

screenshot of invoking the figlet function

```
hui@ubuntu:~$ faas-cli store deploy figlet

Deployed. 200 OK.
URL: http://127.0.0.1:8080/function/figlet

hui@ubuntu:~$ 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

hui@ubuntu:~$ echo "Hello, FaaS, world" | faas-cli invoke figlet

Hello, FaaS, world
```

screenshot of running the

`journalctl -u faasd --lines 40`

```
root@ubuntu:/home/hui/functions# sudo journalctl -u faasd --lines 40
-- Logs begin at Wed 2022-10-26 00:05:52 PDT, end at Thu 2022-10-27 13:30:01 PDT. --
Oct 27 10:57:33 ubuntu faasd[950]: 2022/10/27 10:57:33 - gateway
Oct 27 10:57:33 ubuntu faasd[950]: 2022/10/27 10:57:33 - queue-worker
Oct 27 10:57:33 ubuntu faasd[950]: Starting: prometheus
Oct 27 10:57:33 ubuntu faasd[950]: Creating local directory: /var/lib/faasd/prometheus
Oct 27 10:57:33 ubuntu faasd[950]: 2022/10/27 10:57:33 Running prometheus with user: "65534"
Oct 27 10:57:33 ubuntu faasd[950]: 2022/10/27 10:57:33 Created container: prometheus
Oct 27 10:57:34 ubuntu faasd[950]: 2022/10/27 10:57:34 prometheus has IP: 10.62.0.2
Oct 27 10:57:34 ubuntu faasd[950]: 2022/10/27 10:57:34 Task: prometheus Container: prometheus
Oct 27 10:57:34 ubuntu faasd[950]: Starting: basic-auth-plugin
Oct 27 10:57:34 ubuntu faasd[950]: 2022/10/27 10:57:34 Created container: basic-auth-plugin
Oct 27 10:57:34 ubuntu faasd[950]: 2022/10/27 10:57:34 basic-auth-plugin has IP: 10.62.0.3
Oct 27 10:57:34 ubuntu faasd[950]: 2022/10/27 10:57:34 Task: basic-auth-plugin Container: basic-auth-plugin
Oct 27 10:57:34 ubuntu faasd[950]: Starting: nats
Oct 27 10:57:34 ubuntu faasd[950]: Creating local directory: /var/lib/faasd/nats
Oct 27 10:57:34 ubuntu faasd[950]: 2022/10/27 10:57:34 Running nats with user: "65534"
Oct 27 10:57:34 ubuntu faasd[950]: 2022/10/27 10:57:34 Created container: nats
Oct 27 10:57:34 ubuntu faasd[950]: 2022/10/27 10:57:34 nats has IP: 10.62.0.4
Oct 27 10:57:34 ubuntu faasd[950]: 2022/10/27 10:57:34 Task: nats Container: nats
Oct 27 10:57:34 ubuntu faasd[950]: Starting: gateway
Oct 27 10:57:34 ubuntu faasd[950]: 2022/10/27 10:57:34 Created container: gateway
Oct 27 10:57:35 ubuntu faasd[950]: 2022/10/27 10:57:35 gateway has IP: 10.62.0.5
Oct 27 10:57:35 ubuntu faasd[950]: 2022/10/27 10:57:35 Task: gateway Container: gateway
Oct 27 10:57:35 ubuntu faasd[950]: Starting: queue-worker
Oct 27 10:57:35 ubuntu faasd[950]: 2022/10/27 10:57:35 Created container: queue-worker
Oct 27 10:57:35 ubuntu faasd[950]: 2022/10/27 10:57:35 queue-worker has IP: 10.62.0.6
Oct 27 10:57:35 ubuntu faasd[950]: 2022/10/27 10:57:35 Task: queue-worker Container: queue-worker
Oct 27 10:57:35 ubuntu faasd[950]: 2022/10/27 10:57:35 Supervisor init done in: 2 seconds
Oct 27 10:57:35 ubuntu faasd[950]: 2022/10/27 10:57:35 Resolver rebuilding map
Oct 27 10:57:35 ubuntu faasd[950]: 2022/10/27 10:57:35 Resolver: "localhost"="127.0.0.1"
Oct 27 10:57:35 ubuntu faasd[950]: 2022/10/27 10:57:35 Resolver: "faasd-provider"="10.62.0.1"
Oct 27 10:57:35 ubuntu faasd[950]: 2022/10/27 10:57:35 Resolver: "prometheus"="10.62.0.2"
Oct 27 10:57:35 ubuntu faasd[950]: 2022/10/27 10:57:35 Resolver: "basic-auth-plugin"="10.62.0.3"
Oct 27 10:57:35 ubuntu faasd[950]: 2022/10/27 10:57:35 Resolver: "nats"="10.62.0.4"
Oct 27 10:57:35 ubuntu faasd[950]: 2022/10/27 10:57:35 Resolver: "gateway"="10.62.0.5"
Oct 27 10:57:35 ubuntu faasd[950]: 2022/10/27 10:57:35 Resolver: "queue-worker"="10.62.0.6"
Oct 27 10:57:35 ubuntu faasd[950]: 2022/10/27 10:57:35 Looking up IP for: "prometheus"
Oct 27 10:57:35 ubuntu faasd[950]: 2022/10/27 10:57:35 Proxy from: 127.0.0.1:9090, to: prometheus:9090 (10.62.0.2)
Oct 27 10:57:35 ubuntu faasd[950]: 2022/10/27 10:57:35 Looking up IP for: "gateway"
Oct 27 10:57:35 ubuntu faasd[950]: 2022/10/27 10:57:35 Proxy from: 0.0.0.0:8080, to: gateway:8080 (10.62.0.5)
Oct 27 10:57:35 ubuntu faasd[950]: 2022/10/27 10:57:35 faasd: waiting for SIGTERM or SIGINT
```

Complete slack-request/handler.py

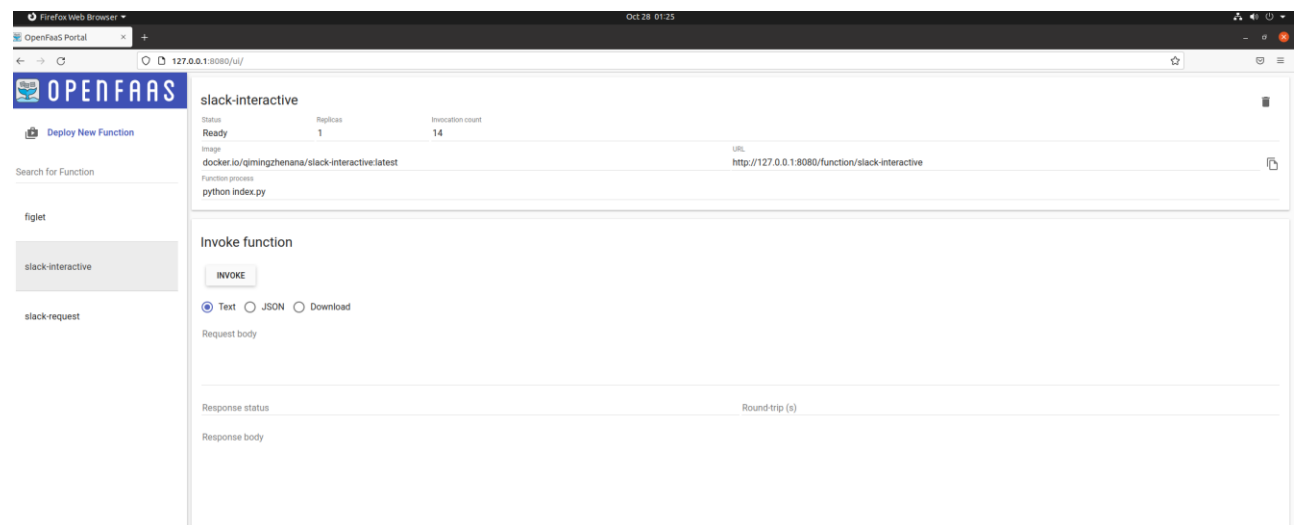
```
"author_name": "tinghui zhang",
"author_icon": "",
"image_url": "https://avatars.githubusercontent.com/u/93081141?s=400&u=a94cc63852f4e9e5c3543a5fa14e50cb633e01c9&v=4"
```

Complete slack-interactive/handler.py

```
"author_name": "tinghui zhang",
"author_link": "https://github.com/Burgerrrr/Tinghui_Zhang_COEN241HW",
"author_icon": "https://avatars.githubusercontent.com/u/93081141?s=400&u=a94cc63852f4e9e5c3543a5fa14e50cb633e01c9&v=4",
```

Screenshot of faas after deployment

```
root@ubuntu:/home/hui/functions# faas-cli list
Function          Invocations  Replicas
figlet            0            0
slack-interactive 0            1
slack-request     0            1
```



a screenshot of invoking slack-request functions

```
root@ubuntu:/home/hui/functions# echo "test" | faas-cli invoke slack-request
{"text": "Serverless Message", "attachments": [{"fields": [{"short": true, "value": "100", "title": "Amazing Level"}], "author_icon": "", "image_url": "https://avatars.githubusercontent.com/u/93081141?s=400&u=a94cc63852f4e9e5c3543a5fa14e50cb633e01c9&v=4", "author_name": "tinghui zhang", "title": "The A awesome world of Cloud Computing! COEN 241"}, {"text": "COEN 241 is the most awesome class ever!.", "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"}]}
```

a screenshot of invoking slack-interactive functions

```
root@ubuntu:/home/hui/functions# echo '{}' | faas-cli invoke slack-interactive
{"attachments": [{"footer": "Slack Apps built on OpenFaas", "author_link": "https://github.com/Burgerrrr/Tinghui_Zhang_COEN241HW", "color": "#36a64f", "text": "Head over to COEN 241", "title": "COEN 241", "ts": 123456789, "author_name": "tinghui zhang", "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://avatars.githubusercontent.com/u/93081141?s=400&u=a94cc63852f4e9e5c3543a5fa14e50cb633e01c9&v=4"}]}
```

Questions:

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

a. Via Curl `curl localhost:8080/function/slack-request -d {}`

b. Via faas-cli `echo "test" | faas-cli invoke slack-request`

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

```
{"text": "Serverless Message", "attachments": [{"fields": [{"short": true, "value": "100", "title": "Amazing Level"}], "author_icon": "", "image_url": "https://avatars.githubusercontent.com/u/93081141?s=400&u=a94cc63852f4e9e5c3543a5fa14e50cb633e01c9&v=4", "author_name": "tinghui zhang", "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"}]}
```

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

a. Via curl `curl localhost:8080/function/slack-interactive -d {}`

b. Via faas-cli `echo '{}' | faas-cli invoke slack-interactive`

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

```
{"attachments": [{"footer": "Slack Apps built on OpenFaas", "author_link": "https://github.com/Burgerrrr/Tinghui_Zhang_COEN241HW", "color": "#36a64f", "text": "Head over to COEN 241", "title": "COEN 241", "ts": 123456789, "author_name": "tinghui zhang", "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://avatars.githubusercontent.com/u/93081141?s=400&u=a94cc63852f4e9e5c3543a5fa14e50cb633e01c9&v=4"}]}
```

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

First method: add "echo 'arguments' |" before "faas-cli invoke slack-request"

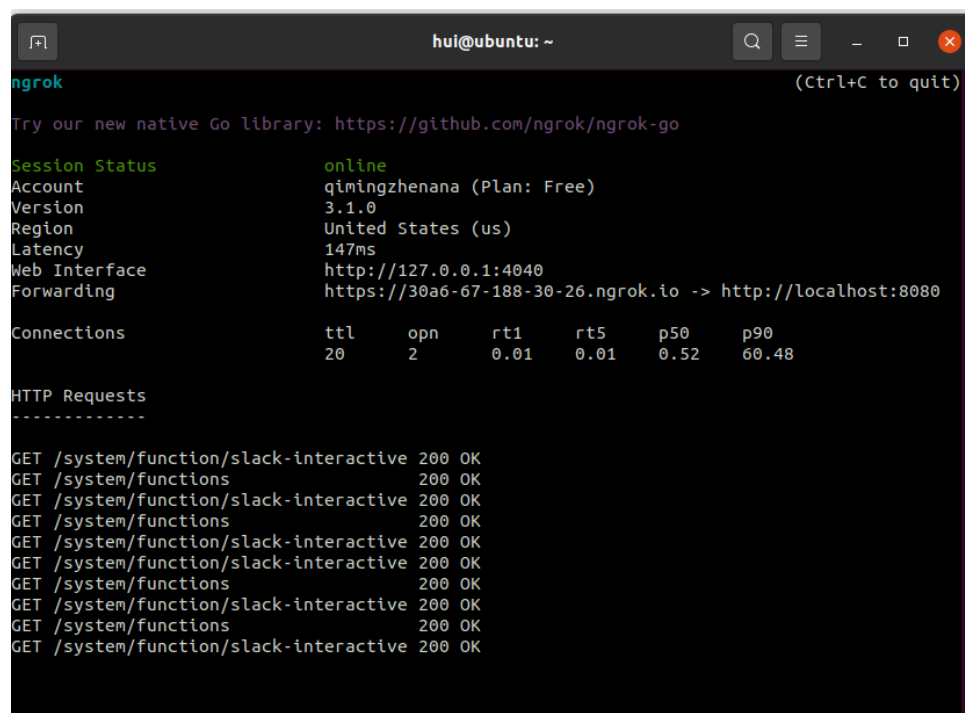
Second method: after calling "faas-cli invoke slack-request", type the arguments and end typing with "control + D"

If use curl, add -d "argument" at the last.

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

the input will be in the response variable, so add some conditionals based on the response variable to return different data. Is this way, it would be able to response different inputs.

Extra credit:



```
hui@ubuntu: ~  
ngrok (Ctrl+C to quit)  
Try our new native Go library: https://github.com/ngrok/ngrok-go  
Session Status      online  
Account             qimingzhenana (Plan: Free)  
Version             3.1.0  
Region             United States (us)  
Latency             147ms  
Web Interface       http://127.0.0.1:4040  
Forwarding          https://30a6-67-188-30-26.ngrok.io -> http://localhost:8080  
  
Connections          ttl      opn      rt1      rt5      p50      p90  
20              2        0.01     0.01     0.52     60.48  
  
HTTP Requests  
-----  
GET /system/function/slack-interactive 200 OK  
GET /system/functions                  200 OK  
GET /system/function/slack-interactive 200 OK  
GET /system/functions                  200 OK  
GET /system/function/slack-interactive 200 OK  
GET /system/functions                  200 OK  
GET /system/function/slack-interactive 200 OK  
GET /system/functions                  200 OK  
GET /system/function/slack-interactive 200 OK  
GET /system/functions                  200 OK  
GET /system/function/slack-interactive 200 OK  
GET /system/functions                  200 OK
```

Slash-command:

Request: <https://30a6-67-188-30-26.ngrok.io/function/slack-request>

Interactive: <https://30a6-67-188-30-26.ngrok.io/function/slack-interactive>

Slack app Link: <https://app.slack.com/client/T049BJMNPB2/C048JUYUMFF>

