

Assignment 2 Report

Question 6:

- What is the command to invoke the slack-request function ?
 - Curl:
curl http://localhost:8080/function/slack-request
 - Faas-cli
“faas-cli invoke slack-request”
- What is the output you see when you invoke the slack-request function?
- UI:

The screenshot shows the OpenFaaS UI interface. On the left, there's a sidebar with function names: figlet, slack-interactive, and slack-request (which is highlighted). The main area displays the 'slack-request' function details:

slack-request		
Status	Replicas	Invocation count
Ready	1	8
Image	docker.io/apadmakshi/slack-request:latest	URL http://localhost:8080/function/slack-request
Function process	python index.py	

Below this is the 'Invoke function' section:

(INVOKE) JSON Text Download

Request body
{"Hello": "World"}

Response status: 200 Round-trip (s): 0.098

Response body:

```
{  
  "text": "Serverless Message",  
  "attachments": [  
    {  
      "fields": [  
        {  
          "short": true,  
          "text": "This is a test message from a serverless function!"  
        }  
      ]  
    }  
  ]  
}
```

```

        "value": "100",
        "title": "Amazing Level"
    }
],
"author_icon": "",
"image_url": "https://avatars.githubusercontent.com/u/12345678901234567890",
"author_name": "Padmakshi Ashok Kumar",
"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"
},
{
    "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"
},
{
    "text": "Most Definitely!",
    "type": "button",
    "name": "definitely",
    "value": "definitely"
},
],
"callback_id": "response123",
"fallback": "Would you recommend COEN 241 to your friends?",
"attachment_type": "default"
}
]
}

```

- CLI:

```

[...]@paddy:~/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/u/100?size=40", "author_name": "Padmakshi Ashok Kumar", "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"}]}
paddy@paddy:~/functions$ 

```

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

- Via curl

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

- Via faas-cli

"faas-cli invoke slack-request"

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

UI:

The screenshot shows the OpenFaaS UI interface. On the left, there's a sidebar with categories: figlet, slack-interactive (which is selected and highlighted in grey), and slack-request. The main area displays the 'slack-interactive' function details:

Status	Replicas	Invocation count
Ready	1	16

Image: docker.io/apadmakshi/slack-interactive:latest
Function process: python index.py
URL: http://localhost:8080/function/slack-interactive

Below this, there's an 'Invoke function' section with an 'INVOKE' button. Under 'Request body', the JSON input is shown as:

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

Under 'Response status', it shows 200 and a round-trip time of 0.11 seconds. The 'Response body' section displays the Slack message payload:

```
{
  "attachments": [
    {
      "footer": "Slack Apps built on OpenFaaS",
      "author_link": "https://github.com/APadmakshi/COEN-241---Fall-2022",
      "color": "#36a64f",
      "text": "Head over to COEN 241"
    }
  ]
}
```

Response status	Round-trip (s)
200	0.11
Response body	
{ "attachments": [{ "footer": "Slack Apps built on OpenFaas", "author_link": "https://github.com/APadmakshi/COEN-241---Fall-2022", "color": "#36a64f", "text": "Head over to COEN 241", "title": "COEN 241", "ts": 123456789, "author_name": "Padmakshi Ashok Kumar", "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": "Testing interactive", "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 interactive testing - summary of the attachment", "thumb_url": "https://www.scu.edu/engineering/academic-programs/department-of-computer-engineering/graduate/course-descriptions/", "author_icon": "https://avatars.githubusercontent.com/apadmakshi" }] }	

- CLI:

```
[paddy@paddy:~/functions$ faas-cli invoke slack-interactive
Reading from STDIN - hit (Control + D) to stop.
[{"Hello": "Testing"}]
[{"attachments": [{"footer": "Slack Apps built on OpenFaas", "author_link": "https://github.com/APadmakshi/COEN-241---Fall-2022", "color": "#36a64f", "text": "Head over to COEN 241", "title": "COEN 241", "ts": 123456789, "author_name": "Padmakshi Ashok Kumar", "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": "Testing interactive", "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 interactive testing - summary of the attachment", "thumb_url": "https://www.scu.edu/engineering/academic-programs/department-of-computer-engineering/graduate/course-descriptions/", "author_icon": "https://avatars.githubusercontent.com/apadmakshi"}]}
paddy@paddy:~/functions$ ]
```

- How would you pass different arguments to the functions?

We can do it using stdin or through echo.

Via STDIN: curl <http://localhost:8080/function/><function> -d <data string>

Via echo: "echo <JSON String> | faas-cli invoke <function>"

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

Question 7:

- A screenshot of invoking the figlet function

Invoked using CLI:

```
[paddy@paddy:~$ echo "Hello, World" | faas-cli invoke figlet
      _      _      _      _      _      _      _      _      _      _      _      _      _      _      _      _      _      _
     | | | | | / \ | | / \ | | / \ | | / \ | | / \ | | / \ | | / \ | | / \ | | / \ | | / \ | | / \ | | / \ | | | | | | | | | | | | | |
     | | | | | | | ( ) | | | | | | | ( ) | | | | | | | ( ) | | | | | | | ( ) | | | | | | | ( ) | | | | | |
     | | | | | | \---| | | | | | \---| | | | | | \---| | | | | | \---| | | | | | \---| | | | | | \---| | |
     | | | | | | , --| | | | | | , --| | | | | | , --| | | | | | , --| | | | | | , --| | | | | | , --| | |
```

Invoked using UI:

The screenshot shows the OpenFaaS UI interface. At the top, there's a search bar and a 'Deploy New Function' button. Below that, a list of functions is shown, with 'figlet' selected. The 'figlet' function details are displayed in a card:

Status	Replicas	Invocation count
Ready	1	3
Image	URL	
ghcr.io/openfaas/figlet:latest	http://localhost:8080/function/figlet	
Function process		
figlet		

Below this, under the heading 'Invoke function', is a form to make an API call:

Request body:
Hello, World

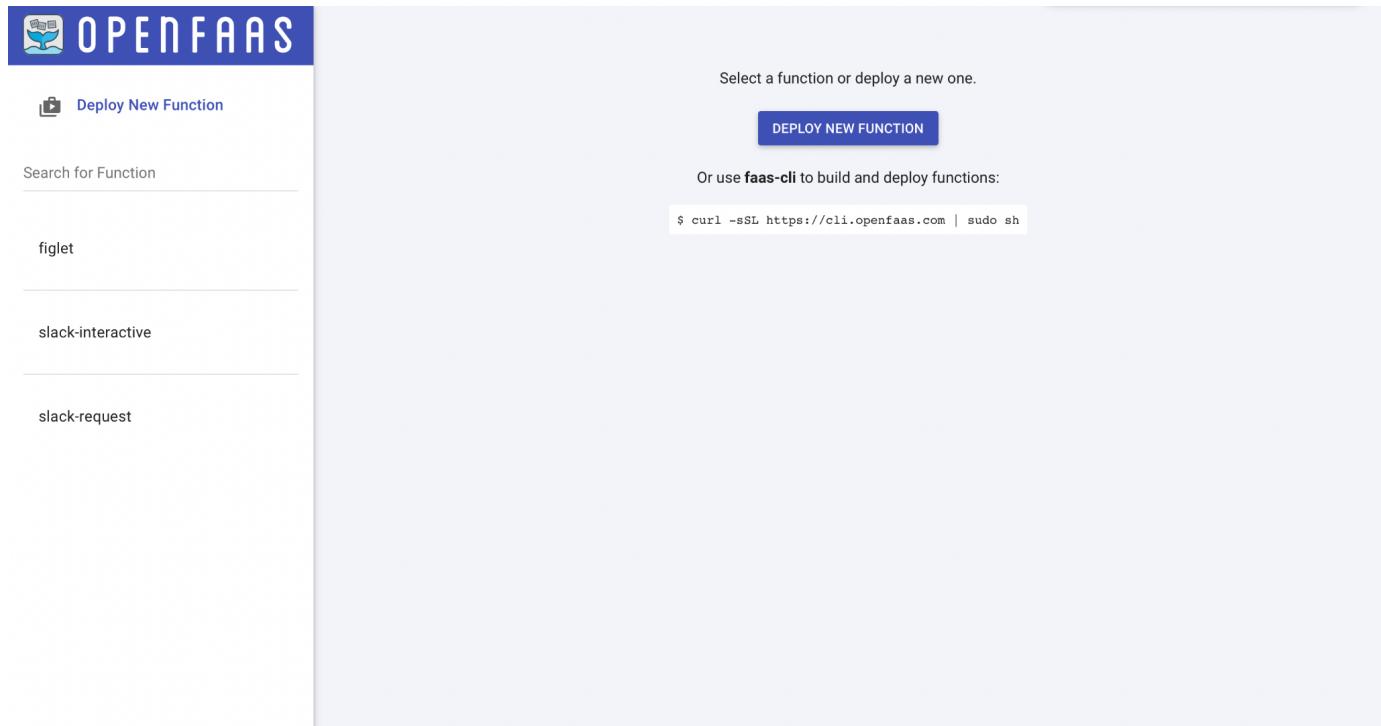
Response status: 200
Round-trip (s): 0.019

Response body:
The same ASCII art as in the CLI invocation, representing the word "Hello, World" in a stylized font.

- A screenshot of running the following command: sudo journalctl -u faasd --lines 40

```
[paddy@paddy:~$ sudo journalctl -u faasd --lines 40
-- Logs begin at Mon 2022-10-17 04:27:50 UTC, end at Tue 2022-11-01 18:22:38 UT>
Oct 31 19:23:05 paddy faasd[634]: 2022/10/31 19:23:05 - prometheus
Oct 31 19:23:05 paddy faasd[634]: 2022/10/31 19:23:05 - gateway
Oct 31 19:23:05 paddy faasd[634]: Starting: nats
Oct 31 19:23:05 paddy faasd[634]: Creating local directory: /var/lib/faasd/nats
Oct 31 19:23:05 paddy faasd[634]: 2022/10/31 19:23:05 Running nats with user: "">>
Oct 31 19:23:05 paddy faasd[634]: 2022/10/31 19:23:05 Created container: nats
Oct 31 19:23:06 paddy faasd[634]: 2022/10/31 19:23:06 nats has IP: 10.62.0.2
Oct 31 19:23:06 paddy faasd[634]: 2022/10/31 19:23:06 Task: nats      Contain>
Oct 31 19:23:06 paddy faasd[634]: Starting: queue-worker
Oct 31 19:23:06 paddy faasd[634]: 2022/10/31 19:23:06 Created container: queue->
Oct 31 19:23:06 paddy faasd[634]: 2022/10/31 19:23:06 queue-worker has IP: 10.6>
Oct 31 19:23:06 paddy faasd[634]: 2022/10/31 19:23:06 Task: queue-worker      >
Oct 31 19:23:06 paddy faasd[634]: Starting: basic-auth-plugin
Oct 31 19:23:06 paddy faasd[634]: 2022/10/31 19:23:06 Created container: basic->
Oct 31 19:23:06 paddy faasd[634]: 2022/10/31 19:23:06 basic-auth-plugin has IP:>
Oct 31 19:23:06 paddy faasd[634]: 2022/10/31 19:23:06 Task: basic-auth-plugin  >
Oct 31 19:23:06 paddy faasd[634]: Starting: prometheus
Oct 31 19:23:06 paddy faasd[634]: Creating local directory: /var/lib/faasd/prom>
Oct 31 19:23:06 paddy faasd[634]: 2022/10/31 19:23:06 Running prometheus with u>
Oct 31 19:23:06 paddy faasd[634]: 2022/10/31 19:23:06 Created container: promet>
Oct 31 19:23:06 paddy faasd[634]: 2022/10/31 19:23:06 prometheus has IP: 10.62.>
Oct 31 19:23:06 paddy faasd[634]: 2022/10/31 19:23:06 Task: prometheus      C>
Oct 31 19:23:06 paddy faasd[634]: Starting: gateway
Oct 31 19:23:06 paddy faasd[634]: 2022/10/31 19:23:06 Created container: gateway
Oct 31 19:23:06 paddy faasd[634]: 2022/10/31 19:23:06 gateway has IP: 10.62.0.6
Oct 31 19:23:06 paddy faasd[634]: 2022/10/31 19:23:06 Task: gateway      Cont>
Oct 31 19:23:06 paddy faasd[634]: 2022/10/31 19:23:06 Supervisor init done in: >
Oct 31 19:23:06 paddy faasd[634]: 2022/10/31 19:23:06 Looking up IP for: "gatew>
Oct 31 19:23:06 paddy faasd[634]: 2022/10/31 19:23:06 Resolver rebuilding map
Oct 31 19:23:06 paddy faasd[634]: 2022/10/31 19:23:06 Resolver: "localhost"="12>
Oct 31 19:23:06 paddy faasd[634]: 2022/10/31 19:23:06 Resolver: "faasd-provider">
Oct 31 19:23:06 paddy faasd[634]: 2022/10/31 19:23:06 Resolver: "nats"="10.62.0>
Oct 31 19:23:06 paddy faasd[634]: 2022/10/31 19:23:06 Resolver: "queue-worker"=>
Oct 31 19:23:06 paddy faasd[634]: 2022/10/31 19:23:06 Resolver: "basic-auth-plu>
Oct 31 19:23:06 paddy faasd[634]: 2022/10/31 19:23:06 Resolver: "prometheus"="1>
Oct 31 19:23:06 paddy faasd[634]: 2022/10/31 19:23:06 Resolver: "gateway"="10.6>
Oct 31 19:23:06 paddy faasd[634]: 2022/10/31 19:23:06 Looking up IP for: "prome>
Oct 31 19:23:06 paddy faasd[634]: 2022/10/31 19:23:06 Proxy from: 127.0.0.1:909>
lines 17-39
```

- A screenshot of your OpenFaaS gateway AFTER deploying figlet, slack-handler and slack-interactive functions



- A screenshot of invoking slack-request and slack-interactive functions
 - Slack-interactive
 - UI:

OPENFAAS

Deploy New Function

Search for Function

slack-interactive

Status	Replicas	Invocation count
Ready	1	16
Image	URL	
docker.io/apadmakshi/slack-interactive:latest	http://localhost:8080/function/slack-interactive	
Function process	python index.py	

figlet

slack-interactive

slack-request

Invoke function

INVOKE

Text JSON Download

Request body

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

Response status	Round-trip (s)
200	0.11

Response body

```
{
  "attachments": [
    {
      "footer": "Slack Apps built on OpenFaas",
      "author_link": "https://github.com/APadmakshi/COEN-241---Fall-2022",
      "color": "#36a64f",
      "text": "Head over to COEN 241",
    }
  ]
}
```

Response status	Round-trip (s)
200	0.11

Response body

```
{
  "attachments": [
    {
      "footer": "Slack Apps built on OpenFaas",
      "author_link": "https://github.com/APadmakshi/COEN-241---Fall-2022",
      "color": "#36a64f",
      "text": "Head over to COEN 241",
      "title": "COEN 241",
      "ts": 123456789,
      "author_name": "Padmakshi Ashok Kumar",
      "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": "Testing interactive",
      "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 interactive testing - summary of the attachment",
      "thumb_url": "https://www.scu.edu/engineering/academic-programs/department-of-computer-engineering/graduate/course-descriptions/",
      "author_icon": "https://avatars.githubusercontent.com/apadmakshi"
    }
  ]
}
```

■ CLI:

```
[paddy@paddy:~/functions$ faas-cli invoke slack-interactive
Reading from STDIN - hit (Control + D) to stop.
[{"Hello": "Testing"}]
{"attachments": [{"footer": "Slack Apps built on OpenFaaS", "author_link": "https://github.com/A
Padmakshi/COEN-241---Fall-2022", "color": "#36a64f", "text": "Head over to COEN 241", "title": "
COEN 241", "ts": 123456789, "author_name": "Padmakshi Ashok Kumar", "title_link": "https://www.s
cu.edu/engineering/academic-programs/department-of-computer-engineering/graduate/course-descript
ions/", "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": "T
esting interactive", "replace_original": true, "footer_icon": "https://a.slack-edge.com/45901/m
arketing/img/_rebrand/meta/slack_hash_256.png", "pretext": "Ahh yeah! Great choice, COEN 241 is a
bsolutely amazing!", "fallback": "Required interactive testing - summary of the attachment", "th
umb_url": "https://www.scu.edu/engineering/academic-programs/department-of-computer-engineering/
graduate/course-descriptions/", "author_icon": "https://avatars.githubusercontent.com/apadmakshi
"}]}
paddy@paddy:~/functions$ ]
```

- Slack-request

- UI:

The screenshot shows the OpenFaaS UI interface. On the left, there's a sidebar with a search bar and a list of functions: figlet, slack-interactive, and slack-request (which is currently selected and highlighted in grey). The main area displays the details for the 'slack-request' function.

slack-request

Status	Replicas	Invocation count
Ready	1	8

Image: docker.io/apadmakshi/slack-request:latest URL: http://localhost:8080/function/slack-request

Function process: python index.py

Invoke function

INVOKE

Text JSON Download

Request body:

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

Response status: 200 Round-trip (s): 0.098

Response body:

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

```
        "value": "100",
        "title": "Amazing Level"
    },
],
"author_icon": "",
"image_url": "https://avatars.githubusercontent.com/u/12345678901234567890",
"author_name": "Padmakshi Ashok Kumar",
"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"
},
{
    "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"
},
{
    "text": "Most Definitely!",
    "type": "button",
    "name": "definitely",
    "value": "definitely"
},
],
"callback_id": "response123",
"fallback": "Would you recommend COEN 241 to your friends?",
"attachment_type": "default"
}
]
```

■ CLI:

```
[paddy@paddy:~/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/u/100?v=4", "author_name": "Padmakshi Ashok Kumar", "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"}, {"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"}]}
paddy@paddy:~/functions$ ]
```