

HW 2 Report

Step 6 : Questions

1. What is the command to invoke the slack-request function?


- Via Curl :
curl <http://localhost: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?

CLI:

```
malst@ubuntu:~/functions$ faas-cli invoke slack-request
Reading from STDIN - hit (Control + D) to stop.
{"Hello": "World"}
{"text": "Serverless Message", "attachments": [{"fields": [{"short": true, "value": "100", "title": "Amazing level"}], "author_icon": "", "image_url": "https://avatars.githubusercontent.com/malavikast", "author_name": "Malavika Sreedhar Tankala", "title": "The awesome world of Cloud Computing! COEN 241"}, {"text": "COEN 241 is the most awesome class ever!", "description": "testing the slack-request", "title": "About COEN 241"}, {"text": "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"}]}
malst@ubuntu:~/functions$
```

UI:

 **OPENFAAS**

[Deploy New Function](#)

Search for Function

figlet

slack-interactive

slack-request

slack-request

Status: Ready Replicas: 1 Invocation count: 12

Image: docker.io/malavikast/slack-request:latest URL: http://127.0.0.1:8080/function/slack-request

Function process: python index.py

Invoke function

☐ Text ☒ JSON ☐ Download

Request body

```
{"Hello" : "World"}
```

Response status: 200 Round-trip (s): 0.936

Response body

```
{
  "text": "Serverless Message",
  "attachments": [
    {
      "fields": [
        {
          "short": true,
```

slack-request

☐ Text ☒ JSON ☐ Download

Request body

```
{ "Hello" : "World" }
```

Response status

200

Round-trip (s)

0.936

Response body

```
{
  "text": "Serverless Message",
  "attachments": [
    {
      "fields": [
        {
          "short": true,
          "value": "100",
          "title": "Amazing level"
        }
      ],
      "author_icon": " ",
      "image_url": "https://avatars.githubusercontent.com/malavikast",
      "author_name": "Malavika Sreedhar Tankala",
      "title": "The awesome world of Cloud Computing! COEN 241"
    },
    {
      "text": "COEN is the mos t awesome class ever!.",
      "description": "Testing the slack-request",
      "title": "About COEN 241"
    },
    {
      "text": "COEN is the mos t awesome class ever!.",
      "description": "Testing the slack-request",
      "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"
    }
  ]
}
```

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

c. Via Curl :

curl <http://localhost:8080/function/slack-interactive>

d. Via faas-cli:


faas-cli invoke slack-interactive


4. What is the output you see when you invoke the slack-interactive function?

CLI:

```
malst@ubuntu:/functions$ faas-cli invoke slack-interactive
Reading from STDIN - hit (Control + D) to stop.
{"Hello": "COEN 241"}
{"attachments": [{"author_link": "https://github.com/malavikast/COEN-241--Winter-2023", "color": "#36a64f", "text": "Head over to COEN 241", "author_name": "Malavika Sreedhar Tankala", "response_type": "Testing interactive", "replace_original": true, "pretext": "Ahh yeah! Great choice, COEN 241 is absolutely amazing!", "thumb_url": "https://www.scu.edu/engineering/academic-programs/department-of-computer-engineering/graduate/course-descriptions/", "title": "COEN 241", "footer_icon": "https://a.slack-edge.com/45901/marketing/img/_rebrand/meta/slack_hash_256.png", "footer": "Slack Apps built on OpenFaas", "ts": 123456789, "title_link": "https://www.scu.edu/engineering/academic-programs/department-of-computer-engineering/graduate/course-descriptions/", "fallback": "Required plain-text summary of the attachment.", "author_icon": "https://avatars.githubusercontent.com/malavikast"}]}
malst@ubuntu:/functions$
```

UI:

**OPENFAAS**

 **Deploy New Function**

Search for Function

figlet

slack-interactive

slack-request

slack-interactive

StatusReplicasInvocation count

Not ready117

ImageURL

docker.io/malavikast/slack-interactive:latesthttp://127.0.0.1:8080/function/slack-interactive

Function process

python index.py

Invoke function

☐ Text ☒ JSON ☐ Download

Request body

```
{"Hello": "COEN 241"}
```

Response statusRound-trip (s)

20015.563

Response body

```
{
  "attachments": [
    {
      "author_link": "https://github.com/malavikast/COEN-241--Winter-2023",
      "color": "#36a64f",
      "text": "Head over to COEN 241",
      "author_name": "Malavika Sreedhar Tankala",
```

```
{ "Hello" : "COEN 241" }
```

Response status	Round-trip (s)
200	15.563

```
Response body
{
  "attachments": [
    {
      "author_link": "https://github.com/malavikast/COEN-241--Winter-2023",
      "color": "#36a64f",
      "text": "Head over to COEN 241",
      "author_name": "Malavika Sreedhar Tankala",
      "response_type": "Testing interactive",
      "replace_original": true,
      "pretext": "Ahh yeah! Great choice, COEN 241 is absolutely amazing!",
      "thumb_url": "https://www.scu.edu/engineering/academic-programs/department-of-computer-engineering/graduate/course-descriptions/",
      "title": "COEN 241",
      "footer_icon": "https://a.slack-edge.com/45901/marketing/img/_rebrand/meta/slack_hash_256.png",
      "footer": "Slack Apps built on OpenFaas",
      "ts": 123456789,
      "title_link": "https://www.scu.edu/engineering/academic-programs/department-of-computer-engineering/graduate/course-descriptions/",
      "fallback": "Required plain-text summary of the attachment.",
      "author_icon": "https://avatars.githubusercontent.com/malavikast"
    }
  ]
}
```

5. How would you pass different arguments to the functions?

There are 2 ways to pass different arguments to the functions:

1. Via echo:
echo <JSON String> | faas-cli invoke <function>
2. Via STDIN:
curl <http://localhost:8080/function/><function> -d <data string>

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

In order to process various inputs, we need to obtain the request string and format it correctly in JSON. This can be done by using the `json.load()` function to convert the input to a valid JSON string, and then adding it to the dictionary element in the `handler.py` file. The resulting values are stored in the response, which can be returned using `json.dumps()`.

Step 7:

- **Provide a screenshot of invoking the figlet function.**

CLI:

[illegible]

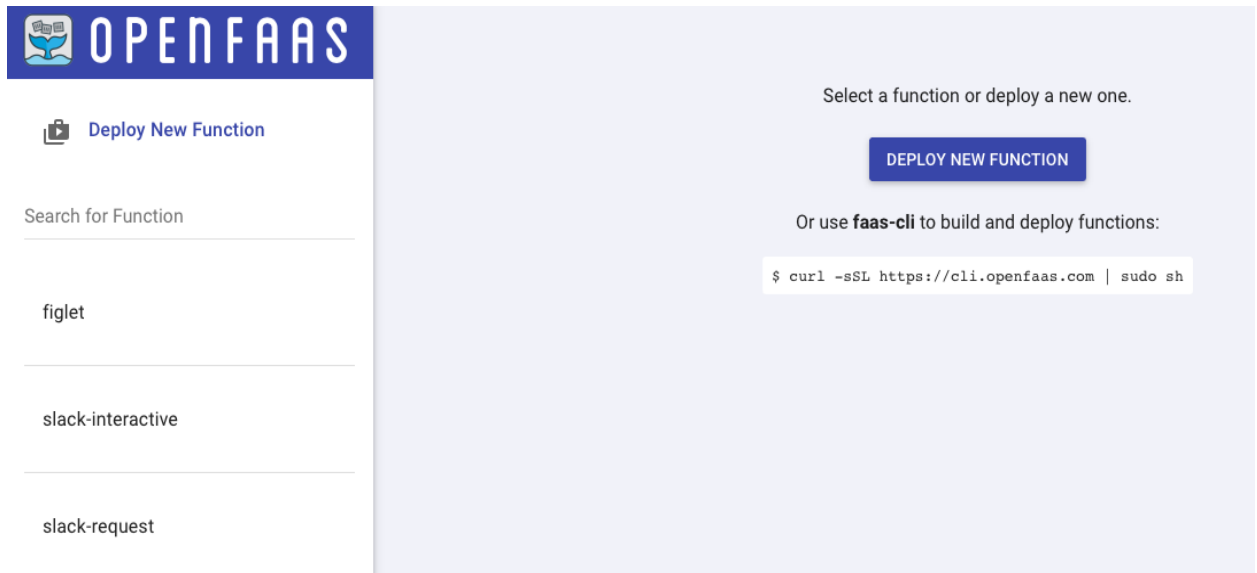
UI:

[illegible]

- Provide a screenshot of running the following command
sudo journalctl -u faasd --lines 40

```
malst@ubuntu:~$ sudo journalctl -u faasd --lines 40
[sudo] password for malst:
-- Logs begin at Mon 2023-01-30 20:52:32 UTC, end at Wed 2023-02-15 20:47:04 UTC. --
Feb 15 05:12:23 ubuntu faasd[884]: 2023/02/15 05:12:23 - prometheus
Feb 15 05:12:23 ubuntu faasd[884]: 2023/02/15 05:12:23 - gateway
Feb 15 05:12:23 ubuntu faasd[884]: Starting: nats
Feb 15 05:12:23 ubuntu faasd[884]: Creating local directory: /var/lib/faasd/nats
Feb 15 05:12:23 ubuntu faasd[884]: 2023/02/15 05:12:23 Running nats with user: "65534"
Feb 15 05:12:25 ubuntu faasd[884]: 2023/02/15 05:12:25 Created container: nats
Feb 15 05:12:43 ubuntu faasd[884]: 2023/02/15 05:12:43 nats has IP: 10.62.0.2
Feb 15 05:12:43 ubuntu faasd[884]: 2023/02/15 05:12:43 Task: nats Container: nats
Feb 15 05:12:44 ubuntu faasd[884]: Starting: queue-worker
Feb 15 05:12:46 ubuntu faasd[884]: 2023/02/15 05:12:46 Created container: queue-worker
Feb 15 05:12:55 ubuntu faasd[884]: 2023/02/15 05:12:55 queue-worker has IP: 10.62.0.3
Feb 15 05:12:55 ubuntu faasd[884]: 2023/02/15 05:12:55 Task: queue-worker Container: queue-worker
Feb 15 05:12:56 ubuntu faasd[884]: Starting: basic-auth-plugin
Feb 15 05:12:58 ubuntu faasd[884]: 2023/02/15 05:12:58 Created container: basic-auth-plugin
Feb 15 05:13:05 ubuntu faasd[884]: 2023/02/15 05:13:05 basic-auth-plugin has IP: 10.62.0.4
Feb 15 05:13:05 ubuntu faasd[884]: 2023/02/15 05:13:05 Task: basic-auth-plugin Container: basic-auth-plugin
Feb 15 05:13:06 ubuntu faasd[884]: Starting: prometheus
Feb 15 05:13:06 ubuntu faasd[884]: Creating local directory: /var/lib/faasd/prometheus
Feb 15 05:13:06 ubuntu faasd[884]: 2023/02/15 05:13:06 Running prometheus with user: "65534"
Feb 15 05:13:08 ubuntu faasd[884]: 2023/02/15 05:13:08 Created container: prometheus
Feb 15 05:13:14 ubuntu faasd[884]: 2023/02/15 05:13:14 prometheus has IP: 10.62.0.5
Feb 15 05:13:14 ubuntu faasd[884]: 2023/02/15 05:13:14 Task: prometheus Container: prometheus
Feb 15 05:13:15 ubuntu faasd[884]: Starting: gateway
Feb 15 05:13:17 ubuntu faasd[884]: 2023/02/15 05:13:17 Created container: gateway
Feb 15 05:13:26 ubuntu faasd[884]: 2023/02/15 05:13:26 gateway has IP: 10.62.0.6
Feb 15 05:13:26 ubuntu faasd[884]: 2023/02/15 05:13:26 Task: gateway Container: gateway
Feb 15 05:13:27 ubuntu faasd[884]: 2023/02/15 05:13:27 Supervisor init done in: About a minute
Feb 15 05:13:27 ubuntu faasd[884]: 2023/02/15 05:13:27 Looking up IP for: "gateway"
Feb 15 05:13:27 ubuntu faasd[884]: 2023/02/15 05:13:27 Resolver rebuilding map
Feb 15 05:13:27 ubuntu faasd[884]: 2023/02/15 05:13:27 Resolver: "localhost"="127.0.0.1"
Feb 15 05:13:27 ubuntu faasd[884]: 2023/02/15 05:13:27 Looking up IP for: "prometheus"
Feb 15 05:13:27 ubuntu faasd[884]: 2023/02/15 05:13:27 faasd: waiting for SIGTERM or SIGINT
Feb 15 05:13:27 ubuntu faasd[884]: 2023/02/15 05:13:27 Resolver: "faasd-provider"="10.62.0.1"
Feb 15 05:13:27 ubuntu faasd[884]: 2023/02/15 05:13:27 Resolver: "nats"="10.62.0.2"
Feb 15 05:13:27 ubuntu faasd[884]: 2023/02/15 05:13:27 Resolver: "queue-worker"="10.62.0.3"
Feb 15 05:13:27 ubuntu faasd[884]: 2023/02/15 05:13:27 Resolver: "basic-auth-plugin"="10.62.0.4"
Feb 15 05:13:27 ubuntu faasd[884]: 2023/02/15 05:13:27 Resolver: "prometheus"="10.62.0.5"
Feb 15 05:13:27 ubuntu faasd[884]: 2023/02/15 05:13:27 Resolver: "gateway"="10.62.0.6"
Feb 15 05:13:27 ubuntu faasd[884]: 2023/02/15 05:13:27 Proxy from: 127.0.0.1:9090, to: prometheus:9090 (10.62.0.5)
Feb 15 05:13:27 ubuntu faasd[884]: 2023/02/15 05:13:27 Proxy from: 0.0.0.0:8080, to: gateway:8080 (10.62.0.6)
malst@ubuntu:~$
```

- Provide a screenshot of OpenFaas gateway after deploying the figlet, slack-request and slack-interactive functions.



- Provide a screenshot of invoking slack-request and slack interactive functions.

slack-request:

CLI

```
malst@ubuntu:~/functions$ faas-cli invoke slack-request
Reading from STDIN - hit (Control + D) to stop.
{"Hello": "World"}
{"text": "Serverless Message", "attachments": [{"fields": [{"short": true, "value": "100", "title": "Amazing level"}], "author_icon": "", "image_url": "https://avatars.githubusercontent.com/malavikast", "author_name": "Malavika Sreedhar Tankala", "title": "The awesome world of Cloud Computing! COEN 241", {"text": "COEN is the most awesome class ever!.", "description": "Testing the slack-request", "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"}]}
malst@ubuntu:~/functions$
```

UI



Deploy New Function

Search for Function

figlet

slack-interactive

slack-request

slack-request



Status	Replicas	Invocation count
Ready	1	12
Image	URL	
docker.io/malavikast/slack-request:latest	http://127.0.0.1:8080/function/slack-request	
Function process		
python index.py		

Invoke function

INVOKE

☐ Text ☒ JSON ☐ Download

Request body

```
{"Hello" : "World"}
```

Response status	Round-trip (s)
200	0.936

Response body

```
{
  "text": "Serverless Message",
  "attachments": [
    {
      "fields": [
        {
          "short": true,
```

slack-request

☐ Text ☒ JSON ☐ Download

Request body

```
{"Hello" : "World"}
```

Response status	Round-trip (s)
200	0.936

Response body

```
{
  "text": "Serverless Message",
  "attachments": [
    {
      "fields": [
        {
          "short": true,
          "value": "100",
          "title": "Amazing level"
        }
      ],
      "author_icon": " ",
      "image_url": "https://avatars.githubusercontent.com/malavikast",
      "author_name": "Malavika Sreedhar Tankala",
      "title": "The awesome world of Cloud Computing! COEN 241"
    },
    {
      "text": "COEN is the mos t awesome class ever!.",
      "description": "Testing the slack-request",
      "title": "About COEN 241"
    }
  ],
  ,
```



```

        "title": "The awesome world of Cloud Computing! COEN 241"
    },
    {
        "text": "COEN is the mos t awesome class ever!.",
        "description": "Testing the slack-request",
        "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"
    }
}
}

```

slack-interactive :


CLI


```

malst@ubuntu:~/functions$ faas-cli invoke slack-interactive
Reading from STDIN - hit (Control + D) to stop.
{"Hello": "COEN 241"}
{"attachments": [{"author_link": "https://github.com/malavikast/COEN-241--Winter-2023", "color": "#36a64f", "text": "Head over to COEN 241", "author_name": "Malavika Sreedhar Tankala", "response_type": "Testing interactive", "replace_original": true, "pretext": "Ahh yeah! Great choice, COEN 241 is absolutely amazing!", "thumb_url": "https://www.scu.edu/engineering/academic-programs/department-of-computer-engineering/graduate/course-descriptions/", "title": "COEN 241", "footer_icon": "https://a.slack-edge.com/45901/marketing/img/_rebrand/meta/slack_hash_256.png", "footer": "Slack Apps built on OpenFaas", "ts": 123456789, "title_link": "https://www.scu.edu/engineering/academic-programs/department-of-computer-engineering/graduate/course-descriptions/", "fallback": "Required plain-text summary of the attachment.", "author_icon": "https://avatars.githubusercontent.com/malavikast"}]}
malst@ubuntu:~/functions$

```

UI


 **OPENFAAS**

 [Deploy New Function](#)

figlet

slack-interactive

slack-request


slack-interactive

Status	Replicas	Invocation count
Not ready	1	17

Image

docker.io/malavikast/slack-interactive:latest

URL

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

Function process

python index.py

Invoke function

INVOKE

☐ Text ☒ JSON ☐ Download

Request body

```
{ "Hello" : "COEN 241" }
```

Response status	Round-trip (s)
200	15.563

Response body

```
{
  "attachments": [
    {
      "author_link": "https://github.com/malavikast/COEN-241--Winter-2023",
      "color": "#36a64f",
      "text": "Head over to COEN 241",
      "author_name": "Malavika Sreedhar Tankala",
      "response_type": "Testing interactive",
      "replace_original": true,
      "pretext": "Ahh yeah! Great choice, COEN 241 is absolutely amazing!",
      "thumb_url": "https://www.scu.edu/engineering/academic-programs/department-of-computer-engineering/graduate/course-descriptions/",
      "title": "COEN 241",
      "footer_icon": "https://a.slack-edge.com/45901/marketing/img/_rebrand/meta/slack_hash_256.png",
      "footer": "Slack Apps built on OpenFaas",
      "ts": 123456789,
      "title_link": "https://www.scu.edu/engineering/academic-programs/department-of-computer-engineering/graduate/course-descriptions/",
      "fallback": "Required plain-text summary of the attachment.",
      "author_icon": "https://avatars.githubusercontent.com/malavikast"
    }
  ]
}
```

Response status	Round-trip (s)
200	15.563

Response body

```
{
  "attachments": [
    {
      "author_link": "https://github.com/malavikast/COEN-241--Winter-2023",
      "color": "#36a64f",
      "text": "Head over to COEN 241",
      "author_name": "Malavika Sreedhar Tankala",
      "response_type": "Testing interactive",
      "replace_original": true,
      "pretext": "Ahh yeah! Great choice, COEN 241 is absolutely amazing!",
      "thumb_url": "https://www.scu.edu/engineering/academic-programs/department-of-computer-engineering/graduate/course-descriptions/",
      "title": "COEN 241",
      "footer_icon": "https://a.slack-edge.com/45901/marketing/img/_rebrand/meta/slack_hash_256.png",
      "footer": "Slack Apps built on OpenFaas",
      "ts": 123456789,
      "title_link": "https://www.scu.edu/engineering/academic-programs/department-of-computer-engineering/graduate/course-descriptions/",
      "fallback": "Required plain-text summary of the attachment.",
      "author_icon": "https://avatars.githubusercontent.com/malavikast"
    }
  ]
}
```