# COEN 241 Assignment 2 Answers

## Q1. What is the command to invoke slack-request function?
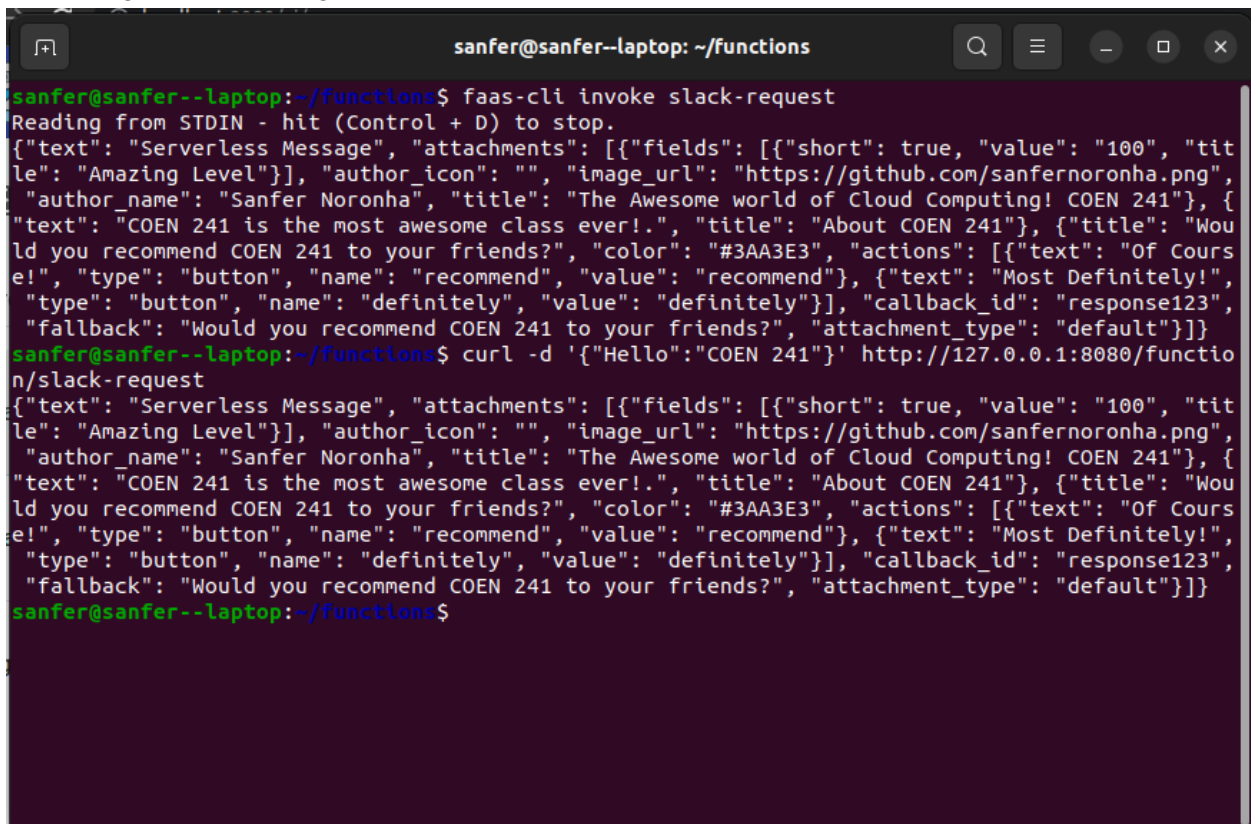
    a. Via curl
    b. Via faas-cli

Ans. Via curl : curl -d '{"Hello": "COEN 241"}' http://127.0.0.1:8080/function/slack-request
    Via faas-cli: faas-cli invoke slack-request

## Q2. What is the output you see when you invoke the slack-request function?
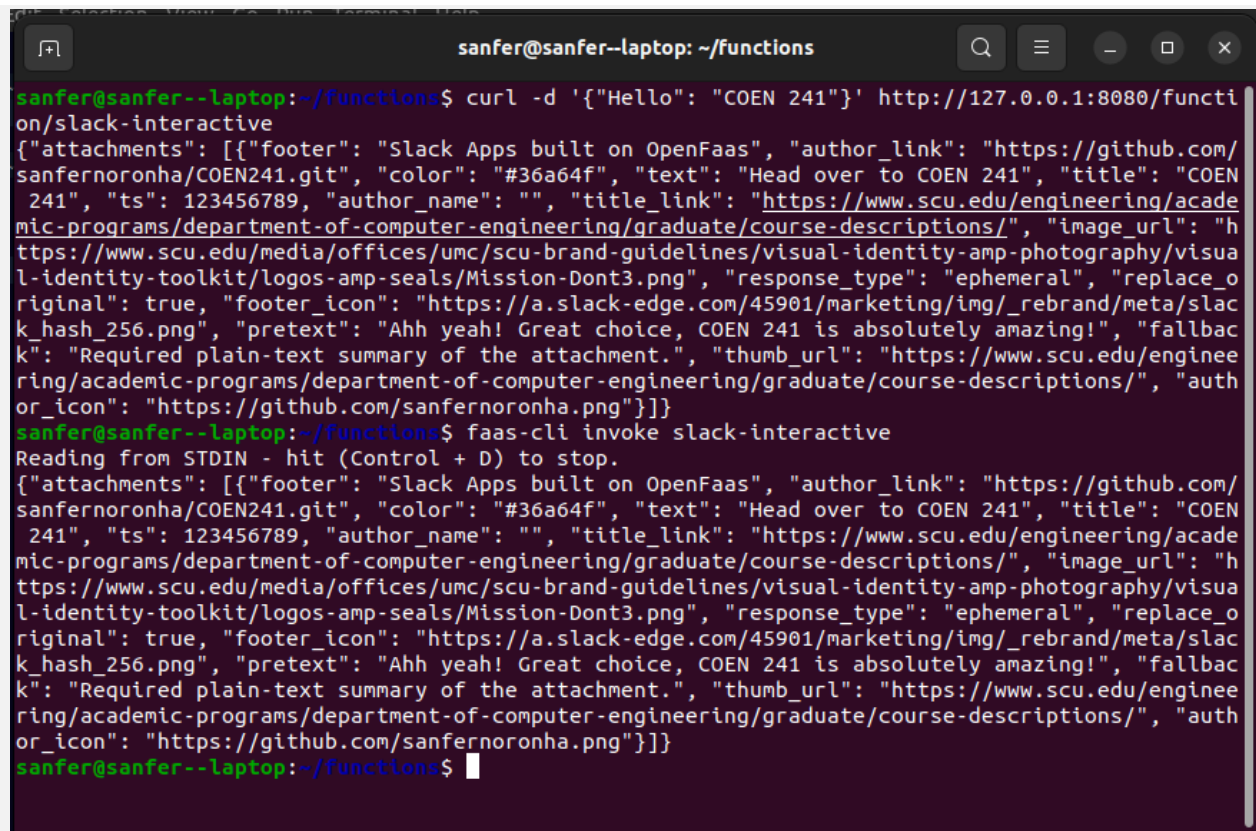
Ans. We get the following outputs



## Q3. What is the command to invoke the slack-interactive function?

a.Via curl

b.Via faas-cli

Ans. Via curl: curl -d '{"Hello" : "COEN 241"}' http://127.0.0.1:8080/function/slack-interactive
    Via faas-cli: faas-cli invoke slack-interactive

## Q4. What is the output seen after invoking the slack-interactive function?



```
sanfer@sanfer--laptop:~/functions$ curl -d '{"Hello": "COEN 241"}' http://127.0.0.1:8080/functi
on/slack-interactive
{"attachments": [{"footer": "Slack Apps built on OpenFaas", "author_link": "https://github.com/
sanfernoronha/COEN241.git", "color": "#36a64f", "text": "Head over to COEN 241", "title": "COEN
 241", "ts": 123456789, "author_name": "", "title_link": "https://www.scu.edu/engineering/acade
mic-programs/department-of-computer-engineering/graduate/course-descriptions/", "image_url": "h
ttps://www.scu.edu/media/offices/umc/scu-brand-guidelines/visual-identity-amp-photography/visua
l-identity-toolkit/logos-amp-seals/Mission-Dont3.png", "response_type": "ephemeral", "replace_o
riginal": true, "footer_icon": "https://a.slack-edge.com/45901/marketing/img/_rebrand/meta/slac
k_hash_256.png", "pretext": "Ahh yeah! Great choice, COEN 241 is absolutely amazing!", "fallbac
k": "Required plain-text summary of the attachment.", "thumb_url": "https://www.scu.edu/enginee
ring/academic-programs/department-of-computer-engineering/graduate/course-descriptions/", "auth
or_icon": "https://github.com/sanfernoronha.png"}]}
sanfer@sanfer--laptop:~/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/
sanfernoronha/COEN241.git", "color": "#36a64f", "text": "Head over to COEN 241", "title": "COEN
 241", "ts": 123456789, "author_name": "", "title_link": "https://www.scu.edu/engineering/acade
mic-programs/department-of-computer-engineering/graduate/course-descriptions/", "image_url": "h
ttps://www.scu.edu/media/offices/umc/scu-brand-guidelines/visual-identity-amp-photography/visua
l-identity-toolkit/logos-amp-seals/Mission-Dont3.png", "response_type": "ephemeral", "replace_o
riginal": true, "footer_icon": "https://a.slack-edge.com/45901/marketing/img/_rebrand/meta/slac
k_hash_256.png", "pretext": "Ahh yeah! Great choice, COEN 241 is absolutely amazing!", "fallbac
k": "Required plain-text summary of the attachment.", "thumb_url": "https://www.scu.edu/enginee
ring/academic-programs/department-of-computer-engineering/graduate/course-descriptions/", "auth
or_icon": "https://github.com/sanfernoronha.png"}]}
sanfer@sanfer--laptop:~/functions$
```

## Q5.How would you pass different arguments to the functions?

Ans. Following are some of the ways of passing arguments to functions.

1. curl -d '{"Hello": "COEN 241"}' http://127.0.0.1:8080/function/slack-interactive

The above command sends the specified data in a POST request to an HTTP server.

2. echo "Hello, FaaS World" | faas-cli invoke figlet

Here, we invoke the figlet function using faas-cli and the argument given to the function is "Hello, FaaS World".

We can also use the openfaas UI.

## Q5.How would you pass different arguments to the functions?

Ans. urllib is used to decode any string into a URL using the default UTF-8 encoding. json.load() method is used to transform a valid JSON string, such as a urlstring, into a Python dictionary. The functions are like API endpoints. We send req to the function which is accessed using the req parameter and decoded with above mentioned libraries. Different requests can be extracted using various api functions of the above libraries. Api testing tools like Postman can be used to send various arguments to the functions for testing. json.dumps is used to return data to the requesting client.

Codes:

slack-interactive/handler.py

```python
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/sanfernoronha/COEN241.git",
                "author_icon": "https://github.com/sanfernoronha.png",
                "title": "COEN 241",
                "title_link": "https://www.scu.edu/engineering/academic-programs/depart
                "text": "Head over to COEN 241",
                "image_url": "https://www.scu.edu/media/offices/umc/scu-brand-guideline
                "thumb_url": "https://www.scu.edu/engineering/academic-programs/departm
                "footer": "Slack Apps built on OpenFaas",
                "footer_icon": "https://a.slack-edge.com/45901/marketing/img/_rebrand/m
                "ts": 123456789
            }
        ]
    }
    return json.dumps(data)
```

slack-interactive.yml

```yaml
provider:
  name: openfaas
```

```yaml
  gateway: http://127.0.0.1:8080
functions:
  slack-interactive:
    lang: python
    handler: ./slack-interactive
    image: sanfernoronha/slack-interactive
    environment:
      content_type: application/json
```

slack-request/handler.py

```python
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": "Sanfer Noronha",
            "author_icon": "",
            "image_url": "https://github.com/sanfernoronha.png"
        },
        {
            "title": "About COEN 241",
            "text": "COEN 241 is the most awesome class ever!."
        },
        {
            "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)
```

slack-request.yml

```
provider:
  name: openfaas
  gateway: http://127.0.0.1:8080
functions:
  slack-request:
    lang: python
    handler: ./slack-request
    image: sanfernoronha/slack-request
    environment:
      content_type: application/json
```