

# Cloud Computing Architecture And Deployment Model

## *Assignment - 11*

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# Experiment : Creation of ChatBot using Amazon Lex

## Step 1 : Create a custom bot in amazon lex service

The screenshot shows the 'Add bot' form in the Amazon Lex console. The form includes the following fields and options:

- Bot name:** MobileChatBot
- Language:** English (US)
- Output voice:** Matthew
- Session timeout:** 5 min
- Sentiment analysis:** Yes (selected), No
- IAM role:** AWSServiceRoleForLexBots (Automatically created on your behalf)
- COPPA:** Please indicate if your use of this bot is subject to the Children's Online Privacy Protection Act (COPPA). Learn more. Yes (selected), No
- Advanced options:** Enable accuracy improvements and ML features. Learn more. Yes (selected), No
- Confidence score threshold:** 0.4 (default)

A warning box states: "You must obtain any required verifiable parental consent under COPPA. Under COPPA restrictions, user conversations will not be logged even if conversation logging is enabled."

At the bottom, there is a 'Tags' section.

## Step 2: Now create a intent for the new chatbot and name it

The first screenshot shows the 'Add intent' dialog box in the Amazon Lex console. The dialog has three options: 'Create intent', 'Import intent', and 'Search existing intents'. The 'Create intent' option is selected.

The second screenshot shows the 'Create intent' dialog box. It prompts the user to 'Give a unique name for the new intent'. The name 'Introduction' has been entered. Below the dialog, a table is visible with the following columns: 'Required', 'Name', 'Slot type', 'Version', and 'Prompt'. The table contains one row with the following values: 'e.g. Location', 'e.g. AMAZON.US\_CITY', and 'e.g. What city?'.

## Step 3: Now create some utterances for your bot to respond

The screenshot shows the 'Introduction' tab in the Amazon Lex console. The left sidebar contains links for 'Intents', 'Introduction' (selected), 'Slot types', 'No slots created', and 'Error Handling'. The main content area is titled 'Introduction Latest' and includes sections for 'Sample utterances', 'Lambda initialization and validation', 'Slots', 'Confirmation prompt', 'Fulfillment', and 'Response'. The 'Sample utterances' section has a text input field with the placeholder 'e.g. I would like to book a flight'. The 'Slots' section contains a table with columns: Priority, Required, Name, Slot type, Version, Prompt, and Settings. The table has one row with the following values: Priority (empty), Required (empty), Name (e.g. Location), Slot type (e.g. AMAZON\_US\_CITY), Version (empty), Prompt (e.g. What city?), and Settings (a plus icon). The 'Fulfillment' section has two radio buttons: 'AWS Lambda function' (unselected) and 'Return parameters to client' (selected). The 'Response' section has a button labeled 'Add Message'.

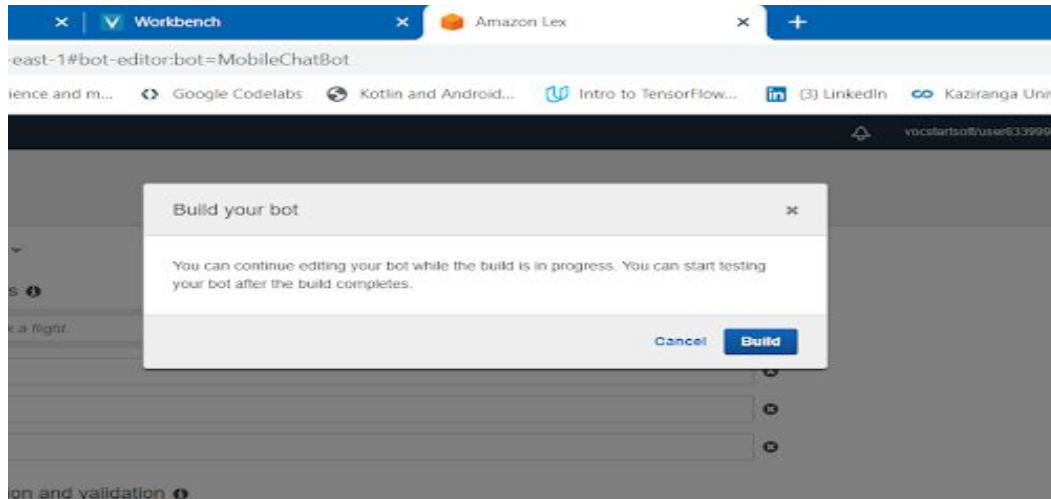
## Step 4: Create a slot

The screenshot shows the 'Slots' tab in the Amazon Lex console. The left sidebar is the same as in Step 3. The main content area is titled 'Slots' and includes sections for 'Lambda initialization and validation', 'Slots', 'Confirmation prompt', and 'Fulfillment'. The 'Slots' section contains a table with columns: Priority, Required, Name, Slot type, Version, Prompt, and Settings. The table has two rows. The first row has the following values: Priority (empty), Required (empty), Name (e.g. Location), Slot type (e.g. AMAZON\_US\_CITY), Version (empty), Prompt (e.g. What city?), and Settings (a plus icon). The second row has the following values: Priority (1), Required (checked), Name (Name), Slot type (AMAZON\_GB\_FIR...), Version (Built-in), Prompt (What is our name?), and Settings (two icons). The 'Confirmation prompt' and 'Fulfillment' sections are empty.

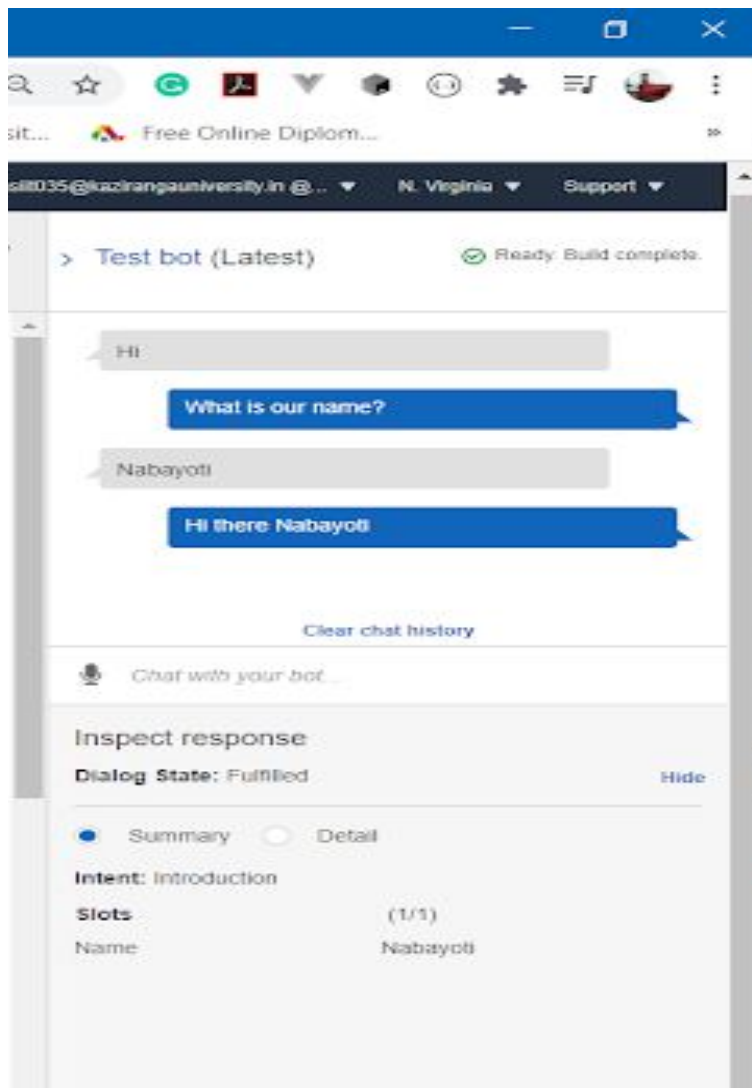
## Step 5: Create a response for the utterance and save the intent

The screenshot shows the 'Monitoring' tab in the Amazon Lex console. The left sidebar contains links for 'Monitoring' (selected), 'Intents', 'Slots', 'No slots created', and 'Error Handling'. The main content area is titled 'Monitoring' and includes sections for 'Fulfillment', 'Response', and 'Preview'. The 'Response' section has a button labeled 'Add Message'. The 'Preview' section has a button labeled 'Preview'. The 'Add Message' section has a text input field with the placeholder 'e.g. Thank you. Your {Drink\_Name} has been ordered.' and a button labeled 'Add Message'. The 'Preview' section has a text input field with the placeholder 'Hi there {Name}' and a button labeled 'Add Message'. The 'Fulfillment' section has a checkbox labeled 'Enable response card' and a checkbox labeled 'Wait for user reply'. The 'Wait for user reply' checkbox has a note: 'If the user says "no," the following message will be presented.' At the bottom of the page, there are buttons labeled 'Save intent' and 'Detach intent'.

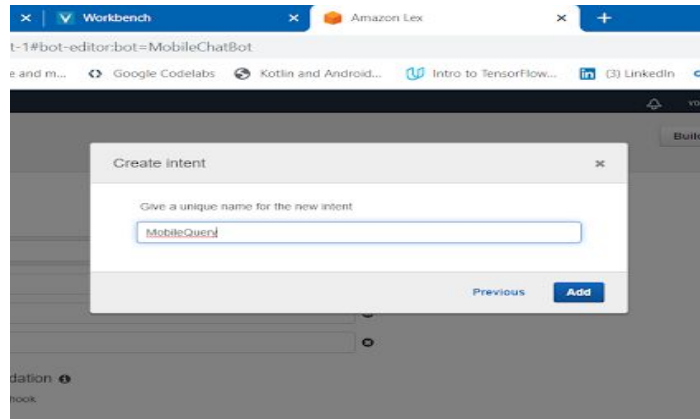
## Step 6: Now build your chat bot



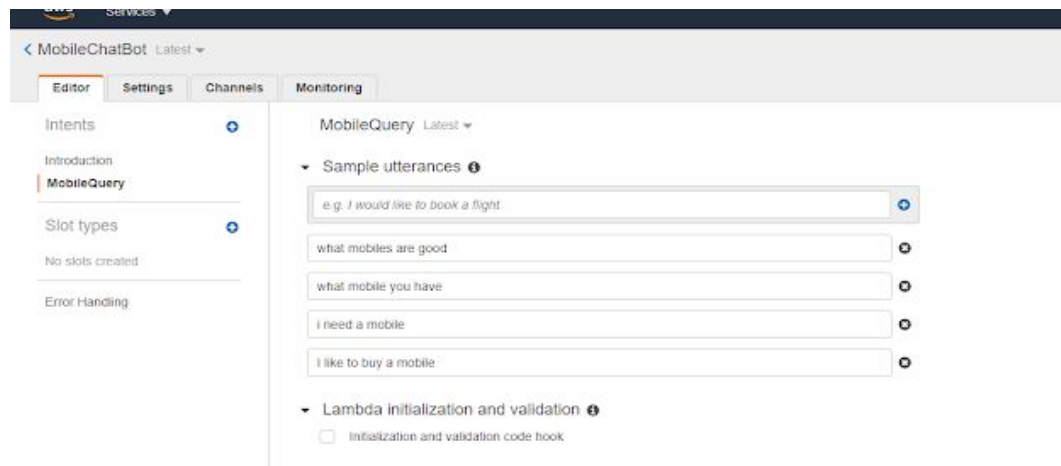
## Step 7: Now you can test your chat bot



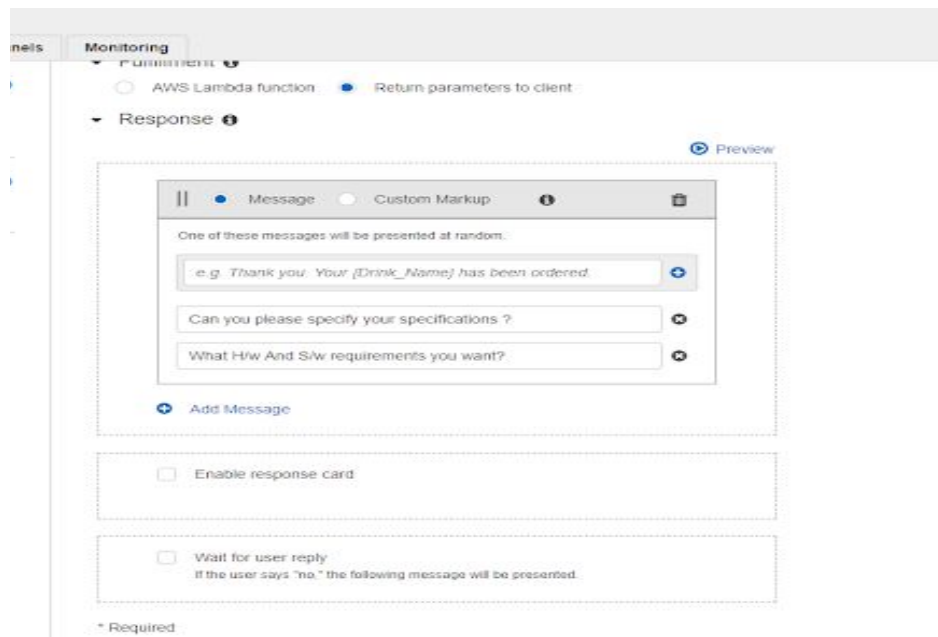
## Step 8: Create another intent



## Step 9: Create utterances



## Step 10: Create multiple response this time



## Step 11: Save and build our bot and test it

The screenshot displays the Amazon Lex console interface. At the top, a green notification box states: "MobileChatBot build was successful. The build is now complete. You can now test the bot in the test window." Below this, the "Test bot (Latest)" section shows a chat history with the following messages:

- Hi there naba
- I need a mobile
- What requirements you have?
- what mobile you have
- please specify your requirements

The "Inspect response" section shows the "Dialog State" as "Fulfilled". The "RequestID" is "86bca517-8cd9-4d54-9059-2d201ec4494a". The response JSON is:

```
{  "alternatives": [    {      "intentName": "Introduction",      "nluIntentConfidence": {        "score": 0.42      },      "slots": {        "name": null      }    }  ],  "dialogState": "Fulfilled",  "dialogStateTimestampMs": 1604551200000,  "dialogStateType": "Fulfilled",  "requestId": "86bca517-8cd9-4d54-9059-2d201ec4494a",  "sessionAttributes": {}}
```

Below the chat history, there is a "Parameters to client" section with a "Preview" button.

The bottom part of the screenshot shows the "Bots" section of the console. It includes a "Create" button and a table listing the bots:

Name	Status	Locale	Last updated	Date Created
MobileChatBot	READY	English (US)	November 5, 2020 at 11:45:36 AM UTC+5:30	November 5, 2020 at 11:11:26 AM UTC+5:30