

Alex Te
COEN 241
Dr. Choi

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

[illegible]

a.

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

```

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": "alexte1",
14             "author_icon": "",
15             "image_url": "https://github.com/alexte1"
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)

```

a.

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

```

import json
import urllib

def handle(req):
    urlstring = urllib.unquote(req).decode('utf8').strip('payload=')
    response = json.loads(urlstring)
    data = {
        "attachments": [
            {
                "replace_original": True,
                "response_type": "ephemeral",
                "fallback": "Required plain-text summary of the attachment.",
                "color": "#36a64f",
                "pretext": "Ahh yeah! Great choice, COEN 241 is absolutely amazing!",
                "author_name": "",
                "author_link": "https://github.com/alexte1/COEN241-HW2",
                "author_icon": "https://github.com/alexte1",
                "title": "COEN 241",
                "title_link": "https://www.scu.edu/engineering/academic-programs/department-of-computer-engineering/graduate/course-descriptions/",
                "text": "Head over to COEN 241",
                "image_url": "https://www.scu.edu/media/offices/umc/scu-brand-guidelines/visual-identity-amp-photography/visual-identity-toolkit/logos-amp-",
                "thumb_url": "https://www.scu.edu/engineering/academic-programs/department-of-computer-engineering/graduate/course-descriptions/",
                "footer": "Slack Apps built on OpenFaas",
                "footer_icon": "https://a.slack-edge.com/45901/marketing/img/_rebrand/meta/slack_hash_256.png",
                "ts": 123456789
            }
        ]
    }

```

a.

4. Provide a screenshot of running the following command (10 pts)

a. `sudo journalctl -u faasd --lines 40`

```

-- Logs begin at Fri 2021-11-05 12:40:35 PDT, end at Fri 2021-11-05 14:31:07 PDT. --
Nov 05 12:49:07 ubuntu-ate-coen241 faasd[27411]: 2021/11/05 12:49:07 Start-up order:
Nov 05 12:49:07 ubuntu-ate-coen241 faasd[27411]: 2021/11/05 12:49:07 - nats
Nov 05 12:49:07 ubuntu-ate-coen241 faasd[27411]: 2021/11/05 12:49:07 - queue-worker
Nov 05 12:49:07 ubuntu-ate-coen241 faasd[27411]: 2021/11/05 12:49:07 - basic-auth-plugin
Nov 05 12:49:07 ubuntu-ate-coen241 faasd[27411]: 2021/11/05 12:49:07 - prometheus
Nov 05 12:49:07 ubuntu-ate-coen241 faasd[27411]: 2021/11/05 12:49:07 - gateway
Nov 05 12:49:07 ubuntu-ate-coen241 faasd[27411]: Starting: nats
Nov 05 12:49:07 ubuntu-ate-coen241 faasd[27411]: 2021/11/05 12:49:07 Created container: nats
Nov 05 12:49:16 ubuntu-ate-coen241 faasd[27411]: 2021/11/05 12:49:16 nats has IP: 10.62.0.2
Nov 05 12:49:16 ubuntu-ate-coen241 faasd[27411]: 2021/11/05 12:49:16 Task: nats Container: nats
Nov 05 12:49:16 ubuntu-ate-coen241 faasd[27411]: Starting: queue-worker
Nov 05 12:49:17 ubuntu-ate-coen241 faasd[27411]: 2021/11/05 12:49:17 Created container: queue-worker
Nov 05 12:49:20 ubuntu-ate-coen241 faasd[27411]: 2021/11/05 12:49:20 queue-worker has IP: 10.62.0.3
Nov 05 12:49:20 ubuntu-ate-coen241 faasd[27411]: 2021/11/05 12:49:20 Task: queue-worker Container: queue-worker
Nov 05 12:49:21 ubuntu-ate-coen241 faasd[27411]: Starting: basic-auth-plugin
Nov 05 12:49:21 ubuntu-ate-coen241 faasd[27411]: 2021/11/05 12:49:21 Created container: basic-auth-plugin
Nov 05 12:49:24 ubuntu-ate-coen241 faasd[27411]: 2021/11/05 12:49:24 basic-auth-plugin has IP: 10.62.0.4
Nov 05 12:49:24 ubuntu-ate-coen241 faasd[27411]: 2021/11/05 12:49:24 Task: basic-auth-plugin Container: basic-auth-plugin
Nov 05 12:49:24 ubuntu-ate-coen241 faasd[27411]: Starting: prometheus
Nov 05 12:49:25 ubuntu-ate-coen241 faasd[27411]: 2021/11/05 12:49:25 Created container: prometheus
Nov 05 12:49:28 ubuntu-ate-coen241 faasd[27411]: 2021/11/05 12:49:28 prometheus has IP: 10.62.0.5
Nov 05 12:49:28 ubuntu-ate-coen241 faasd[27411]: 2021/11/05 12:49:28 Task: prometheus Container: prometheus
Nov 05 12:49:28 ubuntu-ate-coen241 faasd[27411]: Starting: gateway
Nov 05 12:49:28 ubuntu-ate-coen241 faasd[27411]: 2021/11/05 12:49:28 Created container: gateway
Nov 05 12:49:33 ubuntu-ate-coen241 faasd[27411]: 2021/11/05 12:49:33 gateway has IP: 10.62.0.6
Nov 05 12:49:33 ubuntu-ate-coen241 faasd[27411]: 2021/11/05 12:49:33 Task: gateway Container: gateway
Nov 05 12:49:33 ubuntu-ate-coen241 faasd[27411]: 2021/11/05 12:49:33 Supervisor init done in: 1m36.4s
Nov 05 12:49:33 ubuntu-ate-coen241 faasd[27411]: 2021/11/05 12:49:33 Resolver rebuilding map
Nov 05 12:49:33 ubuntu-ate-coen241 faasd[27411]: 2021/11/05 12:49:33 Resolver: "localhost"="127.0.0.1"
Nov 05 12:49:33 ubuntu-ate-coen241 faasd[27411]: 2021/11/05 12:49:33 Resolver: "faasd-provider"="10.62.0.1"
Nov 05 12:49:33 ubuntu-ate-coen241 faasd[27411]: 2021/11/05 12:49:33 Resolver: "nats"="10.62.0.2"
Nov 05 12:49:33 ubuntu-ate-coen241 faasd[27411]: 2021/11/05 12:49:33 Resolver: "queue-worker"="10.62.0.3"
Nov 05 12:49:34 ubuntu-ate-coen241 faasd[27411]: 2021/11/05 12:49:33 Resolver: "basic-auth-plugin"="10.62.0.4"
Nov 05 12:49:34 ubuntu-ate-coen241 faasd[27411]: 2021/11/05 12:49:33 Resolver: "prometheus"="10.62.0.5"
Nov 05 12:49:34 ubuntu-ate-coen241 faasd[27411]: 2021/11/05 12:49:33 Resolver: "gateway"="10.62.0.6"

```

b.

```

ov 05 12:49:34 ubuntu-ate-coen241 faasd[2741]: 2021/11/05 12:49:33 Looking up IP for: "prometheus"
ov 05 12:49:34 ubuntu-ate-coen241 faasd[2741]: 2021/11/05 12:49:33 Proxy from: 127.0.0.1:9090, to:
ov 05 12:49:34 ubuntu-ate-coen241 faasd[2741]: 2021/11/05 12:49:33 faasd: waiting for SIGTERM or SI
ov 05 12:49:34 ubuntu-ate-coen241 faasd[2741]: 2021/11/05 12:49:33 Looking up IP for: "gateway"
ov 05 12:49:34 ubuntu-ate-coen241 faasd[2741]: 2021/11/05 12:49:33 Proxy from: 0.0.0.0:8080, to: ga
lines 6-41/41 (END)

```

c.

5. Provide a screenshot of your OpenFaaS gateway AFTER deploying figlet, slack-handler and slack-interactive functions (10 pts)
 - <issue with getting it to work on intel mac and qemu>
6. Provide a screenshot of invoking slack-request and slack-interactive functions (10 pts)

```

root@ubuntu-ate-coen241:/home/alex/hw2/functions# faas-cli invoke slack-request
Reading from STDIN - hit (Control + D) to stop.
{"name": "Alex"}
{"text": "Serverless Message", "attachments": [{"fields": [{"short": true, "value": "100", "title":
"Amazing Level"}], "author_icon": "", "image_url": "https://github.com/alexte1", "author_name": "a
exte1", "title": "The Awesome world of Cloud Computing! COEN241"}, {"text": "COEN 241 is the most aw
esome class ever!", "title": "About COEN241"}, {"title": "Would you recommend COEN 241 to your frien
ds?", "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 COEN241 to your frien
ds?", "attachment_type": "default"}]}

root@ubuntu-ate-coen241:/home/alex/hw2/functions# faas-cli invoke slack-interactive
Reading from STDIN - hit (Control + D) to stop.
{"name": "Alex"}
{"attachments": [{"footer": "Slack Apps built on OpenFaaS", "author_link": "https://github.com/alexte1/COEN241-HW2.git", "color": "#36a64f", "text": "Head over to COEN 241", "title": "COEN 241", "ts": "123456789", "author_name": "", "title_link": "https://www.scu.edu/engineering/academic-programs/department-of-computer-engineering/graduate/course-descriptions/", "image_url": "https://www.scu.edu/media/offices/unc/scu-brand-guidelines/visual-identity-and-photography/visual-identity-toolkit/logos-and-seals/Mission-Dont3.png", "response_type": "ephemeral", "replace_original": true, "footer_icon": "https://a.slack-edge.com/45901/marketing/img/rebrand/meta/slack_has_256.png", "pretext": "Ahh yea! Great choice, coen 241 is absolutely amazing!", "fallback": "Required plain-text summary of the attachment", "thumb_url": "https://www.scu.edu/engineering/academic-programs/department-of-computer-engineering/graduate/course-descriptions/", "author_icon": "https://github.com/alexte1"}]}

root@ubuntu-ate-coen241:/home/alex/hw2/functions#

```

Step 6

1. What is the command to invoke slack-request via:
 - a. Curl:
 - i. Curl localhost:8080/functions/slack-request
 - b. Faas-cli:
 - i. faas-cli invoke slack-request
2. What is the output you see when you invoke the slack-request function?
 - a. The output shows a json string which was formatted in slack-request/handler.py

```

root@ubuntu-ate-coen241:/home/alex/hw2/functions# faas-cli invoke slack-request
Reading from STDIN - hit (Control + D) to stop.
{"name": "Alex"}
{"text": "Serverless Message", "attachments": [{"fields": [{"short": true, "value": "100", "title":
"Amazing Level"}], "author_icon": "", "image_url": "https://github.com/alexte1", "author_name": "a
exte1", "title": "The Awesome world of Cloud Computing! COEN241"}, {"text": "COEN 241 is the most aw
esome class ever!", "title": "About COEN241"}, {"title": "Would you recommend COEN 241 to your frien
ds?", "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 COEN241 to your frien
ds?", "attachment_type": "default"}]}

root@ubuntu-ate-coen241:/home/alex/hw2/functions#

```

3. What is the command to invoke a slack-interactive function?
 - a. Curl:

- i. Curl localhost:8080/functions/slack-interactive
- b. Faas-cli:
 - i. Faas-cli invoke slack-interactive
- 4. What is the output:
 - a. The output is also a json string from slack-interactive/handler.py


```
root@ubuntu-ate-coen241:/home/alex/hw2/functions# faas-cli invoke slack-interactive
Reading from STDIN - hit (Control + D) to stop.
{"name": "Alex"}
{"attachments": [{"footer": "Slack Apps built on OpenFaas", "author_link": "https://github.com/alexte1/COEN241-HW2.git", "color": "#36a64f", "text": "Head over to COEN 241", "title": "COEN 241", "ts": 123456789, "author_name": "", "title_link": "https://www.scu.edu/engineering/academic-programs/department-of-computer-engineering/graduate/course-descriptions/", "image_url": "https://www.scu.edu/media/offices/unc/scu-brand-guidelines/visual-identity-amp-photography/visual-identity-toolkit/logos-and-seals/Mission-Dont3.png", "response_type": "ephemeral", "replace_original": true, "footer_icon": "https://a.slack-edge.com/45901/marketing/img/_rebrand/meta/slack_has_256.png", "pretext": "Ahh yea! Great choice, coen 241 is absolutely amazing!", "fallback": "Required plain-text summary of the attachment", "thumb_url": "https://www.scu.edu/engineering/academic-programs/department-of-computer-engineering/graduate/course-descriptions/", "author_icon": "https://github.com/alexte1"}]}
```
 - b.
- 5. How would you pass arguments to functions
 - a. Passing in via stdin with a json formatted string. You can also pass it in via a echo and pipe command as we did when we invoked the faas figlet function.
- 6. How would you change the slack-interactive function to react to different inputs?
 - a. You can change the slack-interactive function to react to different inputs by parsing the user json input (when we are invoking the function) and write some code to react to certain commands.