [sudo] password for yasmine /snap/docker/2746/lib/pytho am. Therefore, support for from cryptography.hazmat. 	470-62:~/Desk e: on3.6/site-pac it is depreca backends impo	top/archiPro kages/parami ted in crypt rt default b	ject/python_ser ko/transport.py ography. The ne backend	vice\$ sudo docker-c :32: CryptographyDe xt release of crypt	compose upbuildsc precationWarning: Pyth ography (40.0) will be	ale master=2 on 3.6 is no longer the last to support	supported by the Pyt Python 3.6.	hon core te
		OUTLINE	Building master Sending build context to Do Step 1/6 : FROM python:3.8- > 8177e4b7168c Step 2/6 : COPY requirement	ocker daemon slim-buster ts.txt .	15.36kB						
-	(A)	TIMELINE	> 8e350dfa96eb Step 3/6 : RUN pip install	-r requiremen	ts.txt						
A. 		CHECKPOINTS HIDDEN ITEMS LOCAL HISTORY	> Running in 3ef852a671 Collecting aniso8601==8.1.0	17e							
	× ⊗0	▲ 0 🔄 🖯 Connect	🗟 : CodeStream 🛛 🧬 Live Share 🛛 Blackbo	ox Quokka				Ln 21, Col 16 Spaces: 4 UTF	-8 LF pip requirements	🖗 Go Live 🛛 🖓 Spell 🖉 P	Prettier 🔊 🗘

ctivities	Postm	an	فريل 29 23:44 🖞	😑 fr	💎 🖹 📣 🕯 100 %
_		ht	tp://localhost/weather?city=amsterdam - Team Workspace		
File E	Edit View	Help			
÷	→ Hor	ne Workspaces ~ API Network ~ Explore	Q Search Postman	🌀 🔒 Invite 🕸 🗘 🔇	Dpgrade V
**	68 0	Verview GET http://weather:3002/w GET http://localhost/weather	€ ● + ∞∞∞	No Environment	· · E
Collecti	htt	p://iocalhost/weather?city=amsterdam		🖺 Save 🗸	· 🥖 🗉 🕠
	GE	T v · http://localhost/weather?city=amsterdam			Send ~
Histor	Par Par y Que	ams • Authorization Headers (6) Body Pre-request Script Tes	its Settings		Cookies
) 20		Кеу	Value	Description	••• Bulk Edit
	~	city	amsterdam		
(]		Кеу	Value	Description	
	Pr 1 1 1 1 1	r Cookies Headers (5) Test Results* ietty Raw Preview Visualize JSON ∨ ⇒ 1 ** ** ** ** ** 1 ** ** ** ** ** 1 ** ** ** ** ** 2 ** ** ** ** ** 3 ** ** ** * <th></th> <th>G Status: 200 OK Time: 3.83 s Size: 861 B 🖺 Sav</th> <th>e as Example 🚥</th>		G Status: 200 OK Time: 3.83 s Size: 861 B 🖺 Sav	e as Example 🚥
	1	7 "temp": 281.41,			
					1.8.

Online Q Find and Replace Console

what does that json file mean?

"base": "stations" - This specifies the source of the weather data.

"clouds": {"all": 20} - This gives information about the cloud cover. In this case, there are "few clouds" with a coverage of 20%.

"cod": 200 - This is the HTTP status code returned by the API, indicating a successful response. "coord": {"lat": 52.374, "lon": 4.8897} - This provides the latitude and longitude of Amsterdam.

"dt": 1682782385 - This is the time of data calculation in Unix timestamp format.

"id": 2759794 - This is the ID of the city in OpenWeatherMap's database.

"main": {...} - This contains various temperature and pressure data. The "temp" field gives the current temperature in Kelvin, which is approximately 15 degrees Celsius.

"name": "Amsterdam" - This is the name of the city.

"sys": {...} - This contains various information about the location and time zone of Amsterdam.

"timezone": 7200 - This is the time zone offset in seconds from UTC.

"visibility": 10000 - This gives the visibility distance in meters.

"weather": [{...}] - This gives a description of the weather conditions in Amsterdam. In this case, there are "few clouds".

"wind": {...} - This gives information about the wind speed and direction in Amsterdam.

ties	🖉 Po	stman					🛱 أفريل 29 23:46		🖨 fr	マ 🔋 🔹 🕯 100 %
						http	p://localhost/news?country=gr - Team Wor	rkspace		- • •
File	Edit V	iew He	lp							
\leftarrow	\rightarrow	Home	Workspa	ces ~ API Network	Explore		Q Search Postman	🤶 🔑 Inv	ite 🕸 🗘 🌀	Upgrade ~
22	° (🕉 Overvie	w	GET http://localhost/	news?i 🔵 GET	http://localhost/weathe	+ 000		No Environment	~ 🗄
Collec) ctions	http://lo	calhost/nev	vs?country=gr					🖺 Save 🗸	
Environ	GET ~ http://localhost/news?country=gr									Send 🗸 🎲
Hist	D	Params • Query Pa	Author arams	ization Headers (6)	Body Pre-n	equest Script Tests S	Settings			Cookies
00	0	Ke	ey.			Valu	e	Description		••• Bulk Edit
0,	+	country								
		Ke	ev			Valu	e	Description		
	1	Body Co	ookies He	aders (5) Test Results				G Status: 200 OK Time: 2.04 s Siz	e: 20.51 KB 🖺 Save	as Example 🛛 🚥
		Pretty	Raw	Preview Visualize	JSON 🗸	==				G Q
		7		"publishedAt": "202	, 3-04-28T19:1	0:06Z",				-
		8		"source": {						
		9		"id": "google-r	ews",					
		10		"name": "Google	News"					
		12		}, "+i+le", "Στέιτ Ντι	πάρτμεντ. Εν	κοίθηκε η παροχή δυο μ	C-130 στου Ελλάδα - \"Κλειδώνουν\" τα Ε-3	5 - Capital dr"		
		13		"url": "https://new	s.google.com	/rss/articles/		o cupitur.gr ,		
				CBMie2h0dHBz0i8	vd3d3LmNhcG1	0YWwuZ3IvZXBpa2Fpcm90a	aXRhLzM3MTI2ODEvc3RlaXQtbnRpcGFydG11bnQtZV	Wdrcm10aG1rZS1pLXBhcm94aS1kdW8tYy0xMzAtc3Rpbi11b	GxhZGEta2x1aWRvbm9	1bi10YS1mLT
				M1L9IBhAFodHRwo	zovL3d3dy5j\	XBpdGFsLmdyL2VwaWthaX3	JvdG10YS8zNzEyNjgxL3N0ZW10LW50aXBhcnRtZW50	0LWVna3JpdGhpa2UtaS1wYXJveGktZHVvLWMtMTMwLXN0aW4	tZWxsYWRhLWtsZWlkb	25vdW4tdGEt
				Zi0zNS8_YW1wPXF	ydWU?oc=5",					
		14		"urlToImage": null						
		15	3	,						
		10	£	"author" . "Nowshare	+ <="					
		18		"content": null	L.gl ,					
~		19		"description": null						
33		20		"publishedAt": "200	3-04-28T19:1	0:05Z".				
\smile		20		publicant . Los	0 04 2012713	0.002 ,				





