

# HW2

## Chuandi Zhou


## 1.Tasks

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

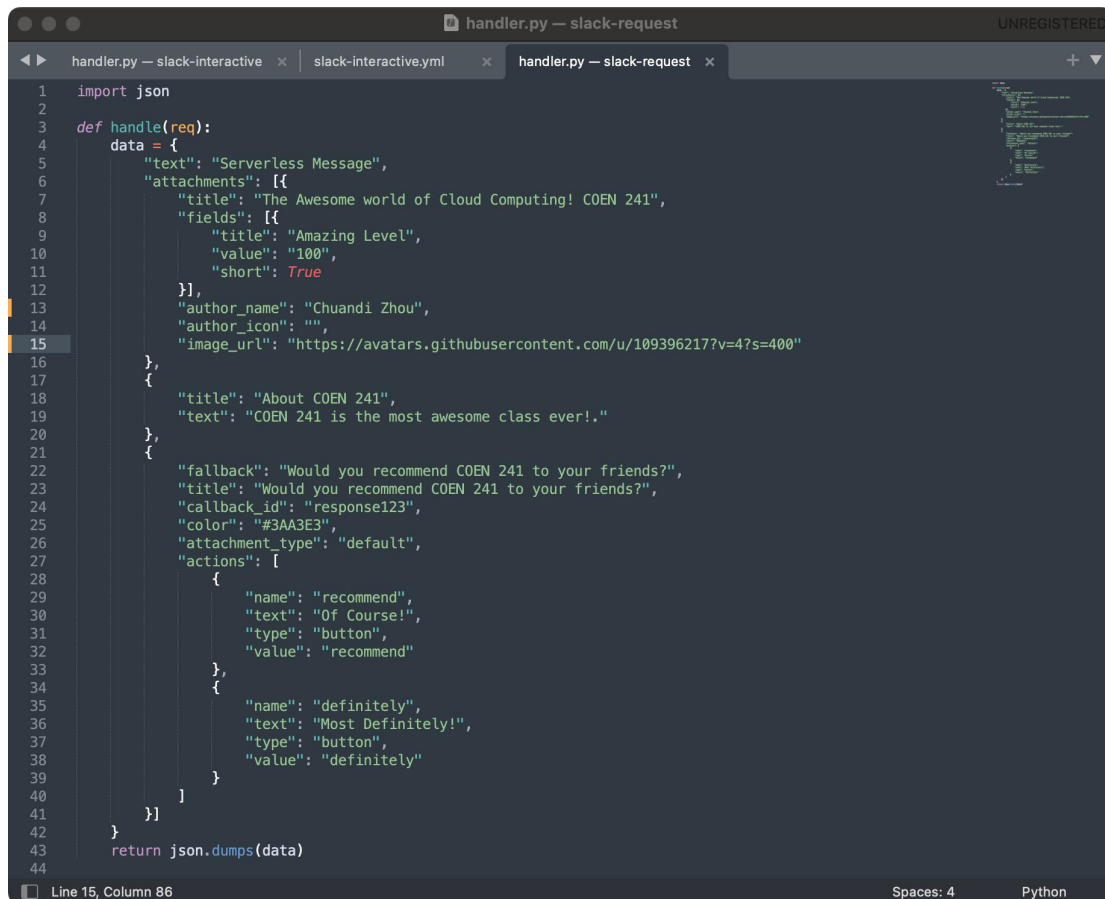
```
QEMU
```

```
doris@doris:~/faasd$  
doris@doris:~/faasd$ faas-cli store deploy figlet  
  
Deployed. 200 OK.  
URL: http://127.0.0.1:8080/function/figlet  
  
doris@doris:~/faasd$  
doris@doris:~/faasd$  
doris@doris:~/faasd$  
doris@doris:~/faasd$ faas-cli store inspect figlet  
Info for: Figlet  


|             |                                             |
|-------------|---------------------------------------------|
| Name        | figlet                                      |
| Description | Generate ASCII logos with the figlet CLI    |
| Image       | ghcr.io/openfaas/figlet:latest              |
| Process     | figlet                                      |
| Repo URL    | https://github.com/openfaas/store-functions |

  
doris@doris:~/faasd$ echo "Hello, Faas, world" | faas-cli invoke figlet  
  
doris@doris:~/faasd$
```

- Complete slack-request/handler.py (20 pt)

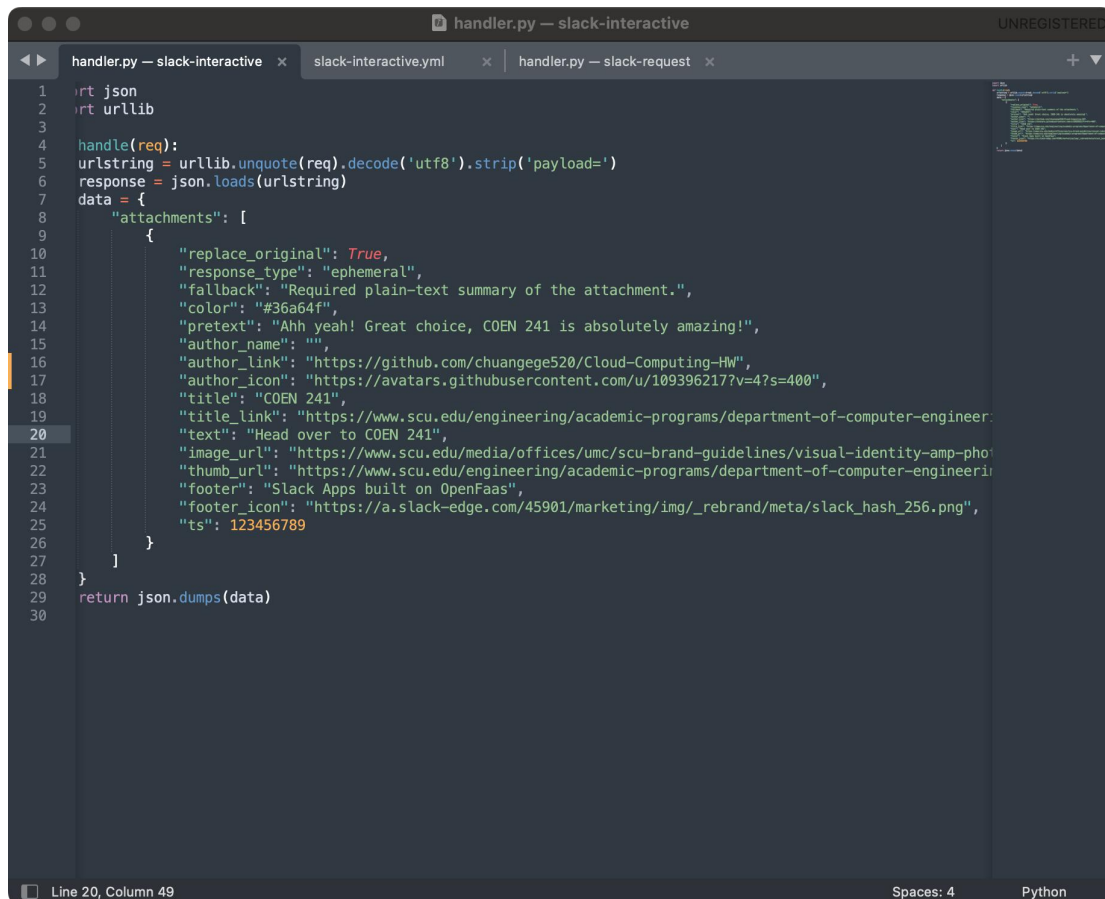


The screenshot shows a code editor window titled "handler.py — slack-request" with a tab for "slack-interactive.yml". The code is a Python function named "handle" that takes a request object "req" and returns a JSON response. The response is a list of attachments. The first attachment has a title "Serverless Message", a text "The Awesome world of Cloud Computing! COEN 241", and a field "Amazing Level" with a value of "100" and a short status of "True". The second attachment has a title "About COEN 241" and a text "COEN 241 is the most awesome class ever!". The third attachment is a fallback with a title "Would you recommend COEN 241 to your friends?", a callback ID "response123", a color "#3AA3E3", and two buttons: "recommend" and "definitely".

```
1 import json
2
3 def handle(req):
4     data = {
5         "text": "Serverless Message",
6         "attachments": [{
7             "title": "The Awesome world of Cloud Computing! COEN 241",
8             "fields": [{
9                 "title": "Amazing Level",
10                "value": "100",
11                "short": True
12            }],
13            "author_name": "Chuandi Zhou",
14            "author_icon": "",
15            "image_url": "https://avatars.githubusercontent.com/u/10939621?v=4?s=400"
16        },
17        {
18            "title": "About COEN 241",
19            "text": "COEN 241 is the most awesome class ever!."
20        },
21        {
22            "fallback": "Would you recommend COEN 241 to your friends?",
23            "title": "Would you recommend COEN 241 to your friends?",
24            "callback_id": "response123",
25            "color": "#3AA3E3",
26            "attachment_type": "default",
27            "actions": [
28                {
29                    "name": "recommend",
30                    "text": "Of Course!",
31                    "type": "button",
32                    "value": "recommend"
33                },
34                {
35                    "name": "definitely",
36                    "text": "Most Definitely!",
37                    "type": "button",
38                    "value": "definitely"
39                }
40            ]
41        }
42    ]
43    return json.dumps(data)
44
```

Line 15, Column 86 Spaces: 4 Python

- Complete slack-interactive/handler.py (20 pt)



```
1 import json
2 import urllib
3
4 def handle(req):
5     urlstring = urllib.unquote(req).decode('utf8').strip('payload=')
6     response = json.loads(urlstring)
7     data = {
8         "attachments": [
9             {
10                 "replace_original": True,
11                 "response_type": "ephemeral",
12                 "fallback": "Required plain-text summary of the attachment.",
13                 "color": "#36a64f",
14                 "pretext": "Ahh yeah! Great choice, COEN 241 is absolutely amazing!",
15                 "author_name": "",
16                 "author_link": "https://github.com/chuangage520/Cloud-Computing-HW",
17                 "author_icon": "https://avatars.githubusercontent.com/u/109396217?v=4?s=400",
18                 "title": "COEN 241",
19                 "title_link": "https://www.scu.edu/engineering/academic-programs/department-of-computer-engineering",
20                 "text": "Head over to COEN 241",
21                 "image_url": "https://www.scu.edu/media/offices/umc/scu-brand-guidelines/visual-identity-and-photography",
22                 "thumb_url": "https://www.scu.edu/engineering/academic-programs/department-of-computer-engineering",
23                 "footer": "Slack Apps built on OpenFaas",
24                 "footer_icon": "https://a.slack-edge.com/45901/marketing/img/_rebrand/meta/slack_hash_256.png",
25                 "ts": "123456789"
26             }
27         ]
28     }
29     return json.dumps(data)
30
```

Line 20, Column 49      Spaces: 4      Python

- Provide a screenshot of running the following command (10 pts)  
`sudo journalctl -u faasd --lines 40`

```
QEMU
-- Logs begin at Sat 2022-10-15 18:12:57 UTC, end at Wed 2022-11-02 05:34:48 UT>
Nov 02 00:28:06 doris faasd[2933]: 2022/11/02 00:28:06 - gateway
Nov 02 00:28:06 doris faasd[2933]: 2022/11/02 00:28:06 - queue-worker
Nov 02 00:28:06 doris faasd[2933]: Starting: basic-auth-plugin
Nov 02 00:28:06 doris faasd[2933]: 2022/11/02 00:28:06 Created container: basic>
Nov 02 00:28:06 doris faasd[2933]: 2022/11/02 00:28:06 basic-auth-plugin has IP>
Nov 02 00:28:06 doris faasd[2933]: 2022/11/02 00:28:06 Task: basic-auth-plugin >
Nov 02 00:28:06 doris faasd[2933]: Starting: nats
Nov 02 00:28:06 doris faasd[2933]: Creating local directory: /var/lib/faasd/nats
Nov 02 00:28:06 doris faasd[2933]: 2022/11/02 00:28:06 Running nats with user: >
Nov 02 00:28:06 doris faasd[2933]: 2022/11/02 00:28:06 Created container: nats
Nov 02 00:28:07 doris faasd[2933]: 2022/11/02 00:28:07 nats has IP: 10.62.0.3
Nov 02 00:28:07 doris faasd[2933]: 2022/11/02 00:28:07 Task: nats Contain>
Nov 02 00:28:07 doris faasd[2933]: Starting: prometheus
Nov 02 00:28:07 doris faasd[2933]: Creating local directory: /var/lib/faasd/pro>
Nov 02 00:28:07 doris faasd[2933]: 2022/11/02 00:28:07 Running prometheus with >
Nov 02 00:28:07 doris faasd[2933]: 2022/11/02 00:28:07 Created container: prome>
Nov 02 00:28:07 doris faasd[2933]: 2022/11/02 00:28:07 prometheus has IP: 10.62>
Nov 02 00:28:07 doris faasd[2933]: 2022/11/02 00:28:07 Task: prometheus >
Nov 02 00:28:07 doris faasd[2933]: Starting: gateway
Nov 02 00:28:07 doris faasd[2933]: 2022/11/02 00:28:07 Created container: gatew>
Nov 02 00:28:08 doris faasd[2933]: 2022/11/02 00:28:08 gateway has IP: 10.62.0.5
Nov 02 00:28:08 doris faasd[2933]: 2022/11/02 00:28:08 Task: gateway Con>
Nov 02 00:28:08 doris faasd[2933]: Starting: queue-worker
Nov 02 00:28:08 doris faasd[2933]: 2022/11/02 00:28:08 Created container: queue>
Nov 02 00:28:08 doris faasd[2933]: 2022/11/02 00:28:08 queue-worker has IP: 10.>
Nov 02 00:28:08 doris faasd[2933]: 2022/11/02 00:28:08 Task: queue-worker >
Nov 02 00:28:08 doris faasd[2933]: 2022/11/02 00:28:08 Supervisor init done in:>
Nov 02 00:28:08 doris faasd[2933]: 2022/11/02 00:28:08 Looking up IP for: "gate>
lines 1-29
```

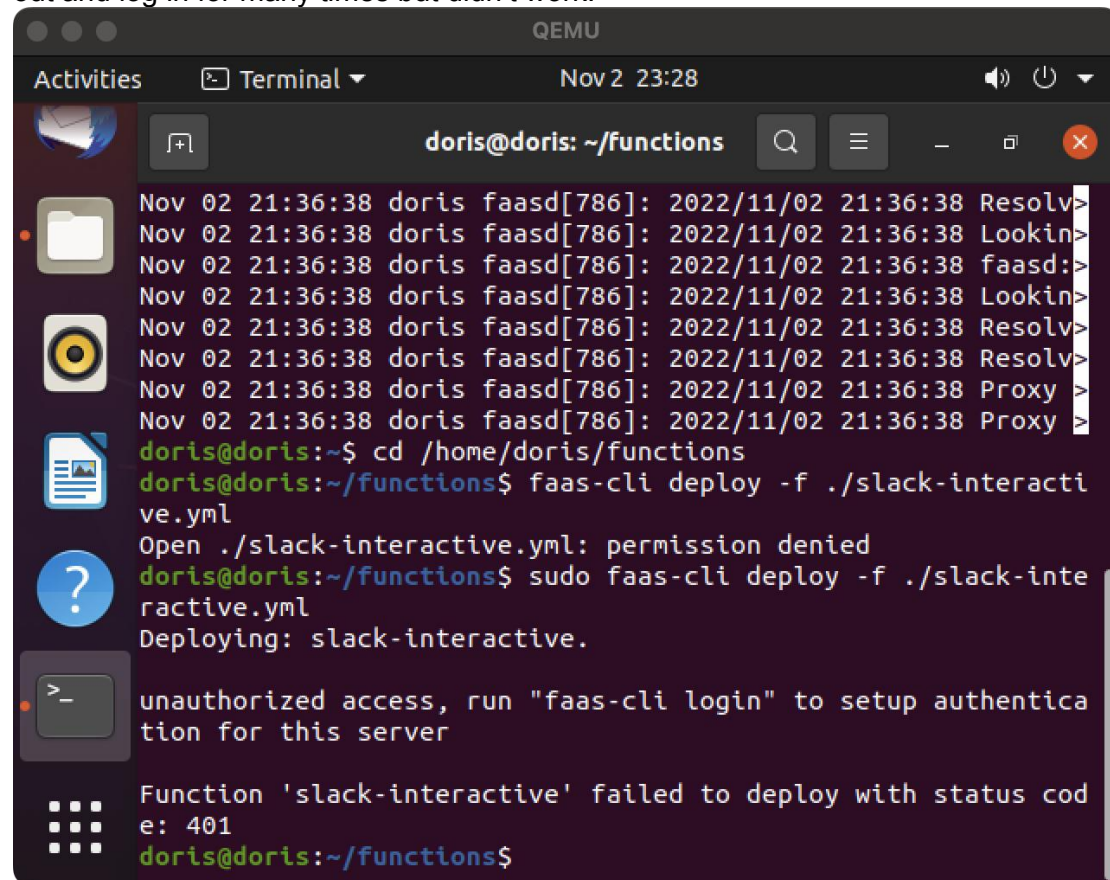
- Provide a screenshot of your OpenFaaS gateway AFTER deploying figlet, slack-handler and slack-interactive functions (10 pts)

deploy figlet

```
QEMU
Activities Terminal Nov 2 13:51
doris@doris: ~/faasd
tion for this server
Function 'slack-interactive' failed to deploy with status code: 401
doris@doris:~/functions$ cd ..
doris@doris:~$ cd faasd
doris@doris:~/faasd$ faas-cli store deploy figlet
Function figlet already exists, attempting rolling-update.
Deployed. 200 OK.
URL: http://127.0.0.1:8080/function/figlet
doris@doris:~/faasd$ faas-cli store inspect figlet
Info for: Figlet
Name      figlet
Description Generate ASCII logos with the figlet CLI
Image     ghcr.io/openfaas/figlet:latest
Process   figlet
Repo URL  https://github.com/openfaas/store-functions
doris@doris:~/faasd$
```

deploy slack-interactive, slack-request

Some problems happened, couldn't deploy images. I tried to reopen the Ubuntu, log out and log in for many times but didn't work.



```
QEMU
Activities Terminal Nov 2 23:28
doris@doris: ~/functions
Nov 02 21:36:38 doris faasd[786]: 2022/11/02 21:36:38 Resolv>
Nov 02 21:36:38 doris faasd[786]: 2022/11/02 21:36:38 Lookin>
Nov 02 21:36:38 doris faasd[786]: 2022/11/02 21:36:38 faasd:>
Nov 02 21:36:38 doris faasd[786]: 2022/11/02 21:36:38 Lookin>
Nov 02 21:36:38 doris faasd[786]: 2022/11/02 21:36:38 Resolv>
Nov 02 21:36:38 doris faasd[786]: 2022/11/02 21:36:38 Resolv>
Nov 02 21:36:38 doris faasd[786]: 2022/11/02 21:36:38 Proxy >
Nov 02 21:36:38 doris faasd[786]: 2022/11/02 21:36:38 Proxy >
doris@doris:~$ cd /home/doris/functions
doris@doris:~/functions$ faas-cli deploy -f ./slack-interacti
ve.yml
Open ./slack-interactive.yml: permission denied
doris@doris:~/functions$ sudo faas-cli deploy -f ./slack-inte
ractive.yml
Deploying: slack-interactive.
unauthorized access, run "faas-cli login" to setup authentica
tion for this server
Function 'slack-interactive' failed to deploy with status cod
e: 401
doris@doris:~/functions$
```

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

Same problem as above, can't deploy images so that can't invoke functions.

## 2. Questions

1. What is the command to invoke the slack-request function (4 pts)?

a. Via Curl

```
$ curl http://127.0.0.1:8080/function/slack-request
```

```
$ curl http://127.0.0.1:8080/function/slack-request -d '{"name":"Doris"}'
```

b. Via faas-cli

```
$ echo '{"name":"Doris"}' | faas-cli invoke slack-request
```

3. What is the output you see when you invoke the slack-request function? (2 pts)

Can't deploy and invoke.

3. What is the command to invoke the slack-interactive function? (4 pts)

a. Via curl

```
$ curl http://127.0.0.1:8080/function/slack-interactive
```

```
$ curl http://127.0.0.1:8080/function/slack-interactive -d '{"name": "Doris"}'
```

b. Via faas-cli

```
$ echo '{"name": "Doris"}' | faas-cli invoke slack-interactive
```

4. What is the output you see when you invoke the slack-interactive function? (2 pts)  
Can't deploy and invoke.

5. How would you pass different arguments to the functions? (4 pts)

a. via STDIN using -d:

```
$ curl http://127.0.0.1:8080/function/function -d <data string>
```

c. via echo

```
$ echo <data string> | faas-cli invoke function
```

6. How would you change the slack-interactive function to react to different inputs? (4 pts)

Take in string input and parse the output into JSON.