Capstone Project Weekly Progress Report

Project Title	MEALBUDDY
Group Name	GROUP_G
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Reporting Week	28 JUNE 2020 - 04 JULY 2020
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1. Tasks Outlined in Previous Weekly Progress Report

- **SQS-LAMDA (LF2) INTEGRATION - Create a new Lambda function (LF2) that acts as a queue worker. Whenever it is invoked it pulls a message from the SQS queue (Q1).**
- **LF2 - elastic search and dynamo db integration study**
- **LEX - LF1 - SQS flow check**
- **Explore https://aws.amazon.com/amplify/and https://www.kommunicate.io/**

2. Progress Made in Reporting Week

- **Created Lambda function named LF2 to receive messages from SQS 'LF1SQSLF2' whenever it is invoked. Lambda pulls the message using the function sqs.receive_message and retrieves all the parameters. https://github.com/tom5167/mealbuddy/tree/master/LAMBDA/LF2**
- **Successfully integrated LEX-LF1-SQS for a sample data and received the required output.**
- **AWS Amplify is a set of tools and services that enables mobile and front-end web developers to build secure, scalable full stack applications, powered by AWS. With Amplify, it's easy to create custom onboarding flows, develop voice-enabled experiences, build AI-powered real-time feeds, launch targeted campaigns, and more. No matter the use case, AWS Amplify helps you develop and release great apps your customers will love. AWS Amplify includes an open-source framework with use-case centric libraries and a powerful toolchain to create and add**

cloud-based features to your app, and a web hosting service to deploy static web applications. https://aws.amazon.com/amplify/

- Kommunicate gives you the power to integrate any third-party or custom chatbot in your platform. Be there where your customers are with Chatbots that are compatible on all platforms; website, mobile, web apps and more.
    - Welcome Messages - Create custom and conditional Welcome Messages to greet your visitors automatically.
    - Push Notifications - Set up interactive alerts for both your agents and customers for new messages in conversations.
    - Customization - Add your brand identity and color, and customize the chat widget to make it your own.
- So I finally decided to go with Kommunicate which is easier to set up, less coding involved and save our time. Even though there is a FREE plan available, I would like to go with a GROWTH plan which has Bot integration and more features. https://www.kommunicate.io/pricing
    - Everything in FREE Plan
    - Monthly $20
    - Includes 2 teammates. $10 for each additional teammate
    - Unlimited bots
- Kommunicate is GDPR compliant which makes it more secure.

- Created a lambda function called SQStest (Works as a queue worker)to pull message from the SQS(Simple Queue Service).

  https://github.com/tom5167/mealbuddy/blob/master/LAMBDA/LF2/LF2.py

    - To configure Lambda function triggers using the console, you must ensure the following:

If you use an IAM user, your Amazon SQS role must include the following permissions:

- lambda:CreateEventSourceMapping

-lambda:ListEventSourceMappings

-lambda:ListFunctions

Your Lambda role must include the following permissions:

- sqs:DeleteMessage

-sqs:GetQueueAttributes

- sqs:ReceiveMessage

- From Queue(LF1SQSLF2) Actions, select Configure Trigger for Lambda Function.
- In SQStest define URL for SQS queue

```
response = sqs.get_queue_url(QueueName='LF1SQSLF2.fifo')
queue_url = response['QueueUrl']
```

- Receive a message from SQS queue

-QueueUrl (string) :The URL of the Amazon SQS queue to which permissions are added.

- AttributeName.N:A list of attributes that need to be returned along with each message

-All – Returns all values.

- Response Elements

The following element is returned by the service

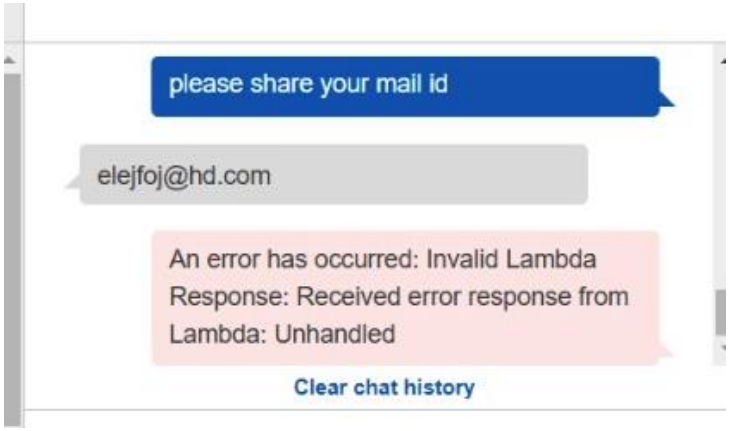
-Message.N

-A list of messages.

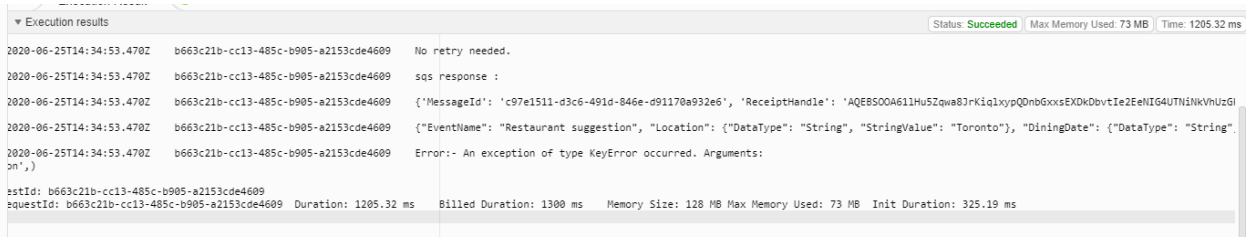
-Type: Array of Message objects

3. Difficulties Encountered in Reporting Week

- **While integrating Lex chat bot with the Lambda LF1 Following error occurred in chat bot and the SQS message contained null values.**



- **This issue was due to variable name mismatch in Lex and LF1.**
- **Since response from sqs is a Nested JSON and in python it appears as a Dictionary with keys and values.Dictionary contains keys and values in string, but expected in json**



Solution:Change the Key's values into json format again

4. Tasks to Be Completed in Next Week

- **LF2 query from dynamo db**
- **LF2 SNS for sending message notification to cell phone**
- **Test Case Document for various test case scenarios**
- **LEX - LF1 - SQS- LF2 flow check and resolve issues if any**