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Build a Chatbot with Multiple Slots

AZ

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Test Draft version C ⚙ X
Last build submitted: 2 minutes ago

Inspect

4000

Got it. So we are transferring 4000 from Checking to Savings. Can I go ahead with the transfer?

yes

The transfer is complete. 4000 should now be available in your Savings account.

Ready for complete testing

Type a message

This screenshot shows a chatbot interface titled 'Test Draft version' with a timestamp of 'Last build submitted: 2 minutes ago'. The user has sent the message '4000'. The bot has responded with a message asking if the user wants to proceed with a transfer from 'Checking' to 'Savings'. The user has responded with 'yes'. The bot has confirmed that the transfer is complete and that 4000 should now be available in the user's Savings account. At the bottom, there is a checkbox labeled 'Ready for complete testing' which is checked, and a text input field with a microphone icon and the placeholder 'Type a message'.

Introducing Today's Project!

What is Amazon Lex?

Amazon Lex is an AWS AI service for building conversational interfaces for applications using voice and text. With Lex, you can build chatbots that can act as virtual assistants for your applications and can help businesses with customer experiences.

How I used Amazon Lex in this project

I configured multiple slots with a shared slot type, implemented a confirmation prompt, used the conversation flow and visual builder and automated bot deployment using CloudFormation.

One thing I didn't expect in this project was...

I didn't expect using AWS CloudFormation to automate the deployment of the chatbot would save so much time but also it made sure all resources were correctly configured and linked.



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This project took me...

This project took me an hour as well as completing the previous parts of this project series.



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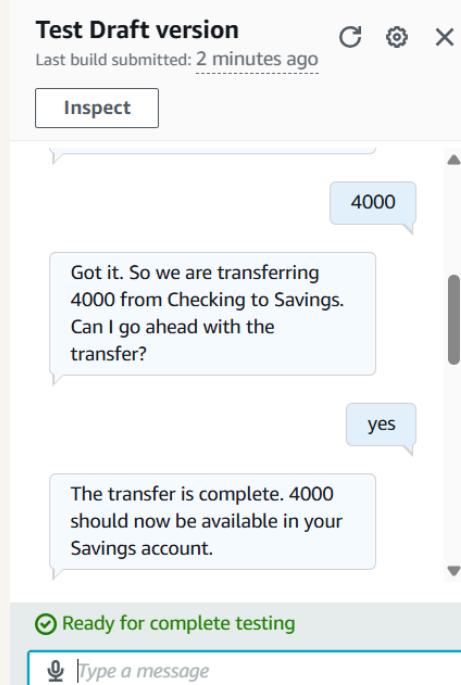
TransferFunds

An intent I created for my chatbot was TransferFunds, which will transfer money between the accounts.

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Using multiple slots

For this intent, I had to use the same slot type twice. This is because we are transferring money between different accounts so the slot type will remain same for multiple slots. We can define them uniquely to separate their differences.

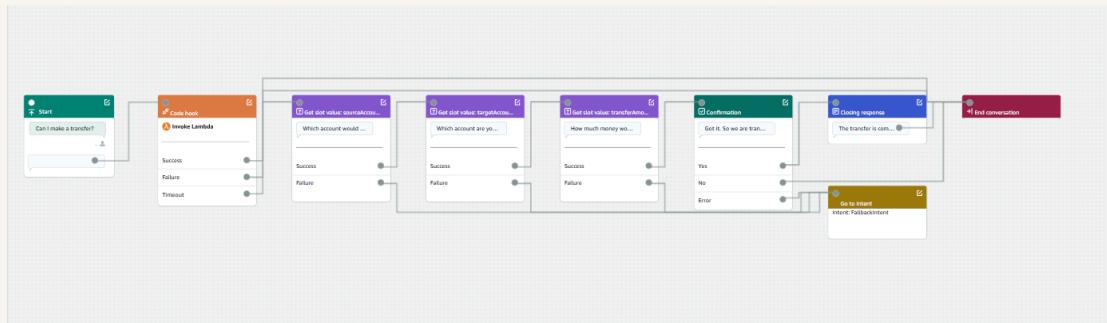
I also learnt how to create confirmation prompts, which are prompts repeated back for the user to confirm. If the user confirms the intent, the bot fulfills the intent. If the user declines, then the bot sends a decline response that you set up.

The screenshot shows a configuration panel for a bot intent. At the top right, there is a blue circular button labeled "Active". Below it, the section title "Confirmation" is followed by a small "Info" link. A descriptive text states: "Prompts help to clarify whether the user wants to fulfill the intent or cancel it." To the right of this text is a blue circular button with a white checkmark. Under the "Confirmation" section, there are two expandable sections: "Prompts to confirm the intent" and "Responses sent when the user declines the intent". The "Prompts to confirm the intent" section contains a message template: "Message: Got it. So we are transferring {transferAmou...". The "Responses sent when the user declines the intent" section contains a message template: "Message: The transfer has been cancelled.S". Below these, there is a "Confirmation prompt" section with a placeholder message: "Got it. So we are transferring {transferAmount} from {sourceAccountType} to {targetAccountType}. Can I go ahead". Underneath, there is a "Decline response" section with a placeholder message: "The transfer has been cancelled.S". At the bottom of the panel, there is a "Advanced options" button and a note: "Configure confirmation prompts and decline responses.".

Exploring Lex features

Lex also has a special conversation flow feature that updates as you continue editing the intent. It shows all the steps in a conversation in a chronological order and also gives recommendation responses which you could add to your Intent set up.

You could also set up your intent using a visual builder! A visual builder gives you a visual representation of the intent you just built and it can help you to build from scratch as well as viewing the flow itself.



AWS CloudFormation

AWS CloudFormation is a service that you can use to easily create and set up AWS resources. You will use a file that describes all the resources you want to create and their dependencies as code. You don't have to manage your resources individually.

I used CloudFormation to create a template YAML file to deploy Banker Bot in seconds without having to create all the resources from the console individually. So I can use this template to edit and delete the stack of resources I have described.

Intents (5) Info		
An intent represents an action that the user wants to perform.		
<input type="text"/> Search intents		
Name	Description	Last edited
TransferFunds	Help user transfer funds between bank accounts	8 minutes ago
FollowupCheckBalance	Intent to allow a follow-up balance check request without authentication	8 minutes ago
CheckBalance	Intent to check the balance in the specified account type	8 minutes ago
Welcome	Welcome intent	8 minutes ago
FallbackIntent	Default fallback intent when no other intent matches	8 minutes ago



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The final result!

Re-building my bot with CloudFormation took me less than 10 minutes with the provided template file.

There was an error after I deployed my bot! The error was denied access error. I fixed this by adding permissions to my Lambda function with the associated version of my chatbot.

Policy statement details

Statement ID
my-custom-permission-amazonlexchatbot

Principal
lexv2.amazonaws.com

Effect
Allow

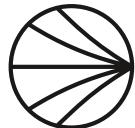
Action
lambda:InvokeFunction

Conditions

```
1 * []
2 * "ArnLike": {
3     "AWS:SourceArn": "arn:aws:iam::834281474341:role/LexV2CfnCr/nextwork-banker-bot-name-Lexv2-
4 }
5 []
```

1:1 JSON Spaces: 2

Edit **Close**



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