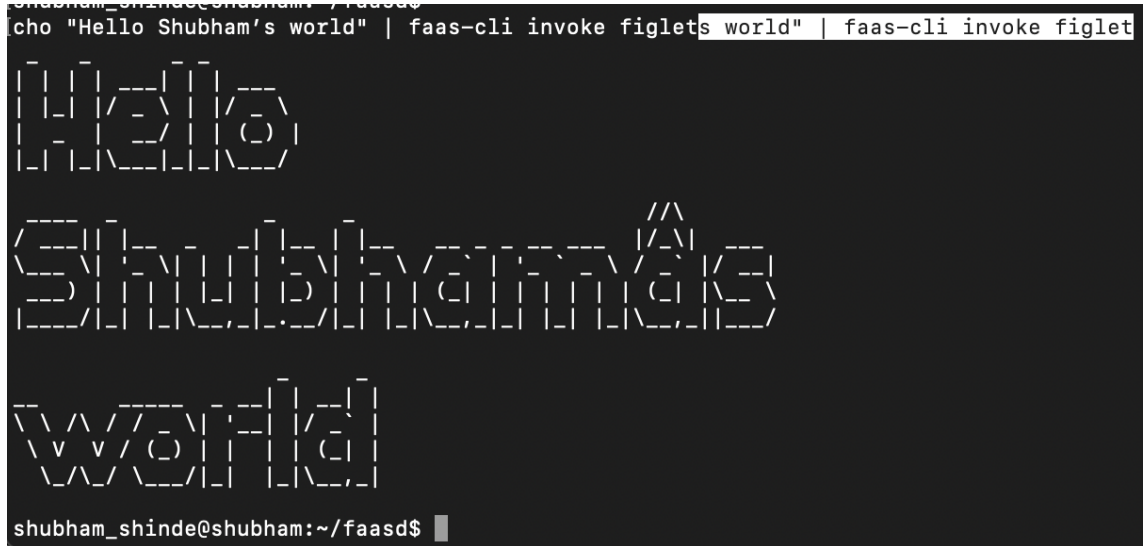


HW2 Report

Tasks (80 pts)

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

```
shubham_shinde@shubham:~/faas$ echo "Hello Shubham's world" | faas-cli invoke figlets world" | faas-cli invoke figlet
```



```
shubham_shinde@shubham:~/faas$
```

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

```

[shubham_shinde@shubham:~/functions/slack-request$ cat handler.py
import json
def handle(req):
    data = {
        "text": "Serverless Message",
        "attachments": [{
            "title": "The Awesome world of Cloud Computing! COEN 241",
            "fields": [{
                "title": "Amazing Level",
                "value": "100",
                "short": True
            }],
            "author_name": "Shubham Shinde",
            "author_icon": "",
            "image_url": "https://github.com/shubhamshinde245.png"
        },
        {
            "title": "About COEN 241",
            "text": "COEN 241 is my favourite class and I enjoy it!."
        },
        {
            "fallback": "Would you recommend COEN 241 to your friends?"
            "title": "Would you recommend COEN 241 to your friends?",
            "callback_id": "response123",
            "color": "#3AA3E3",
            "attachment_type": "default",
            "actions": [
                {
                    "name": "recommend",
                    "text": "Of Course!",
                    "type": "button",
                    "value": "recommend"
                },
                {
                    "name": "definitely",
                    "text": "Most Definitely!",
                    "type": "button",
                    "value": "definitely"
                }
            ]
        }
    ]
}
return json.dumps(data)

shubham_shinde@shubham:~/functions/slack-request$ █

```

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

```

shubham_shinde@shubham:~/functions/slack-interactive$ cat handler.py
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": "Yes! That's an amazing choice, COEN 241 is amazing!",
                "author_name": "",
                "author_link": "https://github.com/shubhamshinde245/COEN-241-Cloud-Computing.git",
                "author_icon": "https://github.com/shubhamshinde245.png",
                "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-seals/Mission-Dont3.png",
                "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/46981/marketing/img/_rebrand/meta/slack_hash_256.png",
                "ts": 123456789
            }
        ]
    }
    return json.dumps(data)
shubham_shinde@shubham:~/functions/slack-interactive$ █

```

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

sudo journalctl -u faasd --lines 40

```

shubham_shinde@shubham:~/functions/slack-request$ sudo journalctl -u faasd --lines 40
[sudo] password for shubham_shinde:
Feb 17 22:12:11 shubham faasd[627]: 2023/02/17 22:12:11 - gateway
Feb 17 22:12:11 shubham faasd[627]: 2023/02/17 22:12:11 - queue-worker
Feb 17 22:12:11 shubham faasd[627]: Starting: basic-auth-plugin
Feb 17 22:12:11 shubham faasd[627]: 2023/02/17 22:12:11 Created container: basi>
Feb 17 22:12:12 shubham faasd[627]: 2023/02/17 22:12:12 basic-auth-plugin has IP>
Feb 17 22:12:12 shubham faasd[627]: 2023/02/17 22:12:12 Task: basic-auth-plugin>
Feb 17 22:12:12 shubham faasd[627]: Starting: nats
Feb 17 22:12:12 shubham faasd[627]: Creating local directory: /var/lib/faasd/na>
Feb 17 22:12:12 shubham faasd[627]: 2023/02/17 22:12:12 Running nats with user:>
Feb 17 22:12:12 shubham faasd[627]: 2023/02/17 22:12:12 Created container: nats
Feb 17 22:12:12 shubham faasd[627]: 2023/02/17 22:12:12 nats has IP: 10.62.0.3
Feb 17 22:12:12 shubham faasd[627]: 2023/02/17 22:12:12 Task: nats          Conta>
Feb 17 22:12:12 shubham faasd[627]: Starting: prometheus
Feb 17 22:12:12 shubham faasd[627]: Creating local directory: /var/lib/faasd/pr>
Feb 17 22:12:12 shubham faasd[627]: 2023/02/17 22:12:12 Running prometheus with>
Feb 17 22:12:12 shubham faasd[627]: 2023/02/17 22:12:12 Created container: prom>
Feb 17 22:12:12 shubham faasd[627]: 2023/02/17 22:12:12 prometheus has IP: 10.6>
Feb 17 22:12:12 shubham faasd[627]: 2023/02/17 22:12:12 Task: prometheus      >
Feb 17 22:12:12 shubham faasd[627]: Starting: gateway
Feb 17 22:12:12 shubham faasd[627]: 2023/02/17 22:12:12 Created container: gate>
Feb 17 22:12:12 shubham faasd[627]: 2023/02/17 22:12:12 gateway has IP: 10.62.0>
Feb 17 22:12:12 shubham faasd[627]: 2023/02/17 22:12:12 Task: gateway        Co>
Feb 17 22:12:12 shubham faasd[627]: Starting: queue-worker
Feb 17 22:12:12 shubham faasd[627]: 2023/02/17 22:12:12 Created container: queu>
Feb 17 22:12:12 shubham faasd[627]: 2023/02/17 22:12:12 queue-worker has IP: 10>
Feb 17 22:12:12 shubham faasd[627]: 2023/02/17 22:12:12 Task: queue-worker    >
Feb 17 22:12:12 shubham faasd[627]: 2023/02/17 22:12:12 Supervisor init done in>
Feb 17 22:12:12 shubham faasd[627]: 2023/02/17 22:12:12 Looking up IP for: "pro>
Feb 17 22:12:12 shubham faasd[627]: 2023/02/17 22:12:12 Resolver rebuilding map
Feb 17 22:12:12 shubham faasd[627]: 2023/02/17 22:12:12 Looking up IP for: "gat>
Feb 17 22:12:12 shubham faasd[627]: 2023/02/17 22:12:12 faasd: waiting for SIGT>
Feb 17 22:12:12 shubham faasd[627]: 2023/02/17 22:12:12 Resolver: "localhost"=>
Feb 17 22:12:12 shubham faasd[627]: 2023/02/17 22:12:12 Resolver: "faasd-provid>
Feb 17 22:12:12 shubham faasd[627]: 2023/02/17 22:12:12 Resolver: "basic-auth-p>
Feb 17 22:12:12 shubham faasd[627]: 2023/02/17 22:12:12 Resolver: "nats"="10.62>
Feb 17 22:12:12 shubham faasd[627]: 2023/02/17 22:12:12 Resolver: "prometheus">
Feb 17 22:12:12 shubham faasd[627]: 2023/02/17 22:12:12 Resolver: "gateway"="10>
Feb 17 22:12:12 shubham faasd[627]: 2023/02/17 22:12:12 Resolver: "queue-worker>
Feb 17 22:12:12 shubham faasd[627]: 2023/02/17 22:12:12 Proxy from: 0.0.0.0:808>
Feb 17 22:12:13 shubham faasd[627]: 2023/02/17 22:12:13 Proxy from: 127.0.0.1:9>
shubham_shinde@shubham:~/functions/slack-request$ █

```

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

```
[shubham_shinde@shubham:~$ faas-cli store deploy figlet
Function figlet already exists, attempting rolling-update.
```

```
Deployed. 200 OK.
```

```
URL: http://127.0.0.1:8080/function/figlet
```

```
[shubham_shinde@shubham:~$ 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

```
[shubham_shinde@shubham:~$ sudo DOCKER_BUILDKIT=1 faas-cli push -f ./slack-interactive.ymleract
[0] > Pushing slack-interactive [shubhamshinde245/slack-interactive:latest]
The push refers to repository [docker.io/shubhamshinde245/slack-interactive]
429e046c7ed9: Pushed
```

```
[shubham_shinde@shubham:~/functions$ faas-cli deploy -f ./slack-interactive.yml
Deploying: slack-interactive.
```

```
Deployed. 200 OK.
```

```
URL: http://127.0.0.1:8080/function/slack-interactive
```

```

The push refers to repository [docker.io/shubhamshinde245/slack-request]
b37b794c54b9: Pushed
3e0f89783c6d: Pushed
5f70bf18a086: Mounted from shubhamshinde245/slack-interactive
972ccbe95459: Mounted from shubhamshinde245/slack-interactive
52c1df2630a9: Mounted from shubhamshinde245/slack-interactive
b9c1e77e4c2f: Mounted from shubhamshinde245/slack-interactive
9462b0c5fcdd: Mounted from shubhamshinde245/slack-interactive
1da78b22e2bb: Mounted from shubhamshinde245/slack-interactive
430d12bfe7fd: Mounted from shubhamshinde245/slack-interactive
c7fb241b93e4: Mounted from shubhamshinde245/slack-interactive
0c3f4a77f2c6: Mounted from shubhamshinde245/slack-interactive
ecf456a836a6: Mounted from shubhamshinde245/slack-interactive
174d2908f5db: Mounted from shubhamshinde245/slack-interactive
708b1f29901f: Mounted from shubhamshinde245/slack-interactive
caa2831b18dd: Mounted from shubhamshinde245/slack-interactive
15714e3be781: Mounted from shubhamshinde245/slack-interactive
08ad508c310e: Mounted from shubhamshinde245/slack-interactive
ec8356a34759: Mounted from shubhamshinde245/slack-interactive
294ac687b5fc: Mounted from shubhamshinde245/slack-interactive
latest: digest: sha256:5edb31f9f95f9e0dd2b8704cacdc07d599ef3469e7cf17ff12d8bdee
: 4693
[0] < Pushing slack-request [shubhamshinde245/slack-request:latest] done.
[0] Worker done.
[shubham_shinde@shubham:~/functions$ faas-cli deploy -f ./slack-request.yml
Deploying: slack-request.

Deployed. 200 OK.
URL: http://127.0.0.1:8080/function/slack-request

```

shubhamshinde245
Search by repository name
All Content
Create repository

shubhamshinde245 / slack-request
Contains: Image | Last pushed: a minute ago

Not Scanned
0
0
Public

shubhamshinde245 / slack-interactive
Contains: Image | Last pushed: 5 minutes ago

Not Scanned
0
1
Public

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

```
shubham_shinde@shubham:~/functions$ curl -d '{"Hello": "COEN 241"}' http://127.1.0.1:8080/function/slack-interactive
{"attachments": [{"footer": "Slack Apps built on OpenFaas", "author_link": "https://github.com/shubhamshinde245/COEN-241-Cloud-Computing.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/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": "Yes! That's an amazing choice, COEN 241 is 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/shubhamshinde245.png"}]}
shubham_shinde@shubham:~/functions$
shubham_shinde@shubham:~/functions$
shubham_shinde@shubham:~/functions$
shubham_shinde@shubham:~/functions$
shubham_shinde@shubham:~/functions$ curl -d '{"Hello": "COEN 241"}' http://127.1.0.1:8080/function/slack-interactive
{"attachments": [{"footer": "Slack Apps built on OpenFaas", "author_link": "https://github.com/shubhamshinde245/COEN-241-Cloud-Computing.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/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": "Yes! That's an amazing choice, COEN 241 is 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/shubhamshinde245.png"}]}
shubham_shinde@shubham:~/functions$
```

Questions (20 pts)

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

- Via Curl - `curl -d '{"Hello": "COEN 241"}' http://127.1.0.1:8080/function/slack-request`
- Via faas-cli - `faas-cli invoke slack-request`

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

```
shubham_shinde@shubham:~/functions$ faas-cli invoke slack-request
Reading from STDIN - hit (Control + D) to stop.

{"text": "Serverless Message", "attachments": [{"fields": [{"short": true, "value": "100", "title": "Amazing Level"}], "author_icon": "", "image_url": "https://github.com/shubhamshinde245.png", "author_name": "Shubham Shinde", "title": "The Awesome world of Cloud Computing! COEN 241", {"text": "COEN 241 is my favourite class and I enjoy it!", "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"}]}
shubham_shinde@shubham:~/functions$
```

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

- Via curl - `curl -d '{"Hello": "COEN 241"}' http://127.1.0.1:8080/function/slack-interactive`
- Via faas-cli - `faas-cli invoke slack-interactive`

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

```
shubham_shinde@shubham:~/functions$ faas-cli invoke slack-interactive
Reading from STDIN - hit (Control + D) to stop.

{"attachments": [{"footer": "Slack Apps built on OpenFaas", "author_link": "https://github.com/shubhamshinde245/COEN-241-Cloud-Computing.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/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": "Yes! That's an amazing choice, COEN 241 is 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/shubhamshinde245.png"}]}
```

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

- `curl -d '{"Hello": "COEN 241"}'` <https://127.1.0.1:8080/function/slack-interactive>
- This command sends data to an HTTP server using a POST request,
- An alternative method is to use the echo command and pass the argument to a function using `faas-cli`.
- Arguments can also be passed via the openfaas UI.

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

- The urllib package has a function called `unquote` in `handler.py`, which decodes any string into a URL using the default encoding of UTF-8.
- The result is a Python dictionary created from a valid JSON string, which is stored in the response. Although the response is not used again in the script, it can be used to update the `slack-interactive` function to respond to different inputs by including it in the data dictionary.
- This allows the function to react to various inputs when returning `json.dumps(data)`.

Extra Credit (30 pts)

1. Provide the link to your application

→ <https://c83b-73-223-89-218.ngrok.io>

2. Screenshot of you running your application inside slack

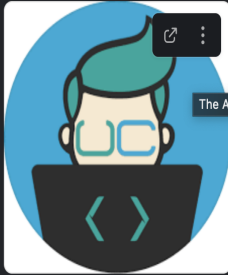
10:26 Serverless Message

Shubham Shinde

The Awesome world of Cloud Computing! COEN 241 (7 kB) ▾

Amazing Level

100



About COEN 241

COEN 241 is my favourite class and I enjoy it!.

Would you recommend COEN 241 to your friends?

Of Course!

Most Definitely!

Yes! That's an amazing choice, COEN 241 is amazing!

COEN 241

Head over to COEN 241

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



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