

Assignment 2– COEN 241 (Cloud Computing)

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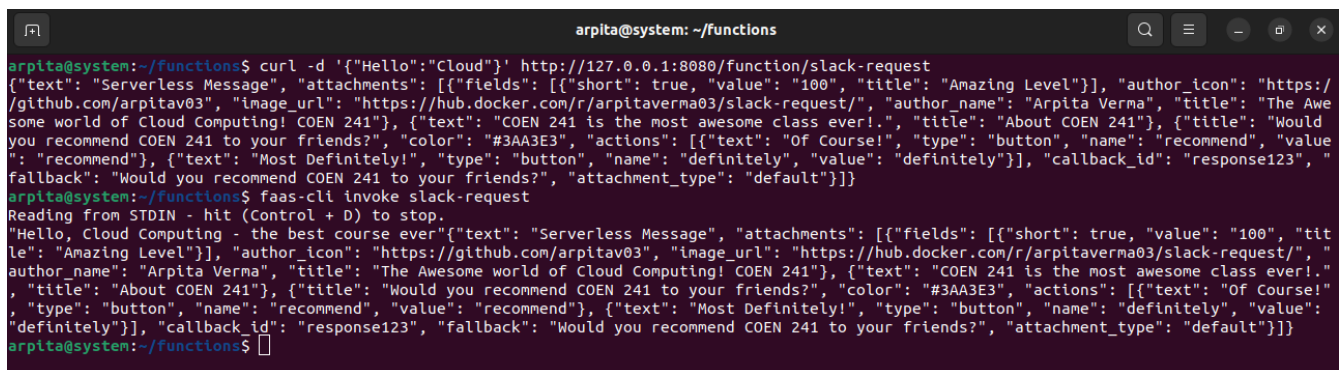
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Answers to HW2 Questions

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

- a) **Via Curl** : `curl localhost:8080/function/slack-request -d {}`
- b) **Via faas-cli** : `faas-cli invoke slack-request`

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

A terminal window titled 'arpita@system: ~/functions' showing the output of a curl command. The output is a JSON object representing a Slack message. It includes a text field, an attachments array with a field (Amazing Level), an author icon, an image url, an author name, a title, a text field, a color, an actions array with a button (recommend), a fallback, and an attachment type. The terminal shows the command being executed and the resulting JSON output.

```
arpita@system:~/functions$ curl -d '{"Hello":"Cloud"}' http://127.0.0.1:8080/function/slack-request
{"text": "Serverless Message", "attachments": [{"fields": [{"short": true, "value": "100", "title": "Amazing Level"}], "author_icon": "https://github.com/arpitav03", "image_url": "https://hub.docker.com/r/arpitaverma03/slack-request/", "author_name": "Arpita Verma", "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"}]}
arpita@system:~/functions$ 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_icon": "https://github.com/arpitav03", "image_url": "https://hub.docker.com/r/arpitaverma03/slack-request/", "author_name": "Arpita Verma", "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"}]}
arpita@system:~/functions$
```

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

- a) **Via curl** : `curl localhost:8080/function/slack-interactive -d {}`
- b) **Via faas-cli** : `faas-cli invoke slack-interactive`

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

A terminal window titled 'arpita@system: ~/functions' shows the execution of a curl command and the resulting JSON output. The curl command is: `curl -d '{"Hello":"Cloud"}' http://127.0.0.1:8080/function/slack-interactive`. The output is a large JSON object with a 'text' field containing 'Hello, Cloud Computing' and an 'attachments' array. The first attachment has a 'text' field with a long paragraph about COEN 241 and a 'fallback' field with a summary. The second attachment has a 'text' field with 'Ahh yeah! Great choice, COEN 241 is absolutely amazing!' and a 'fallback' field with a summary. The terminal also shows the command `faas-cli invoke slack-interactive` and the output 'Reading from STDIN - hit (Control + D) to stop.'

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

Ans: The functions can receive either JSON or text as arguments, and that the JSON payload can be modified as needed. Modifications to the payload can be made by altering the values of keys in the JSON object. If the function is designed to accept plain text, the content-type needs to be set correctly in the YAML file to indicate that the payload is plain text. It is important to ensure that the payload is correctly formatted and matches the expected format in order to ensure that the function can process the request correctly.

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

Ans. The Slack-Interactive function accepts requests in either text or JSON format using the code in the handler.py file. The unquote function, which is part of the urllib package, is used to decode strings into URLs with a default encoding of UTF-8. The json.load() method is then used to convert valid JSON strings into Python dictionaries, which are saved in the response variable. Although the response variable is not currently being used, it can be utilized within the data object to react to different inputs. By incorporating different Slack objects such as buttons, checkboxes, and links in the form of JSON code, we can create various interactive options in the Slack bot responses. When we return json.dumps(data),

the function will start to respond to different inputs.