

Tasks

Here is the list of tasks to do. All of the code and images must be updated via github.

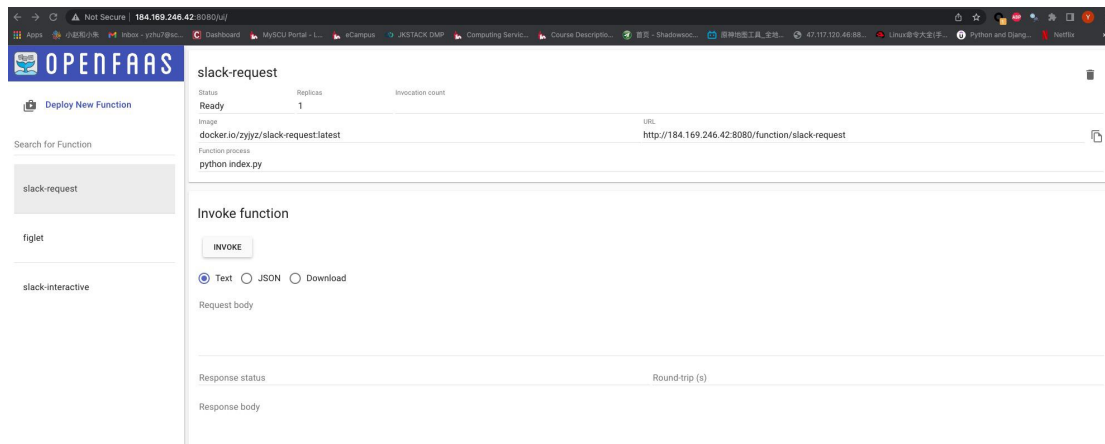
- Provide a screenshot of invoking the figlet function (10 pts)

```
ubuntu@ip-172-31-13-50:~/faasd$ echo "I love cloud computing!" | faas-cli invoke figlet
I love cloud
computing!
```

- Complete slack-request/handler.py (20 pt)
slack-request/handler.py is in the same directory of this file.
- Complete slack-interactive/handler.py (20 pt)
slack-interactive/handler.py is in the same directory of this file.
- Provide a screenshot of running the following command (10 pts)
 - sudo journalctl -u faasd --lines 40

```
ubuntu@ip-172-31-13-50:~/functions$ sudo journalctl -u faasd --lines 40
-- Logs begin at Sun 2022-04-24 23:05:20 UTC, end at Wed 2022-05-11 06:09:02 UTC. --
May 11 05:56:12 ip-172-31-13-50 faasd[118710]: 2022/05/11 05:56:12 - gateway
May 11 05:56:12 ip-172-31-13-50 faasd[118710]: 2022/05/11 05:56:12 - queue-worker
May 11 05:56:12 ip-172-31-13-50 faasd[118710]: Starting: basic-auth-plugin
May 11 05:56:12 ip-172-31-13-50 faasd[118710]: 2022/05/11 05:56:12 Created container: basic-auth-plugin
May 11 05:56:13 ip-172-31-13-50 faasd[118710]: 2022/05/11 05:56:13 basic-auth-plugin has IP: 10.62.0.2
May 11 05:56:13 ip-172-31-13-50 faasd[118710]: 2022/05/11 05:56:13 Task: basic-auth-plugin Container: basic-auth-plugin
May 11 05:56:13 ip-172-31-13-50 faasd[118710]: Starting: nats
May 11 05:56:13 ip-172-31-13-50 faasd[118710]: Creating local directory: /var/lib/faasd/nats
May 11 05:56:13 ip-172-31-13-50 faasd[118710]: 2022/05/11 05:56:13 Running nats with user: "65534"
May 11 05:56:13 ip-172-31-13-50 faasd[118710]: 2022/05/11 05:56:13 Created container: nats
May 11 05:56:13 ip-172-31-13-50 faasd[118710]: 2022/05/11 05:56:13 nats has IP: 10.62.0.3
May 11 05:56:13 ip-172-31-13-50 faasd[118710]: 2022/05/11 05:56:13 Task: nats Container: nats
May 11 05:56:13 ip-172-31-13-50 faasd[118710]: Starting: prometheus
May 11 05:56:13 ip-172-31-13-50 faasd[118710]: Creating local directory: /var/lib/faasd/prometheus
May 11 05:56:13 ip-172-31-13-50 faasd[118710]: 2022/05/11 05:56:13 Running prometheus with user: "65534"
May 11 05:56:13 ip-172-31-13-50 faasd[118710]: 2022/05/11 05:56:13 Created container: prometheus
May 11 05:56:13 ip-172-31-13-50 faasd[118710]: 2022/05/11 05:56:13 prometheus has IP: 10.62.0.4
May 11 05:56:13 ip-172-31-13-50 faasd[118710]: 2022/05/11 05:56:13 Task: prometheus Container: prometheus
May 11 05:56:13 ip-172-31-13-50 faasd[118710]: Starting: gateway
May 11 05:56:13 ip-172-31-13-50 faasd[118710]: 2022/05/11 05:56:13 Created container: gateway
May 11 05:56:13 ip-172-31-13-50 faasd[118710]: 2022/05/11 05:56:13 gateway has IP: 10.62.0.5
May 11 05:56:13 ip-172-31-13-50 faasd[118710]: 2022/05/11 05:56:13 Task: gateway Container: gateway
May 11 05:56:13 ip-172-31-13-50 faasd[118710]: Starting: queue-worker
May 11 05:56:14 ip-172-31-13-50 faasd[118710]: 2022/05/11 05:56:14 Created container: queue-worker
May 11 05:56:14 ip-172-31-13-50 faasd[118710]: 2022/05/11 05:56:14 queue-worker has IP: 10.62.0.6
May 11 05:56:14 ip-172-31-13-50 faasd[118710]: 2022/05/11 05:56:14 Task: queue-worker Container: queue-worker
May 11 05:56:14 ip-172-31-13-50 faasd[118710]: 2022/05/11 05:56:14 Supervisor init done in: 13 seconds
May 11 05:56:14 ip-172-31-13-50 faasd[118710]: 2022/05/11 05:56:14 Looking up IP for: "gateway"
May 11 05:56:14 ip-172-31-13-50 faasd[118710]: 2022/05/11 05:56:14 Resolver rebuilding map
May 11 05:56:14 ip-172-31-13-50 faasd[118710]: 2022/05/11 05:56:14 Resolver: "localhost"="127.0.0.1"
May 11 05:56:14 ip-172-31-13-50 faasd[118710]: 2022/05/11 05:56:14 Resolver: "faasd-provider"="10.62.0.1"
May 11 05:56:14 ip-172-31-13-50 faasd[118710]: 2022/05/11 05:56:14 Resolver: "basic-auth-plugin"="10.62.0.2"
May 11 05:56:14 ip-172-31-13-50 faasd[118710]: 2022/05/11 05:56:14 Resolver: "nats"="10.62.0.3"
May 11 05:56:14 ip-172-31-13-50 faasd[118710]: 2022/05/11 05:56:14 Resolver: "prometheus"="10.62.0.4"
May 11 05:56:14 ip-172-31-13-50 faasd[118710]: 2022/05/11 05:56:14 Resolver: "gateway"="10.62.0.5"
May 11 05:56:14 ip-172-31-13-50 faasd[118710]: 2022/05/11 05:56:14 Resolver: "queue-worker"="10.62.0.6"
May 11 05:56:14 ip-172-31-13-50 faasd[118710]: 2022/05/11 05:56:14 Looking up IP for: "prometheus"
May 11 05:56:14 ip-172-31-13-50 faasd[118710]: 2022/05/11 05:56:14 Proxy from: 127.0.0.1:9090, to: prometheus:9090 (10.62.0.4)
May 11 05:56:14 ip-172-31-13-50 faasd[118710]: 2022/05/11 05:56:14 faasd: waiting for SIGTERM or SIGINT
May 11 05:56:14 ip-172-31-13-50 faasd[118710]: 2022/05/11 05:56:14 Proxy from: 0.0.0.0:8080, to: gateway:8080 (10.62.0.5)
ubuntu@ip-172-31-13-50:~/functions$
```

- Provide a screenshot of your OpenFaaS gateway AFTER deploying figlet, slack-handler and slack-interactive functions (10 pts)



- Provide a screenshot of invoking slack-request and slack-interactive functions (10 pts)

```
ubuntu@ip-172-31-13-50:~$ echo "test" | faas-cli invoke slack-request
{"text": "Serverless Message", "attachments": [{"fields": [{"short": true, "value": "100", "title": "Amazing Level"}], "author_icon": "", "image_url": "https://avatars.githubusercontent.com/u/77255276", "author_name": "Yujie Zhu", "title": "The Awesome world of Cloud Computing! COEN 241"}, {"text": "COEN 241 is the most awesome class ever!.", "title": "About COEN 241"}, {"title": "Would you recommend COEN 241 to your friends?", "color": "#3AA3E3", "actions": [{"text": "Of Course!", "type": "button", "name": "recommend", "value": "recommend"}, {"text": "Most Definitely!", "type": "button", "name": "definitely", "value": "definitely"}], "callback_id": "response123", "fallback": "Would you recommend COEN 241 to your friends?", "attachment_type": "default"}]}
ubuntu@ip-172-31-13-50:~$ echo "test" | faas-cli invoke slack-interactive
{"attachments": [{"footer": "Slack Apps built on OpenFaas", "author_link": "https://github.com/ugzhu/COEN241", "color": "#36a64f", "text": "Head over to COEN 241", "title": "COEN 241", "ts": 123456789, "author_name": "", "title_link": "https://www.scu.edu/engineering/academic-programs/departments-of-computer-engineering/graduate/course-descriptions/", "image_url": "https://www.scu.edu/media/offices/umc/scu-brand-guidelines/visual-identity-amp-photography/visual-identity-toolkit/logos-amp-seals/Mission-Dont3.png", "response_type": "ephemeral", "replace_original": true, "footer_icon": "https://a.slack-edge.com/45901/marketing/lmg/rebrand/meta/slack_hash_256.png", "pretext": "Ahh yeah! Great choice, COEN 241 is absolutely amazing!", "fallback": "Required plain-text summary of the attachment.", "thumb_url": "https://www.scu.edu/engineering/academic-programs/departments-of-computer-engineering/graduate/course-descriptions/", "author_icon": "https://avatars.githubusercontent.com/u/77255276"}]}
```

Questions

- What is the command to invoke the slack-request function (4 pts)?
 - a) Via Curl
 - b) Via faas-cli**
- What is the output you see when you invoke the slack-request function? (2 pts)


```
{"text": "Serverless Message", "attachments": [{"fields": [{"short": true, "value": "100", "title": "Amazing Level"}], "author_icon": "", "image_url": "https://avatars.githubusercontent.com/u/77255276", "author_name": "Yujie Zhu", "title": "The Awesome world of Cloud Computing! COEN 241"}, {"text": "COEN 241 is the most awesome class ever!.", "title": "About COEN 241"}, {"title": "Would you recommend COEN 241 to your friends?", "color": "#3AA3E3", "actions": [{"text": "Of Course!", "type": "button", "name": "recommend", "value": "recommend"}, {"text": "Most Definitely!", "type": "button", "name": "definitely", "value": "definitely"}], "callback_id": "response123", "fallback": "Would you recommend COEN 241 to your friends?", "attachment_type": "default"}]}
```
- What is the command to invoke the slack-interactive function? (4 pts)
 - a) Via curl
 - b) Via faas-cli**
- What is the output you see when you invoke the slack-interactive function? (2 pts)

```
{"attachments": [{"footer": "Slack Apps built on OpenFaas", "author_link": "https://github.com/ugzhu/COEN241", "color": "#36a64f", "text": "Head over to COEN 241", "title": "COEN 241", "ts": 123456789, "author_name": "", "title_link": "https://www.scu.edu/engineering/academic-programs/departments-of-computer-engineering/graduate/course-descriptions/", "image_url": "https://www.scu.edu/media/offices/umc/scu-brand-guidelines/visual-identity-amp-photography/visual-identity-toolkit/logos-amp-seals/Mission-Dont3.png", "response_type": "ephemeral", "replace_original": true, "footer_icon": "https://a.slack-edge.com/45901/marketing/img/_rebrand/meta/slack_hash_256.png", "pretext": "Ahh yeah! Great choice, COEN 241 is absolutely amazing!", "fallback": "Required plain-text summary of the attachment.", "thumb_url": "https://www.scu.edu/engineering/academic-programs/departments-of-computer-engineering/graduate/course-descriptions/", "author_icon": "https://avatars.githubusercontent.com/u/77255276"}]}
```

- How would you pass different arguments to the functions? (4 pts)
 1. After calling “faas-cli invoke slack-interactive” or “faas-cli invoke slack-request”, type argument in command line to STDIN and stop with control+D.
 2. Using echo and pipe: “echo "test" | faas-cli invoke slack-interactive” or “echo "test" | faas-cli invoke slack-request”
- How would you change the slack-interactive function to react to different inputs? (4 pts)
 1. Using string: Comment out first two lines:
urlstring = urllib.unquote(req).decode('utf8').strip('payload=')
response = json.loads(urlstring)
If need to add input to data, just use req to represent the input string.
 2. Using JSON: Uncomment first two lines:
urlstring = urllib.unquote(req).decode('utf8').strip('payload=')
response = json.loads(urlstring)
There two line will parse input JSON object and response is a python dictionary with parsed JSON input data in it. This response can be added into data dictionary.
 3. Using other data type: Comment out first two lines:
urlstring = urllib.unquote(req).decode('utf8').strip('payload=')
response = json.loads(urlstring)
Then add own code to parse input and use it in data dictionary.

Extra Credit

Link to app:

<http://184.169.246.42:8080/function/slack-request>

<http://184.169.246.42:8080/function/slack-interactive>

Screenshot of running app in slack:

Only visible to you


Serverless Message

Yujie Zhu

The Awesome world of Cloud Computing! COEN 241 (23 kB) ▾

Amazing Level

100



About COEN 241

COEN 241 is the most awesome class ever!

Would you recommend COEN 241 to your friends?


Only visible to you

Ahh yeah! Great choice, COEN 241 is absolutely amazing!

COEN 241

Head over to COEN 241

Slack Apps built on OpenFaas · Nov 29th, 1973 (16 kB) ▾



Interactivity

On

Any interactions with shortcuts, modals, or interactive components (such as buttons, select menus, and datepickers) will be sent to a URL you specify. [Learn more.](#)

Request URL

`http://184.169.246.42:8080/function/slack-interactive`

Slack will send an HTTP POST request with information to this URL when users interact with a shortcut or interactive component.

Edit Command

Command ⓘ

Request URL ⓘ

Short Description

Usage Hint
Optionally list any parameters that can be passed.

Escape channels, users, and links sent to your app ☐
Unescaped: @user #general

Preview of Autocomplete Entry

Commands matching "yujie-request"

COEN241-HW2

/yujie-request

coen241 hw2

+

/yujie-request