

Screen-Shot Explanation:

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



```
aanchal@ubuntu:~/faasd$ echo "Hello, FaaS, world" | faas-cli invoke figlet
Hello, FaaS, world
aanchal@ubuntu:~/faasd$ _
```

In the screenshot above, I've invoked the figlet function from the terminal via faas-cli.

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

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

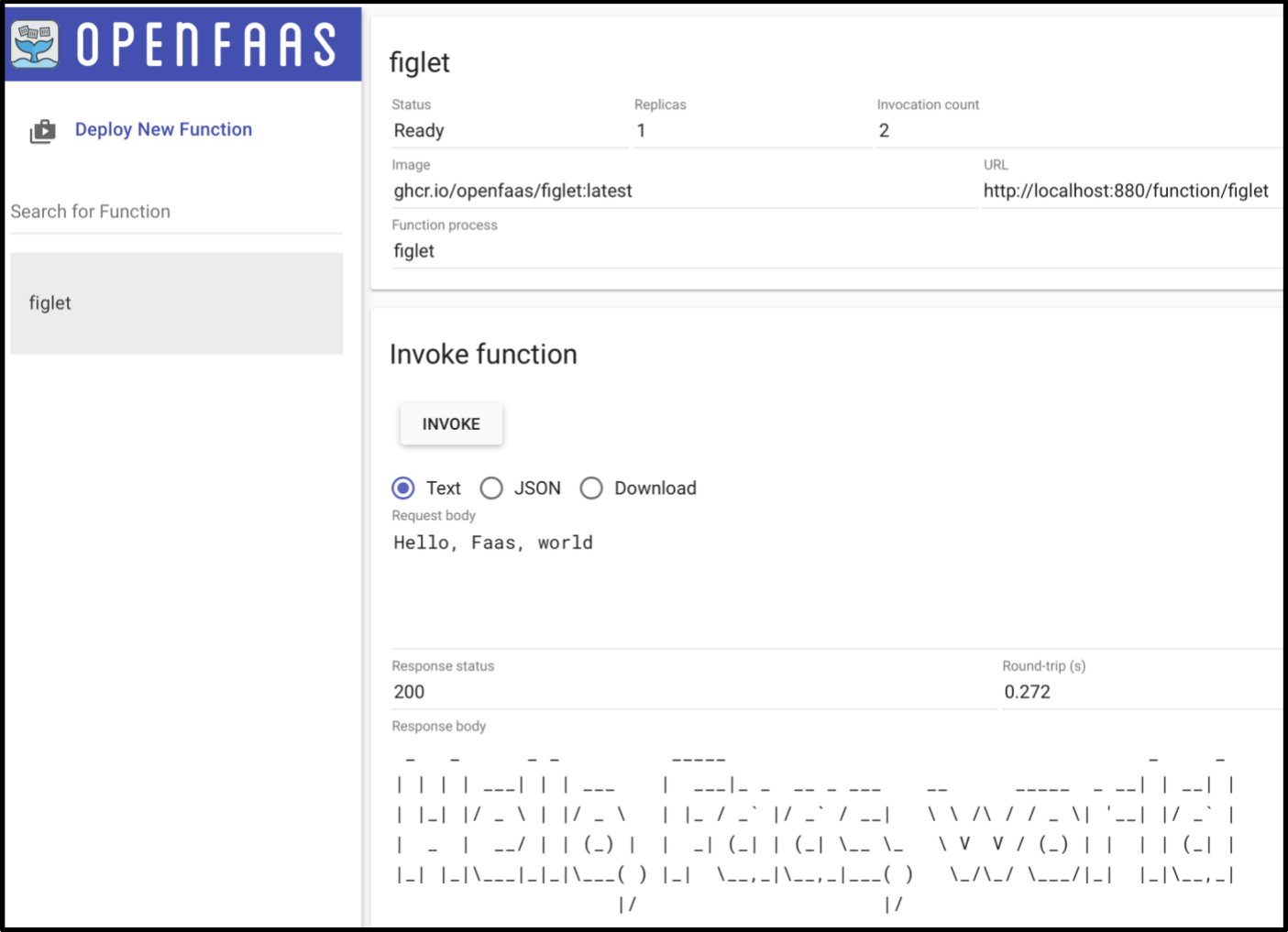
```

aanchal@ubuntuaanchal:~/faasd$ sudo journalctl -u faasd --lines 40
-- Logs begin at Wed 2021-11-10 01:22:07 PST, end at Wed 2021-11-10 09:34:30 PST. --
Nov 10 09:31:43 ubuntuaanchal faasd[2513]: 2021/11/10 09:31:43 Start-up order:
Nov 10 09:31:43 ubuntuaanchal faasd[2513]: 2021/11/10 09:31:43 - prometheus
Nov 10 09:31:43 ubuntuaanchal faasd[2513]: 2021/11/10 09:31:43 - basic-auth-plugin
Nov 10 09:31:43 ubuntuaanchal faasd[2513]: 2021/11/10 09:31:43 - nats
Nov 10 09:31:43 ubuntuaanchal faasd[2513]: 2021/11/10 09:31:43 - gateway
Nov 10 09:31:43 ubuntuaanchal faasd[2513]: 2021/11/10 09:31:43 - queue-worker
Nov 10 09:31:43 ubuntuaanchal faasd[2513]: Starting: prometheus
Nov 10 09:31:43 ubuntuaanchal faasd[2513]: 2021/11/10 09:31:43 Created container: prometheus
Nov 10 09:31:47 ubuntuaanchal faasd[2513]: 2021/11/10 09:31:47 prometheus has IP: 10.62.0.2
Nov 10 09:31:47 ubuntuaanchal faasd[2513]: 2021/11/10 09:31:47 Task: prometheus Container: prometheus
Nov 10 09:31:47 ubuntuaanchal faasd[2513]: Starting: basic-auth-plugin
Nov 10 09:31:47 ubuntuaanchal faasd[2513]: 2021/11/10 09:31:47 Created container: basic-auth-plugin
Nov 10 09:31:50 ubuntuaanchal faasd[2513]: 2021/11/10 09:31:50 basic-auth-plugin has IP: 10.62.0.3
Nov 10 09:31:50 ubuntuaanchal faasd[2513]: 2021/11/10 09:31:50 Task: basic-auth-plugin Container: basic-auth-plugin
Nov 10 09:31:50 ubuntuaanchal faasd[2513]: Starting: nats
Nov 10 09:31:50 ubuntuaanchal faasd[2513]: 2021/11/10 09:31:50 Created container: nats
Nov 10 09:31:52 ubuntuaanchal faasd[2513]: 2021/11/10 09:31:52 nats has IP: 10.62.0.4
Nov 10 09:31:52 ubuntuaanchal faasd[2513]: 2021/11/10 09:31:52 Task: nats Container: nats
Nov 10 09:31:52 ubuntuaanchal faasd[2513]: Starting: gateway
Nov 10 09:31:52 ubuntuaanchal faasd[2513]: 2021/11/10 09:31:52 Created container: gateway
Nov 10 09:31:54 ubuntuaanchal faasd[2513]: 2021/11/10 09:31:54 gateway has IP: 10.62.0.5
Nov 10 09:31:54 ubuntuaanchal faasd[2513]: 2021/11/10 09:31:54 Task: gateway Container: gateway
Nov 10 09:31:54 ubuntuaanchal faasd[2513]: Starting: queue-worker
Nov 10 09:31:54 ubuntuaanchal faasd[2513]: 2021/11/10 09:31:54 Created container: queue-worker
Nov 10 09:31:56 ubuntuaanchal faasd[2513]: 2021/11/10 09:31:56 queue-worker has IP: 10.62.0.6
Nov 10 09:31:56 ubuntuaanchal faasd[2513]: 2021/11/10 09:31:56 Task: queue-worker Container: queue-worker
Nov 10 09:31:56 ubuntuaanchal faasd[2513]: 2021/11/10 09:31:56 Supervisor init done in: 55.883907872s
Nov 10 09:31:56 ubuntuaanchal faasd[2513]: 2021/11/10 09:31:56 Looking up IP for: "gateway"
Nov 10 09:31:56 ubuntuaanchal faasd[2513]: 2021/11/10 09:31:56 Resolver rebuilding map
Nov 10 09:31:56 ubuntuaanchal faasd[2513]: 2021/11/10 09:31:56 Resolver: "localhost"="127.0.0.1"
Nov 10 09:31:56 ubuntuaanchal faasd[2513]: 2021/11/10 09:31:56 Resolver: "faasd-provider"="10.62.0.1"
Nov 10 09:31:56 ubuntuaanchal faasd[2513]: 2021/11/10 09:31:56 Resolver: "prometheus"="10.62.0.2"
Nov 10 09:31:56 ubuntuaanchal faasd[2513]: 2021/11/10 09:31:56 Resolver: "basic-auth-plugin"="10.62.0.3"
Nov 10 09:31:56 ubuntuaanchal faasd[2513]: 2021/11/10 09:31:56 Resolver: "nats"="10.62.0.4"
Nov 10 09:31:56 ubuntuaanchal faasd[2513]: 2021/11/10 09:31:56 Resolver: "gateway"="10.62.0.5"
Nov 10 09:31:56 ubuntuaanchal faasd[2513]: 2021/11/10 09:31:56 Resolver: "queue-worker"="10.62.0.6"
Nov 10 09:31:56 ubuntuaanchal faasd[2513]: 2021/11/10 09:31:56 Looking up IP for: "prometheus"
Nov 10 09:31:56 ubuntuaanchal faasd[2513]: 2021/11/10 09:31:56 Proxy from: 127.0.0.1:9090, to: prometheus:9090 (10.62.0.2)
Nov 10 09:31:56 ubuntuaanchal faasd[2513]: 2021/11/10 09:31:56 faasd: waiting for SIGTERM or SIGINT
Nov 10 09:31:57 ubuntuaanchal faasd[2513]: 2021/11/10 09:31:57 Proxy from: 0.0.0.0:8080, to: gateway:8080 (10.62.0.5)
aanchal@ubuntuaanchal:~/faasd$

```

- In the above screenshot, you can see the output for the journalctl command, which gives the last 40 log information from the journal

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



- In the screenshot above, the figlet function was invoked from the OpenFaaS gateway

Search for Function

slack-request

slack-interactive

figlet

docker.io/aanchrai/slack-interactive:latest

Function process
python index.py

Invoke function

INVOKE

☒ Text ☐ JSON ☐ Download

Request body
{ "Hello": "COEN 241" }

Response status

200

Round-trip (s)

0.972

Response body
{
 "attachments": [
 {
 "footer": "Slack Apps built on OpenFaas",
 "author_link": "https://github.com/aanch-rai",
 "color": "#36a64f",
 "text": "Head over to COEN 241",
 "title": "COEN 241",
 "ts": 123456789,
 "author_name": "Aanchal Rai",
 "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": "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/department-of-computer-engineering/graduate/course-descriptions/",
 "author_icon": "https://github.com/aanch-rai.png"
 }
]
}

- In the screenshot above, the slack-interactive function was invoked from the OpenFaas Gateway
- Request body : { "Hello": "COEN 241" }

The screenshot shows the OpenFaaS web interface. On the left, there's a sidebar with the OpenFaaS logo and a list of functions: 'slack-interactive', 'figlet', and 'slack-request' (which is selected). The main area displays details for the 'slack-request' function, including its status (Ready), replicas (1), and invocation count (1). Below this, there's an 'Invoke function' section with an 'INVOKE' button and radio buttons for 'Text' (selected), 'JSON', and 'Download'. The 'Request body' field is empty. The 'Response status' is 200, and the 'Round-trip (s)' is 0.698. The 'Response body' is a JSON object representing a Slack message with attachments and buttons.

```

{
  "text": "Serverless Message",
  "attachments": [
    {
      "fields": [
        {
          "short": true,
          "value": "100",
          "title": "Amazing Level"
        }
      ],
      "author_icon": "",
      "image_url": "https://www.voonami.com/wp-content/uploads/2019/03/Cloud-Icon.png",
      "author_name": "Aanchal Rai",
      "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"
}

```

- In the screenshot above, the slack-request function is invoked from the Open FaaS gateway

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

```

aanchal@ubuntuaanchal:~/functions$ sudo 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_i
con": "", "image_url": "https://www.voonami.com/wp-content/uploads/2019/03/Cloud-Icon.png", "author_name": "Aanchal Rai", "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", "va
lue": "definitely"}], "callback_id": "response123", "fallback": "Would you recommend COEN 241 to your friends?", "attachment_typ
e": "default"}]}
aanchal@ubuntuaanchal:~/functions$ _

```

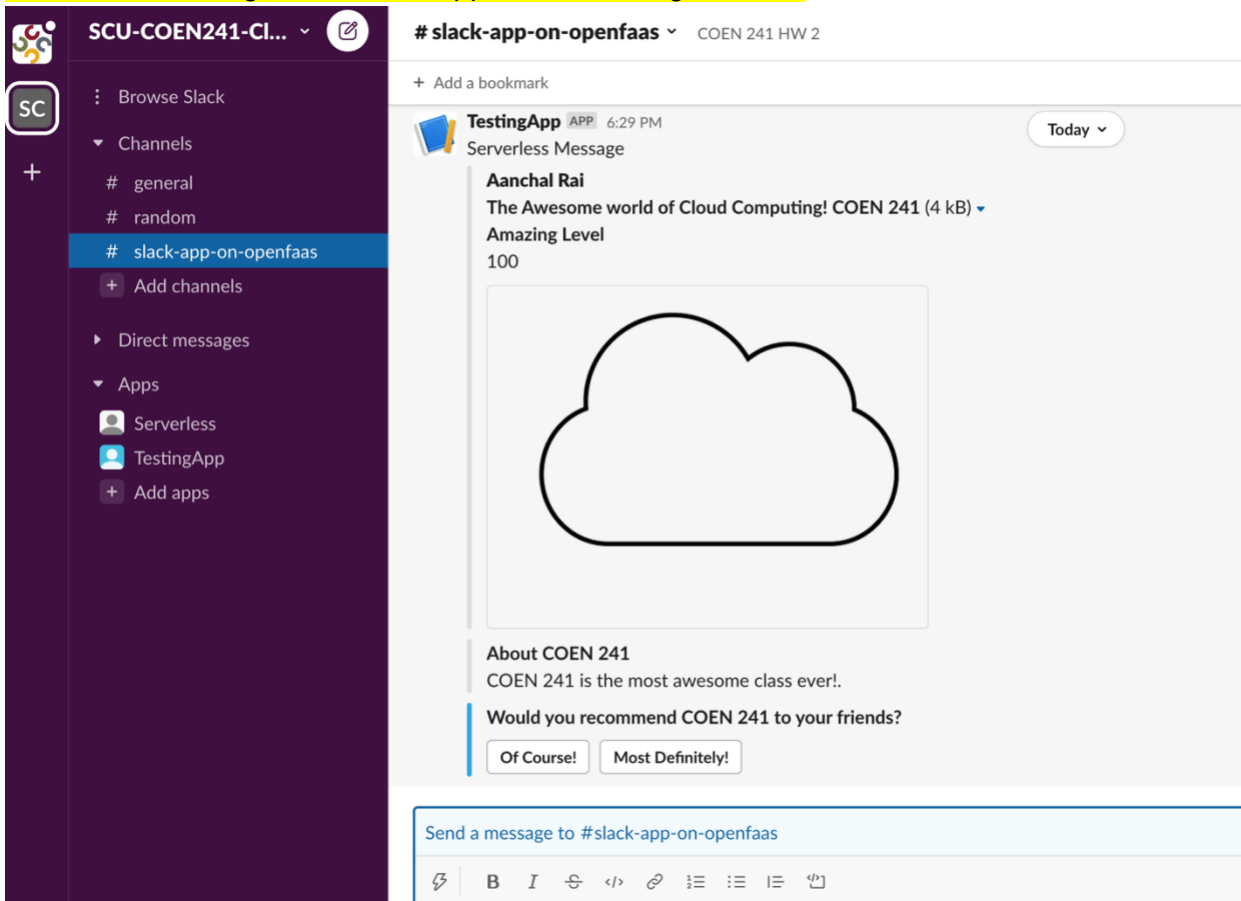
- In the screenshot above, the slack-request function is invoked from the terminal using FaasCli


```
aanchal@ubuntu:~$ echo '{"Hello": "COEN 241"}' | sudo faas-cli invoke slack-interactive
{"attachments": [{"footer": "Slack Apps built on OpenFaas", "author_link": "https://github.com/aanchal-rai", "color": "#36a64f", "text": "Head over to COEN 241", "title": "COEN 241", "ts": 123456789, "author_name": "Aanchal Rai", "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-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_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/department-of-computer-engineering/graduate/course-descriptions/", "author_icon": "https://github.com/aanchal-rai.png"}]}
```

- In the screenshot above, the slack-interactive function is invoked from the terminal using FaasCli

Extra Credit:

- Below two images shows the application running on Slack





SCU-COEN241-Cl...

SC

+

Browse Slack

Channels

general

random

slack-app-on-openfaas

+ Add channels

Direct messages

Apps

Serverless


TestingApp

+ Add apps

slack-app-on-openfaas

COEN 241 HW 2


Today



Aanchal Rai 6:16 PM


added an integration to this channel: [TestingApp](#)

Only visible to you



TestingApp APP 6:17 PM


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




Aanchal Rai

[COEN 241](#)

Head over to COEN 241

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



Send a message to #slack-app-on-openfaas