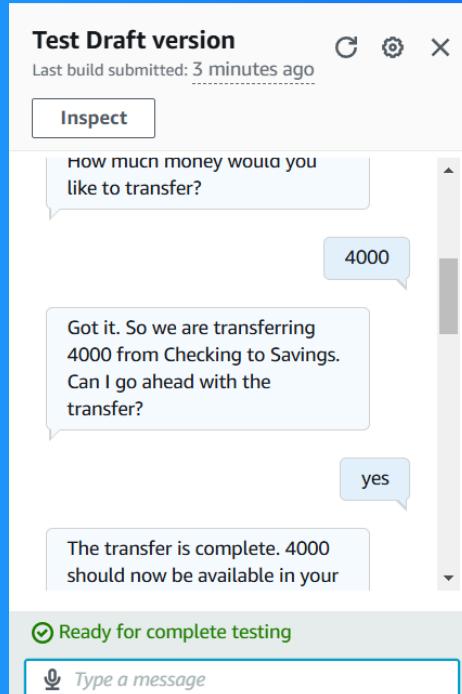




Build a Chatbot with Multiple Slots



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Introducing Today's Project!

What is Amazon Lex?

Amazon Lex helps create conversational interfaces. In my project, I used Lex to build a banking chatbot that checks balances and transfers funds, using intents, Lambda functions, and context to process user requests seamlessly.

How I used Amazon Lex in this project

In today's project, I used Amazon Lex to create a banking chatbot. It handles intents like checking balances and transferring funds. By integrating Lambda functions, I enabled the bot to process user requests and provide responses dynamically.

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

One thing I didn't expect in this project was the complexity of integrating multiple AWS services, such as Lex and Lambda, and ensuring they worked seamlessly together, especially when setting up permissions and debugging the Lambda function.

This project took me...

This project took me about 20-30mins, including setting up Amazon Lex, integrating with Lambda, and testing the bank balance functionality.

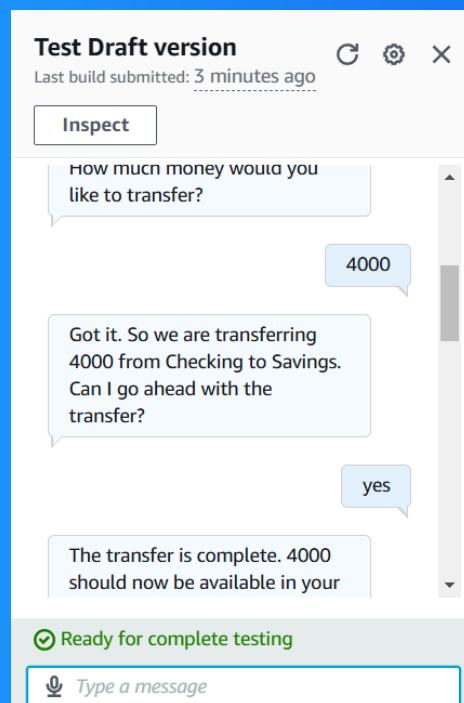


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TransferFunds

An intent I created for my chatbot was TransferFunds, which handles user requests to transfer funds between accounts by collecting the required details like amount and account type.

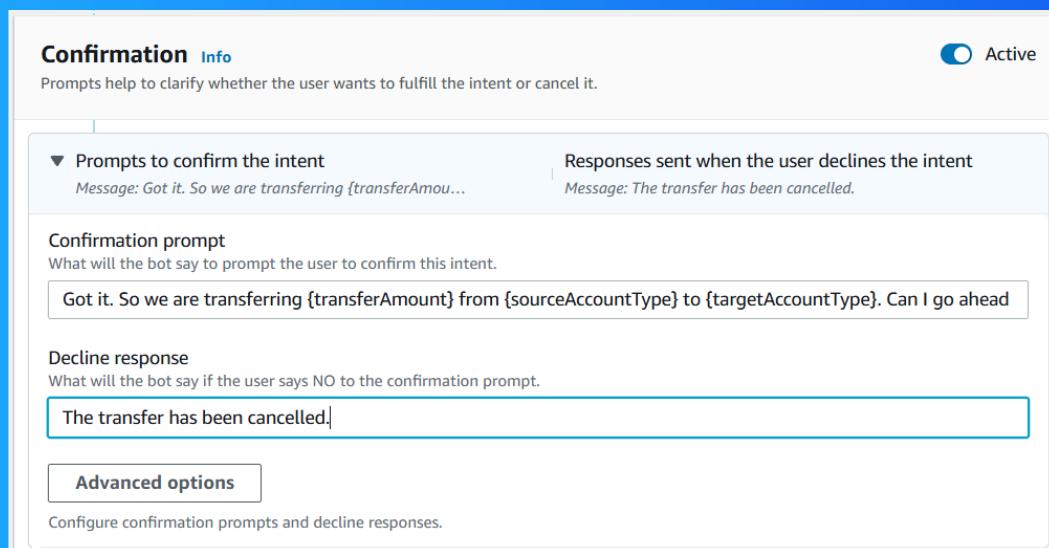




Using multiple slots

For this intent, I used the same slot type twice to capture both the source and destination account types, ensuring consistency in the data for the transfer.

I also learnt how to create confirmation prompts, which are used to verify user inputs before finalizing actions, ensuring accuracy by asking users to confirm details like transfer amounts or account types before proceeding.





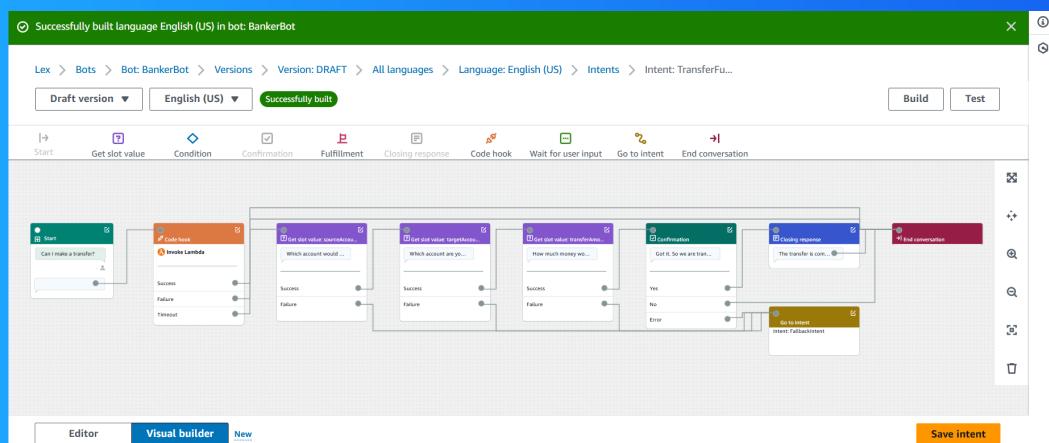
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Exploring Lex features

Lex also has a special conversation flow feature that allows the bot to manage the dialogue, guiding users through a series of steps by prompting for necessary information and ensuring smooth, logical interaction based on user responses.

You could also set up your intent using a visual builder! A visual builder provides an intuitive interface to create and configure intents, slots, and prompts, making it easier to design and manage conversational flows without writing code.





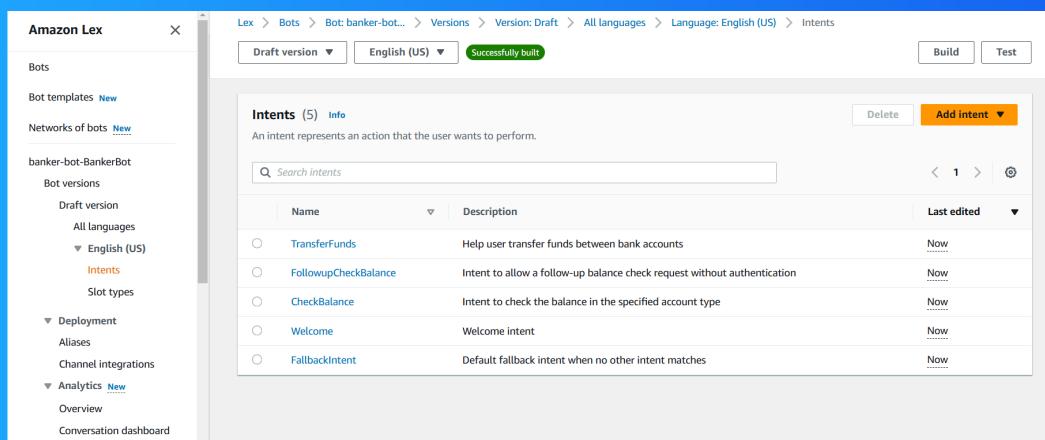
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AWS CloudFormation

AWS CloudFormation is a service that allows you to define and provision AWS infrastructure using code, making it easier to automate, manage, and replicate resources in a consistent and predictable manner across different environments.

I used CloudFormation to automate the creation and configuration of AWS resources, such as Lambda functions and Amazon Lex bots, ensuring consistent and repeatable deployments across different environments without manual intervention.





The final result!

Re-building my bot with CloudFormation took me around 20-30 minutes, as it automated the deployment of resources and configurations, making the process faster and more efficient.

If you get a "denied access" error, check the **Permissions tab** in your Lambda function and ensure the execution role has the correct policies attached, such as `AWSLambdaBasicExecutionRole`, to allow necessary interactions.

Lambda > Functions > testfunctionDELETEthis > Add permissions

Add permissions

Edit policy statement

AWS account
Grant permissions to another AWS account, user, or role.

AWS service
Grant permissions to another AWS service.

Function URL
Grant permissions to invoke your function through the function URL.

Service
The AWS service to grant permissions to.
Other

Statement ID
Enter a unique statement ID to differentiate this statement within the policy.
my-custom-permission-amazonlexchatbot

Principal
The service principal for this AWS service. [Learn more](#)
lexv2.amazonaws.com

Source ARN
The ARN for a resource. Find the ARN in the related service console.
arn:aws:lexus-west-2:471112976395:bot-alias/*

Action
Choose an action to allow.
lambda:InvokeFunction

Cancel **Save**



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