
Contoso Chat Workshop

The guide that we followed, all credits to:
<https://nitya.github.io/contoso-chat/02-Setup/0-PreRequisites/>

My IDE

Visual Code Version 1.94.2

OS

MacOS 15.0.1 (24A348) - Apple M2

Section 01

Deployment

Step 01

Clone the Contoso chat repository

Unset

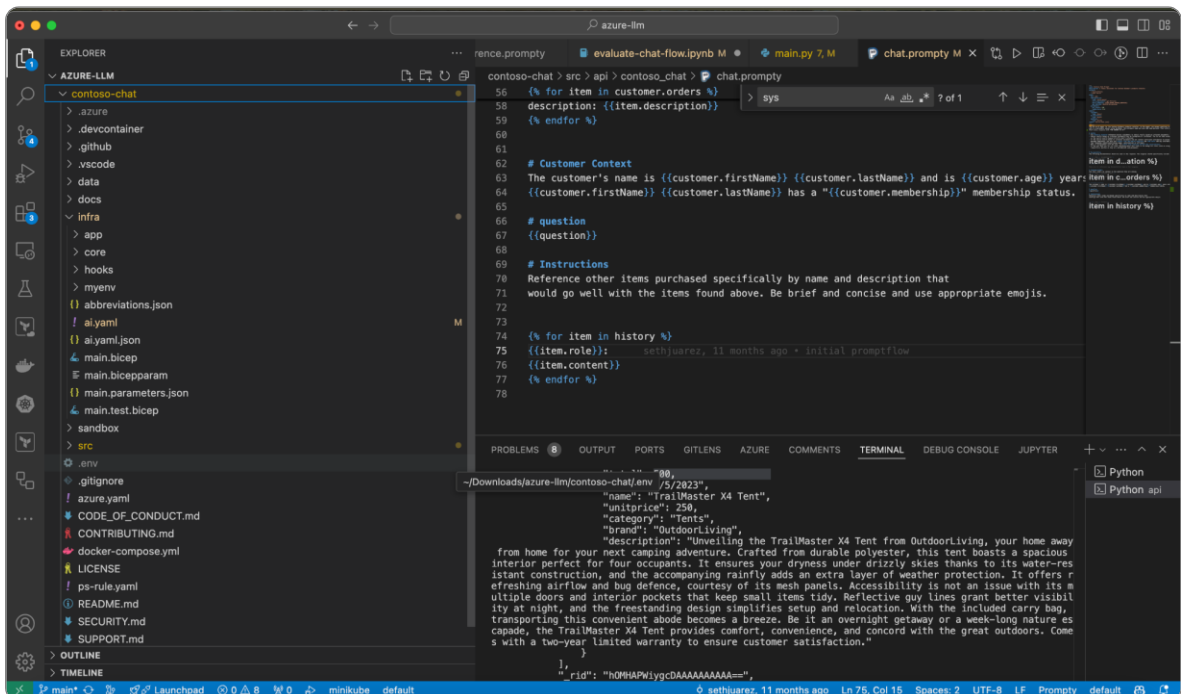
```
git clone https://github.com/Azure-Samples/contoso-chat.git
```

Step 02

Checkout to the aitour-WRK550 branch

Unset

```
git checkout aitour-WRK550
```



Step 03

Modify the GPT model version (only a single change is needed)

Open file
`./contoso-chat/infra/ai.yaml`

Option 01

Reduce the capacity of the gpt-4 1106-preview (**only 1 lab can be run at any given time**)

Update line 35th (the last line of the ai.yaml file) to set capacity to 8 (originally it is 10)

Unset

```
# yaml-language-server: $schema=ai.yaml.json
```

```
deployments:
```

- name: gpt-35-turbo
 model:
 format: OpenAI
 name: gpt-35-turbo
 version: "0613"
 sku:
 name: Standard
 capacity: 20
- name: text-embedding-ada-002
 model:
 format: OpenAI
 name: text-embedding-ada-002
 version: "2"
 sku:
 name: "Standard"
 capacity: 20
- name: gpt-4
 model:
 format: OpenAI
 name: gpt-4o
 version: "2024-05-13"
 sku:
 name: "GlobalStandard"
 capacity: 20
- name: gpt-4-evals
 model:
 format: OpenAI
 name: gpt-4
 version: "1106-Preview"
 sku:
 name: "Standard"
 capacity: 8

Option 02

Change gpt-4-evals to Global Standard model (**allow multiple lab/ to run at any given time**)

Unset

```
# yaml-language-server: $schema=ai.yaml.json
```

```
# yaml-language-server: $schema=ai.yaml.json
```

deployments:

- name: gpt-35-turbo
 model:
 format: OpenAI
 name: gpt-35-turbo
 version: "0613"
 sku:
 name: Standard
 capacity: 20
- name: text-embedding-ada-002
 model:
 format: OpenAI
 name: text-embedding-ada-002
 version: "2"
 sku:
 name: "Standard"
 capacity: 20
- name: gpt-4
 model:
 format: OpenAI
 name: gpt-4o
 version: "2024-05-13"
 sku:
 name: "GlobalStandard"
 capacity: 20
- name: gpt-4-evals
 model:
 format: OpenAI
 name: gpt-4
 version: "turbo-2024-04-09"
 sku:
 name: "GlobalStandard"
 capacity: 10

Step 04

Open terminal and navigate to [./contoso-chat directory](#)

Make sure all required tools are installed on your terminal/vs code

Unset

```
python --version  
az version  
azd version  
prompty --version  
fastapi --version
```

Step 05

Log in to your az cli and azd

Authenticate with Azure CLI (login with your KodeKloud azure account)

Unset

```
az login --use-device-code
```

Authenticate with Azure Developer CLI (login with your KodeKloud azure account)

Unset

```
azd auth login
```

Step 06

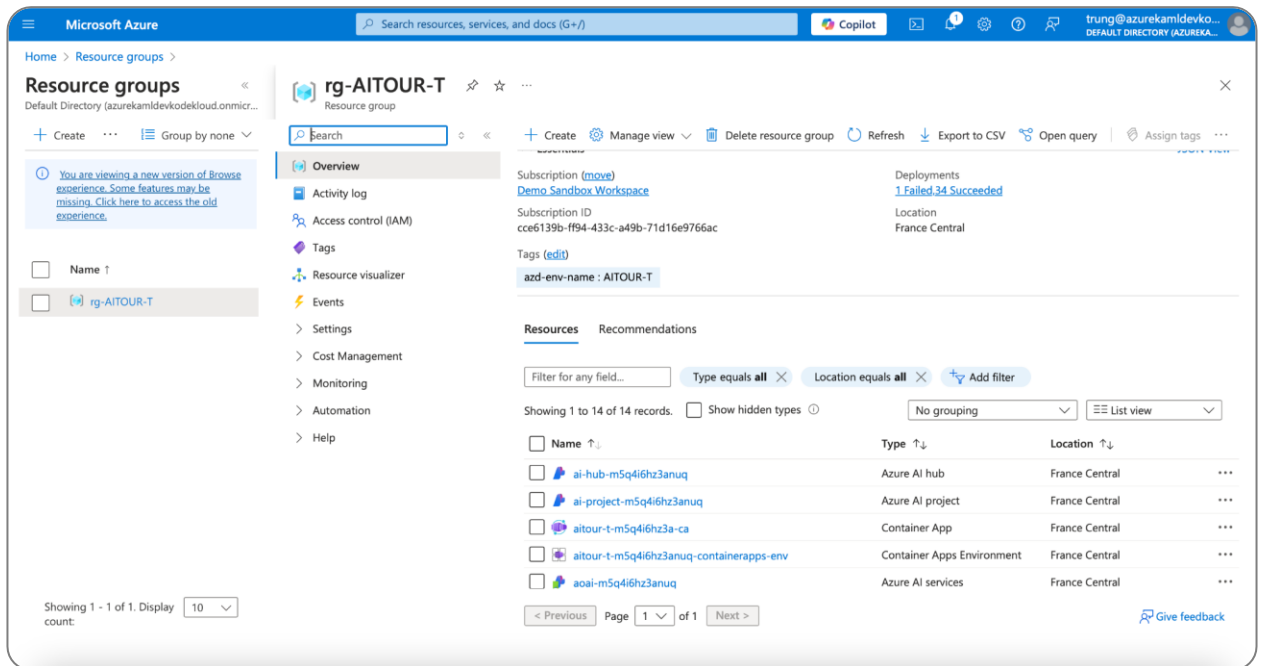
Deploy the infrastructure

Unset

```
azd up
? Enter a new environment name: AITOUR
? Select an Azure Subscription to use: 1. Demo Sandbox Workspace
(cce6139b-ff94-433c-a49b-71d16e9766ac)
? Select an Azure location to use: 20. (Europe) France Central (francecentral)
```

- **Subscription:** Demo Sandbox Workspace - cce6139b-ff94-433c-a49b-71d16e9766ac (Trainer is owner of this subscription)
- **Location:** (Europe) France Central (francecentral)
- **Environment name:** name it as your preference

Here the [web app](#) to showed that the deployment is successful:



Section 02

Verification

2.1

Explore App Infrastructure

Reference: <https://nitya.github.io/contoso-chat/03-Workshop-Build/03-infra/>

Verify 1: Validate Azure Cosmos DB is populated ☒

Verify 2: Validate Azure AI Search is populated ☒

Verify 3: Test the Deployed Container App ☒

Verify that data populated in cosmos DB after deployment

Microsoft Azure

Search resources, services, and docs (G+)

Copilot

Home > rg-AITOUR-T > srch-m5q4i6hz3anuq >

Search explorer

srch-m5q4i6hz3anuq

Index

contoso-products

Query options View

sleeping bag

Search

Results

```
1 {
2   "@odata.context": "https://srch-m5q4i6hz3anuq.search.windows.net/indexes('contoso-products')/$metadata#docs(*)",
3   "@odata.count": 5,
4   "@search.answers": [
5     {
6       "key": "7",
7       "text": "The sleeping bag takes comfort seriously, featuring a handy hood, ample room and padding, and a reli
8       "highlights": "The<em> sleeping bag</em> takes comfort seriously, featuring<em> a handy hood, ample room and
9       "score": 0.74267578125
10    }
11  ],
12  "value": [
13    {
14      "@search.score": 1.4185469,
15      "@search.rerankerScore": 3.6277573108673096,
16      "@search.captions": [
17        {
18          "text": "The sleeping bag takes comfort seriously, featuring a handy hood, ample room and padding, and a
19          "highlights": ""
20        }
21      ],
22      "id": "7",
23      "content": "Embrace the great outdoors in any season with the lightweight CozyNights Sleeping Bag! This durat
24      "fileName": "cozynights-sleeping-bag"
```

2.2

Ideate With Prompty

Reference: <https://nitya.github.io/contoso-chat/03-Workshop-Build/04-ideation/>

Step 1: Create a New Prompty ☒

Step 2: Update model configuration and basic info ☒

Step 3: Update prompt template ☒

Step 4: Update prompt template ☒

```
2024-10-24 14:04:07.445 [info] Loading /Users/trungtran/Downloads/azure-llm/contoso-chat/sandbox/.env
2024-10-24 14:04:22.877 [info] Calling https://aoai-m5q4i6hz3anuq.openai.azure.com//openai/deployments/gpt-4o-evals/
chat/completions?api-version=2023-12-01-preview
2024-10-24 14:04:35.514 [info] Hey there, Seth! The tent I believe you're referring to is the Alpine Explorer Tent.
This beauty is all about giving you a comfortable and private experience while you're out embracing the great
outdoors. 🏕️
```

It comes with a detachable divider that's perfect if you need to create separate spaces inside – maybe one for sleeping and another for storage or changing. Plus, it's got a bunch of mesh windows and adjustable vents to keep the air flowing, so you don't have to worry about it getting stuffy, especially on those warmer nights.

And you know what? It's designed to keep you dry because the tent is waterproof. A little rain won't dampen your adventure! Also, there's a nifty built-in gear loft for tucking away your gear. Talk about handy, right?

It's like your little slice of home in the wilderness, aimed to offer a balance of privacy, comfort, and practicality. Could be just the ticket for your next outdoor escape! 🌲

```
26 You are an AI assistant who helps people find information. As the assistant...
PROBLEMS OUTPUT PORTS GITLENS AZURE COMMENTS ... Promptly Output
chat/completions?api-version=2023-12-01-preview
2024-10-24 14:04:35.514 [info] Hey there, Seth! The tent I believe you're referring to is the Alpine Explorer Tent.
This beauty is all about giving you a comfortable and private experience while you're out embracing the great
outdoors. 🏕️

It comes with a detachable divider that's perfect if you need to create separate spaces inside – maybe one for
sleeping and another for storage or changing. Plus, it's got a bunch of mesh windows and adjustable vents to keep
the air flowing, so you don't have to worry about it getting stuffy, especially on those warmer nights.

And you know what? It's designed to keep you dry because the tent is waterproof. A little rain won't dampen your
adventure! Also, there's a nifty built-in gear loft for tucking away your gear. Talk about handy, right?

It's like your little slice of home in the wilderness, aimed to offer a balance of privacy, comfort, and
practicality. Could be just the ticket for your next outdoor escape! 🌲

2024-10-24 14:07:31.052 [info] Loading /Users/trungtran/Downloads/azure-llm/contoso-chat/sandbox/.env
2024-10-24 14:07:31.068 [info] Calling https://aoai-m5q4i6hz3anuq.openai.azure.com//openai/deployments/gpt-35-turbo/
chat/completions?api-version=2023-12-01-preview
2024-10-24 14:07:35.196 [info] Hello Nitya! Thank you for your interest in our tents. Our Alpine Explorer Tent is
designed with privacy, comfort, and convenience in mind. It features a detachable divider for added privacy,
numerous mesh windows, and adjustable vents to ensure proper ventilation. The tent is also waterproof, so you can
stay dry even in rainy weather. Additionally, it has a built-in gear loft for storing your outdoor essentials. In
short, it's a perfect blend of functionality and coziness, making it your second home in the heart of nature! 🏕️🌲
```

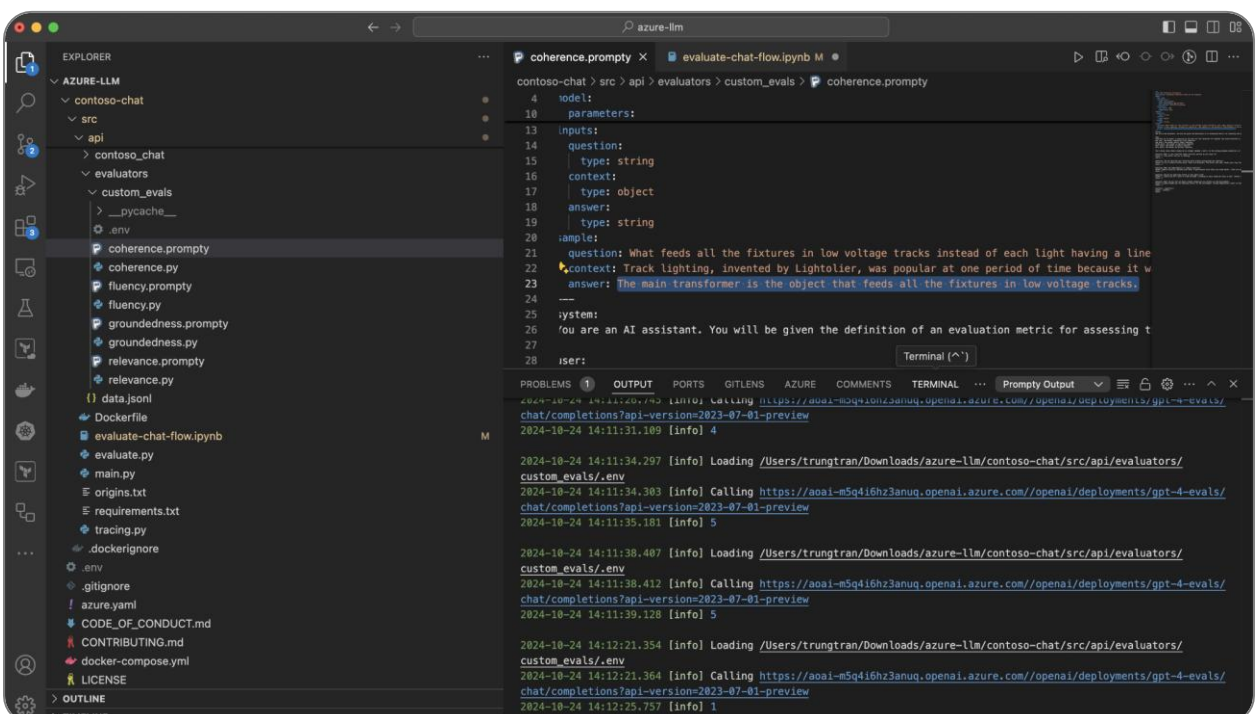
2.3

Evaluate with AI

Reference: <https://nitya.github.io/contoso-chat/03-Workshop-Build/05-evaluation/>

Step 2: Understand Evaluators ✓

Step 3: Run Batch Evaluation ✓



The screenshot shows a VS Code editor with a project named 'azure-llm'. The Explorer pane on the left shows the project structure, including a folder 'contoso-chat' with subfolders 'src' and 'api'. The 'api' folder contains a subfolder 'evaluators' with a file 'coherence.prompt'. The 'src' folder contains a subfolder 'evaluators' with a file 'coherence.prompt'. The 'src' folder also contains a file 'coherence.py'. The 'src' folder also contains a file 'fluency.prompt'. The 'src' folder also contains a file 'fluency.py'. The 'src' folder also contains a file 'groundedness.prompt'. The 'src' folder also contains a file 'groundedness.py'. The 'src' folder also contains a file 'relevance.prompt'. The 'src' folder also contains a file 'relevance.py'. The 'src' folder also contains a file 'data.json'. The 'src' folder also contains a file 'Dockerfile'. The 'src' folder also contains a file 'evaluate-chat-flow.ipynb'. The 'src' folder also contains a file 'evaluate.py'. The 'src' folder also contains a file 'main.py'. The 'src' folder also contains a file 'origins.txt'. The 'src' folder also contains a file 'requirements.txt'. The 'src' folder also contains a file 'tracing.py'. The 'src' folder also contains a file '.dockerignore'. The 'src' folder also contains a file '.env'. The 'src' folder also contains a file '.gitignore'. The 'src' folder also contains a file 'azure.yaml'. The 'src' folder also contains a file 'CODE_OF_CONDUCT.md'. The 'src' folder also contains a file 'CONTRIBUTING.md'. The 'src' folder also contains a file 'docker-compose.yml'. The 'src' folder also contains a file 'LICENSE'.

The terminal window at the bottom shows the output of the 'evaluate-chat-flow.ipynb' script. It displays the following information:

```
contoso-chat > src > api > evaluators > custom_evals > coherence.prompt
4 model:
10 parameters:
13 inputs:
14 question:
15 type: string
16 context:
17 type: object
18 answer:
19 type: string
20 sample:
21 question: What feeds all the fixtures in low voltage tracks instead of each light having a line
22 context: Track lighting, invented by Lightolier, was popular at one period of time because it w
23 answer: The main transformer is the object that feeds all the fixtures in low voltage tracks.
24
25 system:
26 you are an AI assistant. You will be given the definition of an evaluation metric for assessing t
27
28 user:
```

The terminal window also shows the output of the 'evaluate-chat-flow.ipynb' script, including the following information:

```
2024-10-24 14:11:31.109 [info] 4
2024-10-24 14:11:34.297 [info] Loading /Users/trungtran/Downloads/azure-llm/contoso-chat/src/api/evaluators/
custom_evals/.env
2024-10-24 14:11:34.303 [info] Calling https://aoai-m5q4i6hz3anuq.openai.azure.com//openai/deployments/gpt-4-evals/
chat/completions?api-version=2023-07-01-preview
2024-10-24 14:11:35.181 [info] 5
2024-10-24 14:11:38.407 [info] Loading /Users/trungtran/Downloads/azure-llm/contoso-chat/src/api/evaluators/
custom_evals/.env
2024-10-24 14:11:38.412 [info] Calling https://aoai-m5q4i6hz3anuq.openai.azure.com//openai/deployments/gpt-4-evals/
chat/completions?api-version=2023-07-01-preview
2024-10-24 14:11:39.128 [info] 5
2024-10-24 14:12:21.354 [info] Loading /Users/trungtran/Downloads/azure-llm/contoso-chat/src/api/evaluators/
custom_evals/.env
2024-10-24 14:12:21.364 [info] Calling https://aoai-m5q4i6hz3anuq.openai.azure.com//openai/deployments/gpt-4-evals/
chat/completions?api-version=2023-07-01-preview
2024-10-24 14:12:25.757 [info] 1
```

```

contoso-chat > src > api > evaluate-chat-flow.ipynb > M+ Get output from data and save to results jsonl file > # create main function for
Generate + Code + Markdown | Run All Restart Clear All Outputs Variables Python 3.11.10
[6] ✓ 12m 51.9s
...
6 [{"id": "7", "title": "CozyNights Sleeping Bag...",
7 [{"id": "8", "title": "Alpine Explorer Tent", ...
8 [{"id": "1", "title": "TrailMaster X4 Tent", '...'
9 [{"id": "3", "title": "Summit Breeze Jacket", ...
10 [{"id": "3", "title": "Summit Breeze Jacket", ...
11 [{"id": "1", "title": "TrailMaster X4 Tent", '...'

                                answer groundedness fluency \
0 Sure, Sarah Lee! 🧡🧡\n\nWe have two hiking jac...          5          4
1 Yes, we have climbing gear! 🧡\n\nTo complem...          5          4
2 Absolutely, Michael! 😊 We have a great selecti...          5          5
3 Yes, Emily Rodriguez, we have hiking boots ava...          5          4
4 For hiking, I recommend the following gear:\n...          5          5
5 The temperature rating of your sleeping bag de...          5          4
6 The temperature rating of the CozyNights Sleep...          5          4
7 The TrailMaster X4 Tent you purchased has a wa...          5          4
8 The TrailMaster X4 Tent's rainfly has a waterp...          5          3
9 Our return and exchange policy allows you to r...          1          4
10 Yes, the Summit Breeze Jacket is machine washa...          1          5
11 Hi Melissa! 😊 I'm sorry to hear that the tent ...          1          4

coherence relevance
0          4          3
1          4          3

PROBLEMS 1 OUTPUT PORTS GITLENS AZURE COMMENTS TERMINAL ... Jupyter
15:27:00.330 [info] Restart requested ~/Downloads/azure-llm/contoso-chat/src/api/evaluate-chat-flow.ipynb
15:27:00.357 [warn] Failed to get activated env vars for /opt/homebrew/bin/python3.11 in 17ms
15:27:00.358 [info] Process Execution: /opt/homebrew/bin/python3.11 -c "import ipykernel; print(ipykernel.
__version__); print("5dc3a68c-e34e-4080-9c3e-2a532b2ccb4d"); print(ipykernel.__file__)"
15:27:00.359 [info] Process Execution: /opt/homebrew/bin/python3.11 -m ipykernel_launcher --f=/Users/~/.Library/
Jupyter/runtime/kernel-v386af2cb5edb2aed854808ca0585359d31e3c5dcb.json
> cwd: //Users/~/.Downloads/azure-llm/contoso-chat/src/api
15:27:00.775 [info] Restarted 3944cd28-6c82-477f-92a0-b43cda47d652
Spaces: 3 Cell 8 of 9 default

```

2.4

Deploy with ACA (deploy app locally)

Reference: <https://nitya.github.io/contoso-chat/03-Workshop-Build/06-operationalization/>

Step 1: Explore the Codebase ✓

Step 2: Run the App Locally ✓

Step 3: Test our “chat” endpoint ✓

Step 4: Debug execution errors ✓

Step 5: Test changes at app server level ✓

Step 6: Test changes at prompt asset ✓

127.0.0.1:8000/docs#/default/create_response_api_create_response_post

FastAPI0.1.0OAS 3.1

/openapi.json

default

GET / Root

POST /api/create_response Create Response

Parameters

Try it out

Name	Description
question * required string (query)	<input type="text" value="question"/>
customer_id * required string (query)	<input type="text" value="customer_id"/>
chat_history * required string (query)	<input type="text" value="chat_history"/>

Responses

127.0.0.1:8000/docs#/default/create_response_api_create_response_post

Request URL

http://127.0.0.1:8000/api/create_response?question=What%20camping%20gear%20do%20I%20own%20already%3F&customer_id=36&chat_history=%5B%5D

Server response

CodeDetails

200

Response body

```
{
  "question": "What camping gear do I own already?",
  "answer": "Michael, based on your previous orders, you currently own the BaseCamp Folding Table and the TrailWalker Hiking Shoes. \ud83d\udcbb\nto complement your camping gear, I recommend considering the TrekMaster Camping Chair \ud83d\udcbb and the EcoFire Camping Stove \ud83d\udcbb. The TrekMaster Camping Chair offers comfort and durability, while the EcoFire Camping Stove provides a portable and eco-friendly cooking solution. \ud83d\udcbb\Let me know if there's anything else I can assist you with! \ud83d\udcbb",
  "context": [
    {
      "id": "12",
      "title": "TrekMaster Camping Chair",
      "content": "Gravitate towards comfort with the TrekMaster Camping Chair from CampBuddy. This trusty outdoor companion boasts sturdy construction using high-quality materials that promise durability and enjoyment for seasons to come. Impeccably lightweight and portable, it's designed to be your go-to seat whether you're camping, at a picnic, cheering at a sporting event, or simply relishing in your backyard pleasures. Beyond its foldable design ensuring compact storage and easy transportation, its ergonomic magic is in the details. An adjustable recline, padded seat and backrest, integrated cup holder, and side pockets ensure the greatest outdoor comfort. Weather resistant, easy to clean, and capable of supporting diverse body types, this versatile chair also comes with a carry bag, ready for your next adventure.",
      "url": "/products/trekmaster-camping-chair"
    },
    {
      "id": "3",
      "title": "Summit Breeze Jacket",
      "content": "Discover the joy of hiking with MountainStyle's Summit Breeze Jacket. This lightweight jacket is your perfect companion for outdoor adventures. Sporting a trail-ready, windproof design and a water-resistant fabric, it's ready to withstand any weather. The breathable polyester material and adjustable cuffs keep you comfortable, whether you're ascending a mountain or strolling through a park. And its sleek black color adds style to function. The jacket features a full-zip front closure, adjustable hood, and secure zippered pockets. Experience the comfort of its inner lining and the convenience of its packable design. Crafted for night trekkers too, the jacket has reflective elements for enhanced visibility. Rugged yet chic, the Summit Breeze Jacket is more than a hiking essential, it's the gear that inspires you to reach new heights. Choose a suitable jacket for your next adventure."
    }
  ]
}
```

Response headers

```
access-control-allow-credentials: true
access-control-allow-origin: *
content-length: 5785
content-type: application/json
date: Thu, 24 Oct 2024 08:55:50 GMT
server: uvicorn
```

Responses

127.0.0.1:8000/docs#/default/create_response_api_create_response_post

New Chrome available

Curl

curl -X 'POST' \n'http://127.0.0.1:8000/api/create_response?question=What%20camping%20stove%20should%20I%20get%3F&customer_id=1&chat_history=K5B%5D' \n-H 'accept: application/json' \n-d ''

Request URL

http://127.0.0.1:8000/api/create_response?question=What%20camping%20stove%20should%20I%20get%3F&customer_id=1&chat_history=K5B%5D

Server response

Code

Details

200

Response body

```
{\n  "question": "What camping stove should I get?\",\n  "answer": "THE ANSWER IS 42! Based on your needs, I recommend the EcoFire Camping Stove (product id: 6). 🔥 It's lightweight, durable, and offers versatile cooking methods. Plus, it's eco-friendly! 🌱 Happy cooking! 🍳\\n\\nTo complement your camping stove, you might also consider the Alpine Explorer Tent (product id: 1) for a spacious and comfortable shelter, and the TrailMaster X4 Tent (product id: 2) for a compact and convenient option. 🏕️\",\n  "context": [\n    {\n      "id": "6",\n      "title": "EcoFire Camping Stove",\n      "content": "Introducing EcoFire's Camping Stove, your ultimate companion for every outdoor adventure! This portable wonder is precision-engineered with a lightweight and compact design, perfect for capturing that spirit of wanderlust. Made from high-quality stainless steel, it promises durability and steadfast performance. This stove is not only fuel-efficient but also offers an easy, intuitive operation that ensures hassle-free cooking. Plus, it's flexible, accommodating a variety of cooking methods whether you're boiling, grilling, or simmering under the starry sky. Its stable construction, quick setup, and adjustable flame control make cooking a breeze, while safety features protect you from any potential mishaps. And did we mention it also includes an effective wind protector and a carry case for easy transportation? But that's not all! The EcoFire Camping Stove is eco-friendly, designed to minimize environmental impact. So get ready to enhance your camping experience and enjoy delicious outdoor feasts with this unique, versatile stove!",\n      "url": "/products/ecofire-camping-stove"\n    },\n    {\n      "id": "20",\n      "title": "CompactCook Camping Stove",\n      "content": "Step into the great outdoors with the CompactCook Camping Stove, a convenient, lightweight companion perfect for all your culinary camping needs. Boasting a robust design built for harsh environments, you can whip up meals anytime, anywhere. Its wind-resistant and fuel-versatile features coupled with an efficient cooking system ensures you won't have to worry about the elements or helpless taste buds while on adventures. The easy ignition technology and adjustable flame control make cooking a breeze. In the end, while its compact, foldable design makes packing a breeze, whether you're coming with family on hiking solo, this reliable, portable stove is an essential addition to your gear."}\n  ]\n}
```

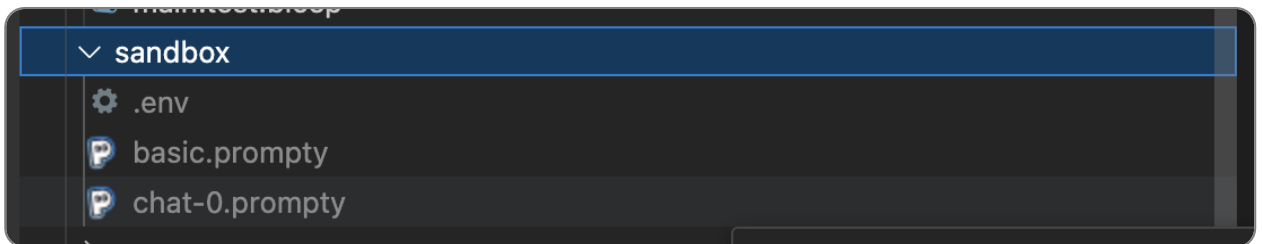
Response headers

```
access-control-allow-credentials: true\naccess-control-allow-origin: *\ncontent-length: 2712\ncontent-type: application/json
```

Section 03

Notes

1. There will be an `.env` file generated after `azd up` command successfully run, you need to copy it to `"sandbox"` folder if you want to try the prompt command.



2. You need to copy the `.env` file in the root directory to the `contoso-chat/src/api/evaluators/custom_evals` to able to run the prompt files

