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COEN 241
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<u>HW 2</u>

1. What is the command to invoke the slack-request function (4 pts)?
    a. Via Curl
       **curl 127.0.0.1:8080/function/slack-request**
    b. Via faas-cli
       **echo "" | 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/58917968?v=4", "author_name": "Praveen Vandeyar", "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 127.0.0.1:8080/function/slack-interactive -H 'Content-Type: application/json' -d '{"json": "object"}'**
    b. Via faas-cli
       **echo '{"json": "object"}' | 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/pv-gitjob", "color": "#36a64f", "text": "Head over to COEN 241", "title": "COEN 241", "ts": 123456789, "author_name": "Praveen Vandeyar", "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/58917968?v=4"}]}**

5. How would you pass different arguments to the functions? (4 pts)
   **For "curl", change the string data that follows "-d", and the input format "content-type" after "-H" if needed. For "faas-cli", change the echo that is being piped. The slack-request does not do anything with the arguments so it does not matter, but for slack-interactive, different JSON payloads is how you pass different arguments. This can be done with different button presses from the buttons obtained from the slack-request function. For figlet, it just reads everything as plain text so whatever text that is passed into it will be read. Inputs can also be passed through files by altering the "content-type".**

6. How would you change the slack-interactive function to react to different inputs? (4 pts)
   **Edit "handler.py" for the slack-interactive function. The handle function extracts the input from the HTTP POST request that is sent as the JSON payload, which is received by "urlstring = urllib.unquote(req).decode('utf8').strip('payload=')". It is then converted into a Python Dictionary by "response = json.loads(urlstring)". For this function, the input payload is provided by the button from the slack-request function. Pressing a button would send the slack-interactive function a JSON payload, specifically one of the following:**

**{"attachment_id": "3", "trigger_id": "2712273276403.2714076275793.a10d4bf6065c79f51bfe54c357bb255e", "response_url": "https://hooks.slack.com/actions/T02M02883PB/2712255102946/nOkrZQ2d5W19xu0jeyQV37IU", "action_ts": "1636596189.849151", "enterprise": null, "actions": [{"type": "button", "name": "recommend", "value": "recommend"}], "is_enterprise_install": false, "callback_id": "response123", "token": "NK3YRXOXcxEVvPyGPjRAYGSt", "is_app_unfurl": false, "user": {"id": "U02L6PGKPHD", "name": "pvandeyar"}, "team": {"domain": "cloud-hw2", "id": "T02M02883PB"}, "type": "interactive_message", "message_ts": "1636596187.000100", "channel": {"id": "C02M02AGHCH", "name": "extra-credit"}}**

**{"attachment_id": "3", "trigger_id": "2709285605525.2714076275793.7206fa195bad4819c5490fb7bdcb96a2", "response_url": "https://hooks.slack.com/actions/T02M02883PB/2697595265239/eFgT1BETZt7noWeAdyxpesqJ", "action_ts": "1636596209.665075", "enterprise": null, "actions": [{"type": "button", "name": "definitely", "value": "definitely"}], "is_enterprise_install": false, "callback_id": "response123", "token": "NK3YRXOXcxEVvPyGPjRAYGSt", "is_app_unfurl": false, "user": {"id": "U02L6PGKPHD", "name": "pvandeyar"}, "team": {"domain": "cloud-hw2", "id": "T02M02883PB"}, "type": "interactive_message", "message_ts": "1636596207.000200", "channel": {"id": "C02M02AGHCH", "name": "extra-credit"}}**

   **Using the values from the dictionary keys "callback_id" for requesting function, "user" for requesting user information, and "value" from "actions" for the pressed button value, data can be returning for the different input by placing "if" statements in slack-interactive function's "handler.py". After the edit, rebuild, push, and redeploy the function.**

7. Extra Credit (30 pts)
   **https://join.slack.com/t/cloud-hw2/shared_invite/zt-yh18x9oy-PwvUZnK0qJALSKJKFilsog**