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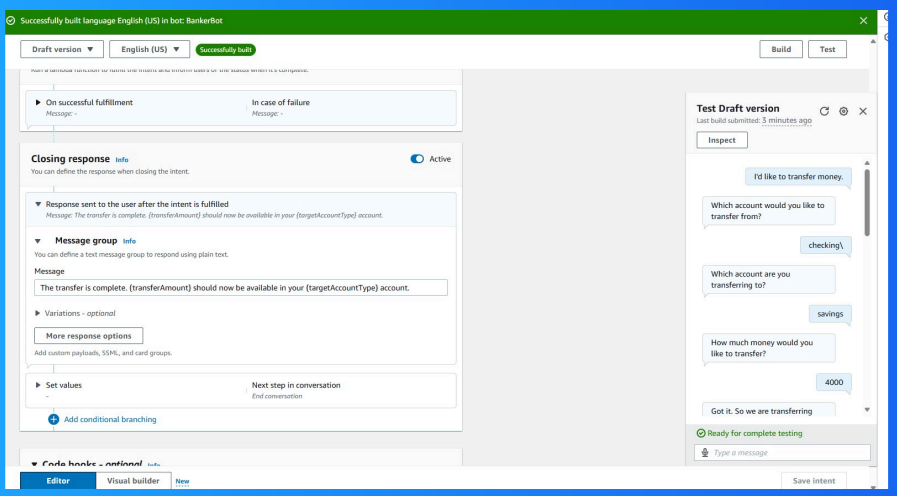
Build a Chatbot with Multiple Slots

Adithya Bellamkonda



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Introducing Today's Project!

What is Amazon Lex?

Amazon Lex is a service for building conversational interfaces using voice and text, leveraging advanced natural language processing and automatic speech recognition technologies.

How I used Amazon Lex in this project

I created a banker bot using Amazon Lex in 30 minutes, configuring intents, custom slots, and AWS Lambda for backend processing while maintaining conversation flow with context tags.

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

One thing I didn't expect in this project was how quickly I could set up and customize the banker bot using Amazon Lex, making the development process much smoother and faster than anticipated.

This project took me...

40 minutes in total, due to the trouble of trying to allow permissions and create a whole new resource policy on an alias through creating lambda permissions.

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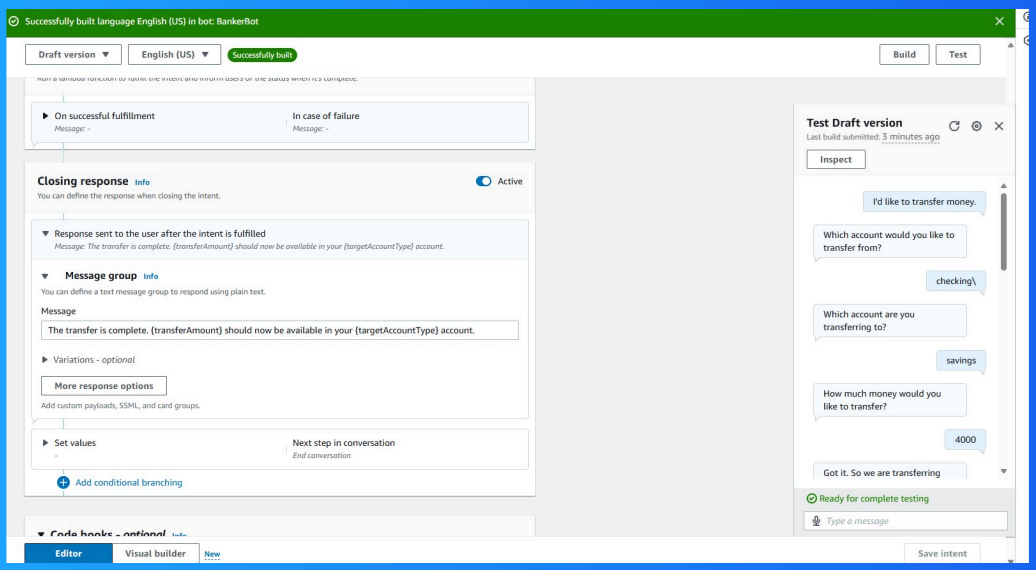
TransferFunds

I created the TransferFunds intent for my chatbot to handle user requests for transferring money between accounts, capturing essential details like source and destination accounts and the transfer amount.



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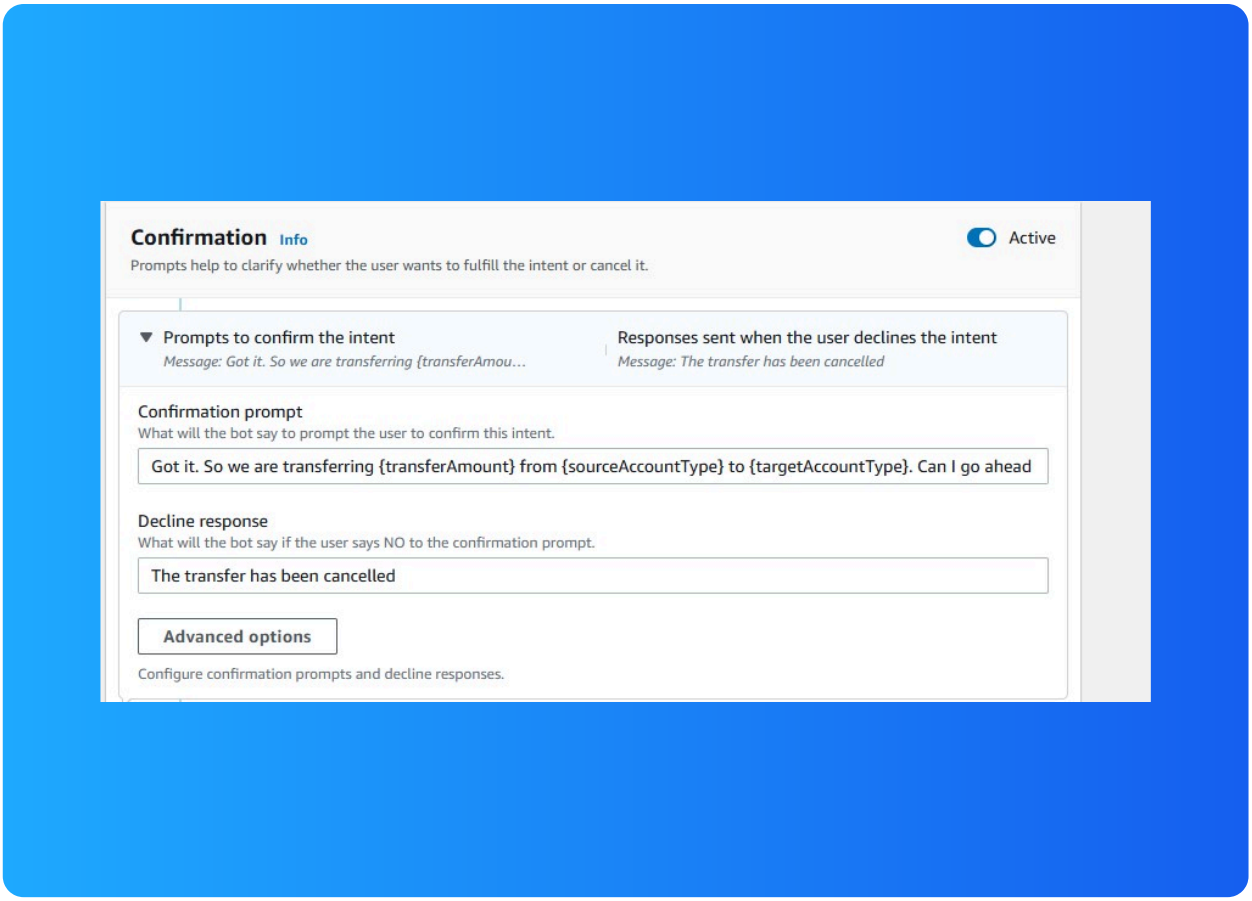
Using multiple slots

For this intent, I had to use the same slot type twice. This is because I needed to capture both the source and destination account details, ensuring the bot could accurately process the transfer request.

I also learned how to create confirmation prompts, which are messages that ask users to confirm their actions before proceeding. These prompts help ensure that the user is satisfied with the details provided.



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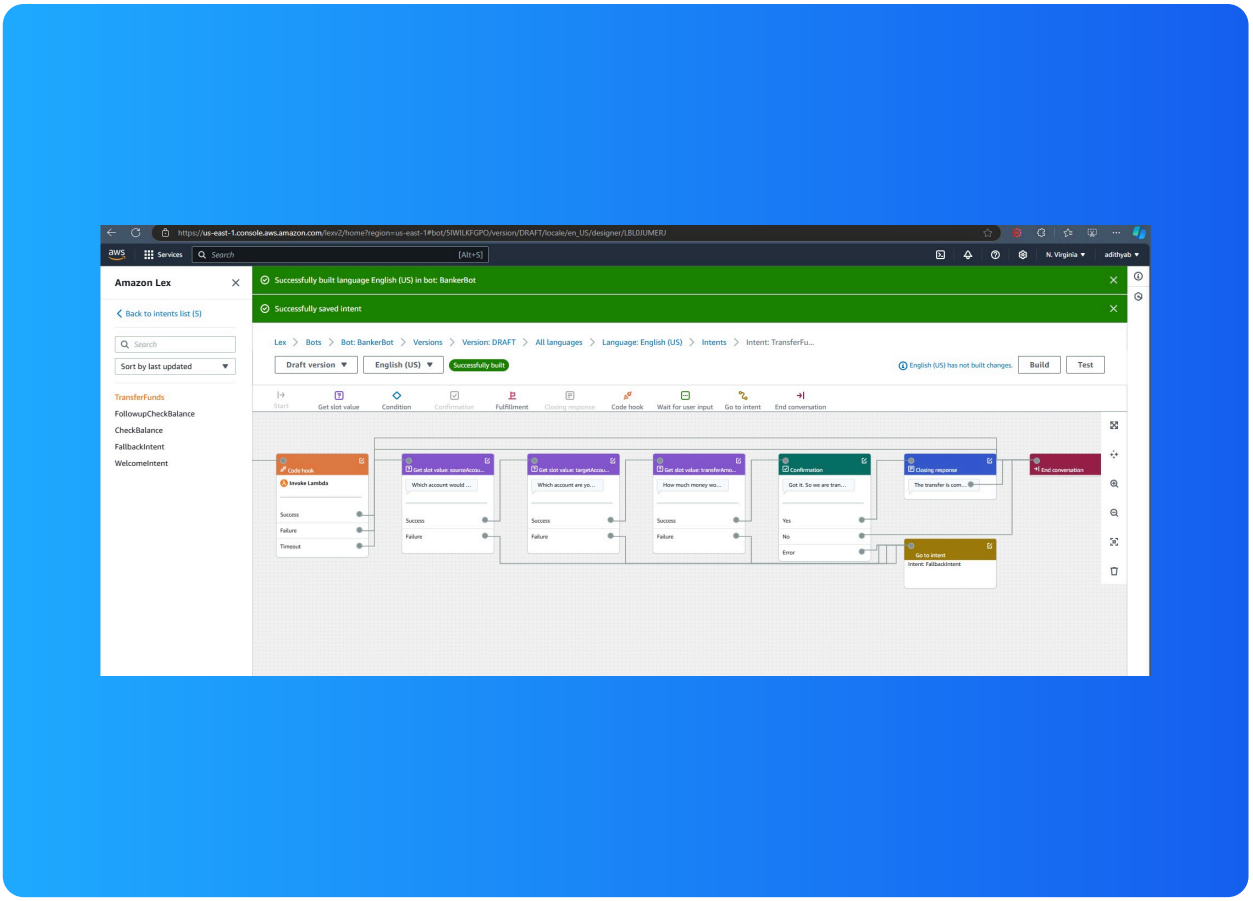
Exploring Lex features

Lex also has a special conversation flow feature that allows for managing multi-turn conversations seamlessly. This feature enables the bot to maintain context over multiple interactions, guiding users through complex tasks.

You can set up your intent using a visual builder! It offers an intuitive interface for designing conversational flows, allowing easy creation and modification of intents, slots, and responses without coding.



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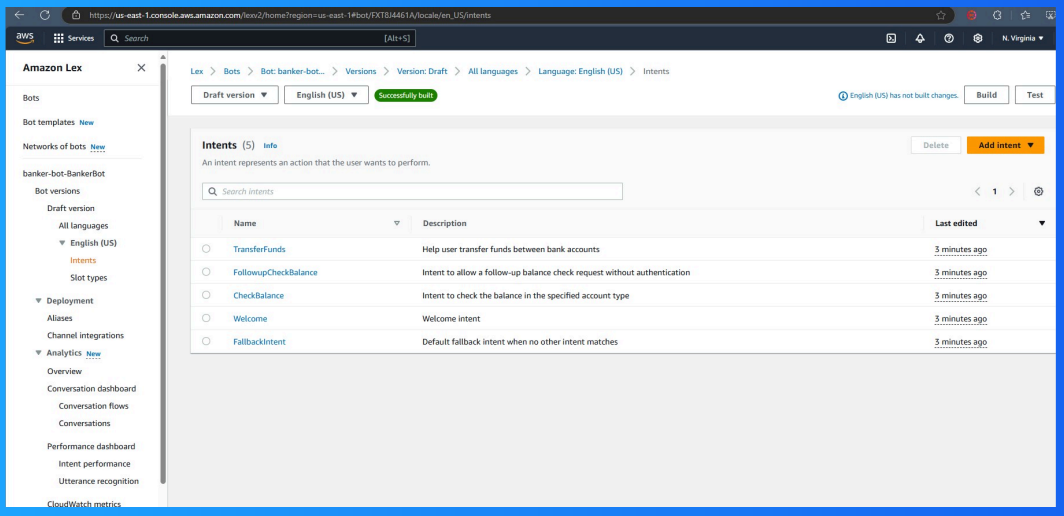
AWS CloudFormation

AWS CloudFormation is a service that allows you to define and provision AWS infrastructure as code. It enables you to create and manage a collection of related AWS resources, deploying them in an orderly and predictable fashion.

I used CloudFormation to automate the deployment of the necessary AWS resources for my chatbot, including creating Lambda functions, IAM roles, and any required configurations, ensuring a consistent setup.



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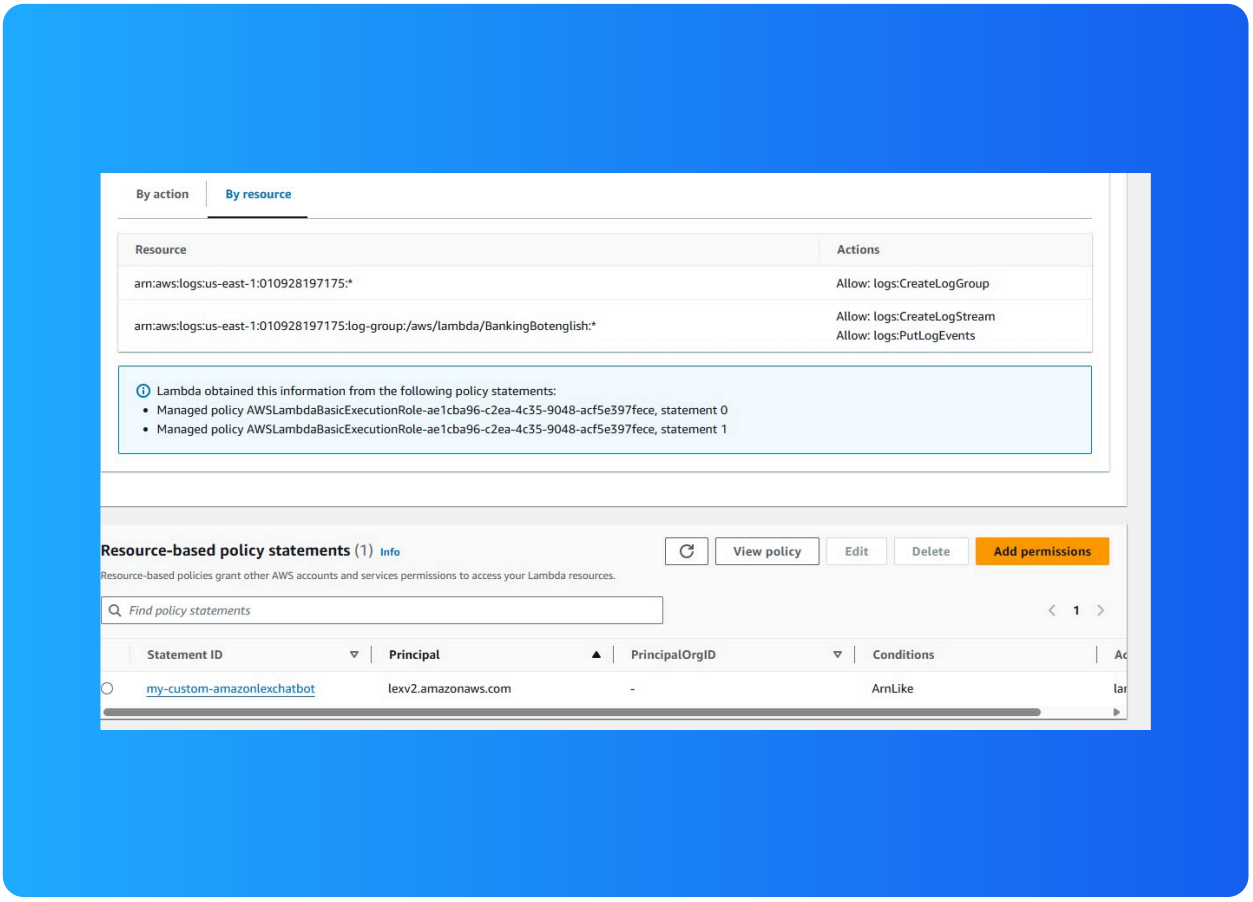
The final result!

Re-building my bot with CloudFormation took me about 20 minutes, streamlining the process and allowing for easy replication of the environment while maintaining consistency across deployments.

There was an error after I deployed my bot! The error was related to missing IAM permissions for the Lambda function. I fixed this by updating the CloudFormation template to include the necessary permissions and redeploying the stack.



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