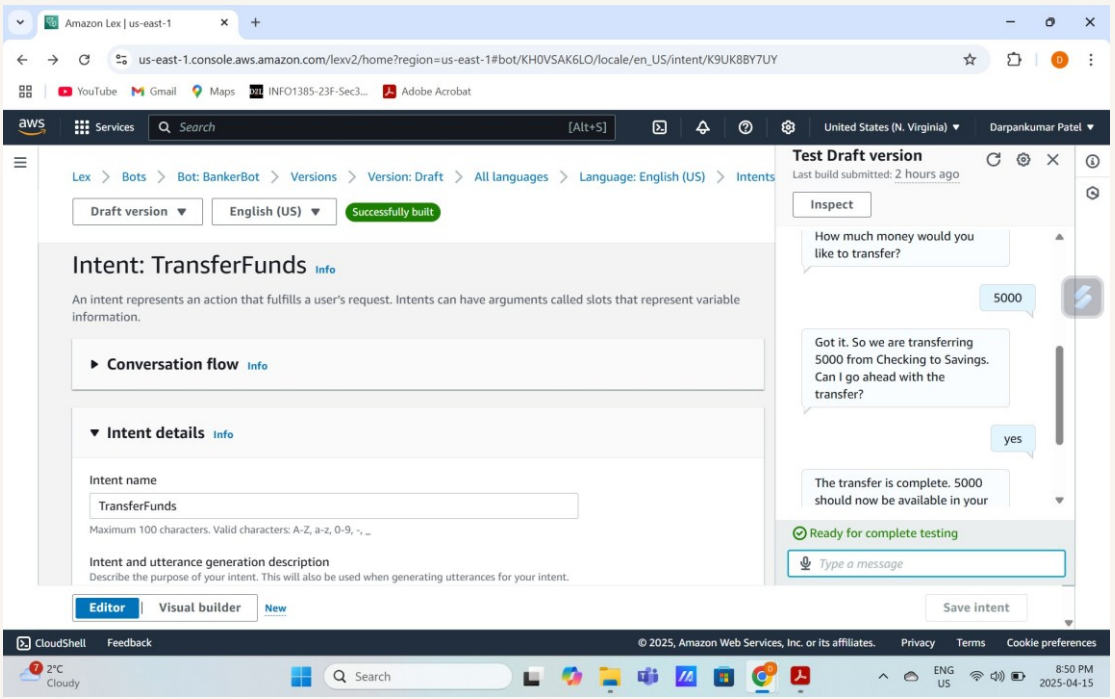
 Darpan Patel

Build a Chatbot with Multiple Slots



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Introducing Today's Project!

What is Amazon Lex?

Amazon Lex is an AWS service for building chatbots using voice and text. It helps create intelligent, conversational bots with natural language understanding, making tasks like answering questions or processing requests easier and faster to automate.

How I used Amazon Lex in this project

I used Amazon Lex to build a chatbot that understands user input, collects info like account type and birthdate, and triggers a Lambda function to return a random bank balance. It also managed conversations using context tags and follow-up intents.

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

One thing I didn’t expect in this project was how useful context tags would be for smooth follow-ups. I assumed basic slot filling was enough, but using input/output contexts made the bot much smarter and the chats feel more natural.

This project took me...

This project took me around 1 hour in total. Setting up the intents and slots was fairly quick, but fine-tuning things like Lambda integration, context tags, and troubleshooting took extra time to get everything running smoothly

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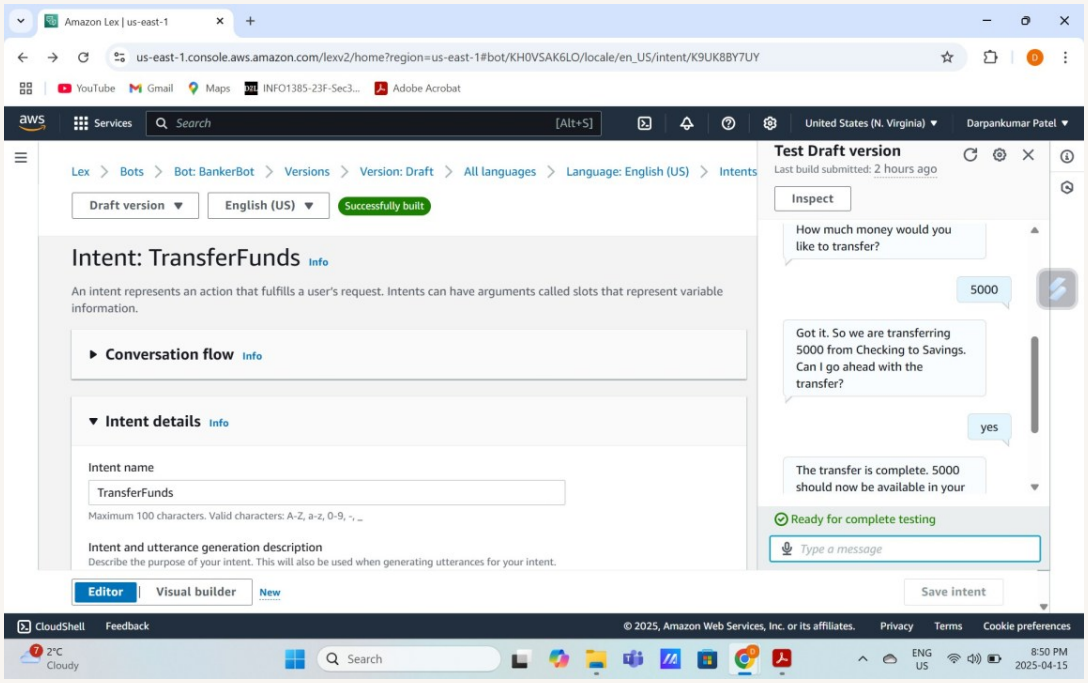
TransferFunds

An intent I created for my chatbot was TransferFunds, which lets users move money between accounts. It asks for the source and target account types and the amount, confirms the info with the user, and then triggers Lambda to complete the transfer.



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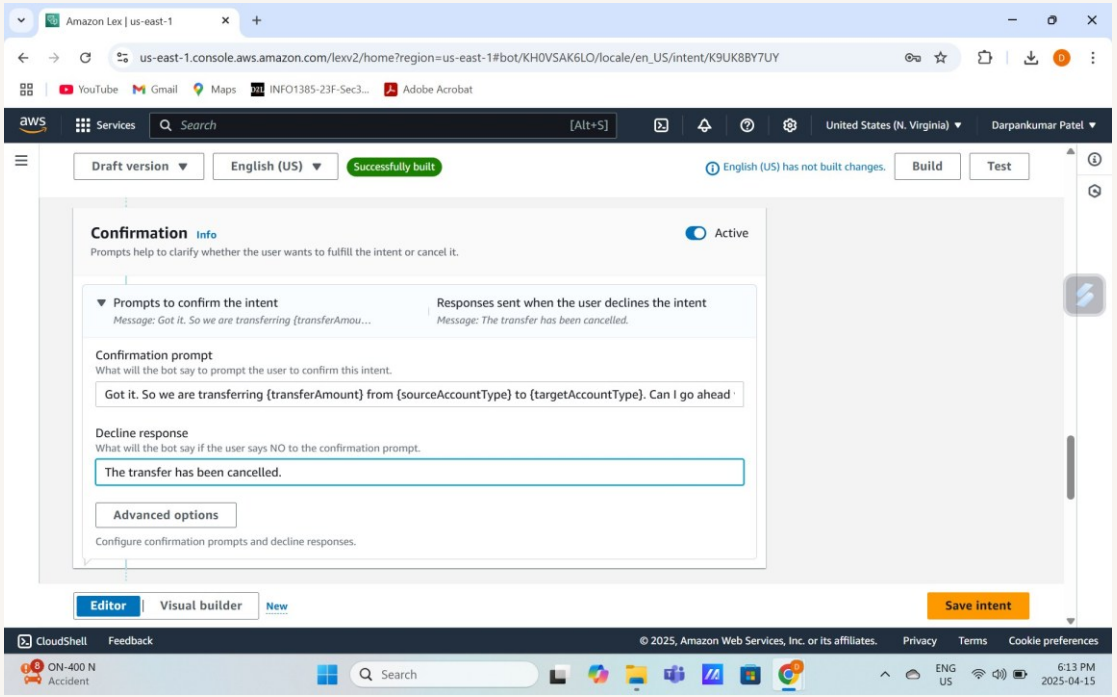
Using multiple slots

For this intent, I used the same slot type twice because both source and target accounts are bank account types. I gave them unique slot names— sourceAccountType and targetAccountType—to keep things clear.

I also learnt how to create confirmation prompts, which are messages that repeat key details back to the user and ask for confirmation before completing an action.
For example: “Can I go ahead with the transfer?” They help prevent mistakes.



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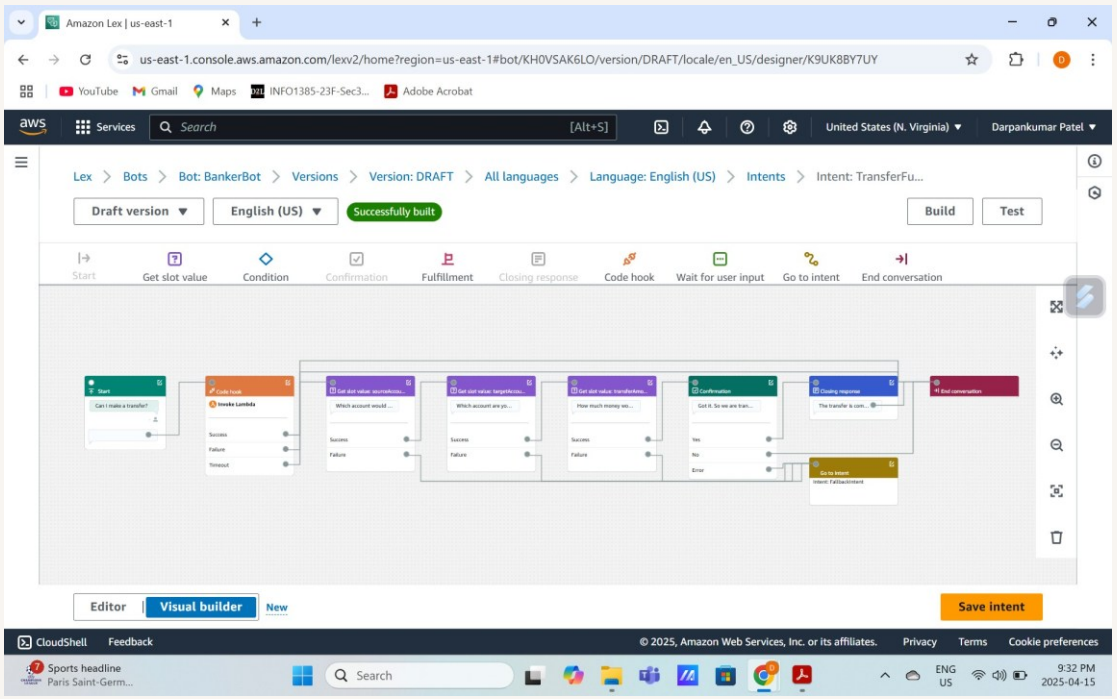
Exploring Lex features

Lex also has a conversation flow feature that visually displays each step in the chatbot's conversation. It shows the logical, chronological order and suggests actions with clickable "ghost" responses, helping design and refine the chatbot's logic.

You could also set up your intent using a visual builder! A visual builder lets you design chatbot flows with drag-and-drop. It helps you map out conversations, manage slots, and see how parts connect—making setup faster and easier.



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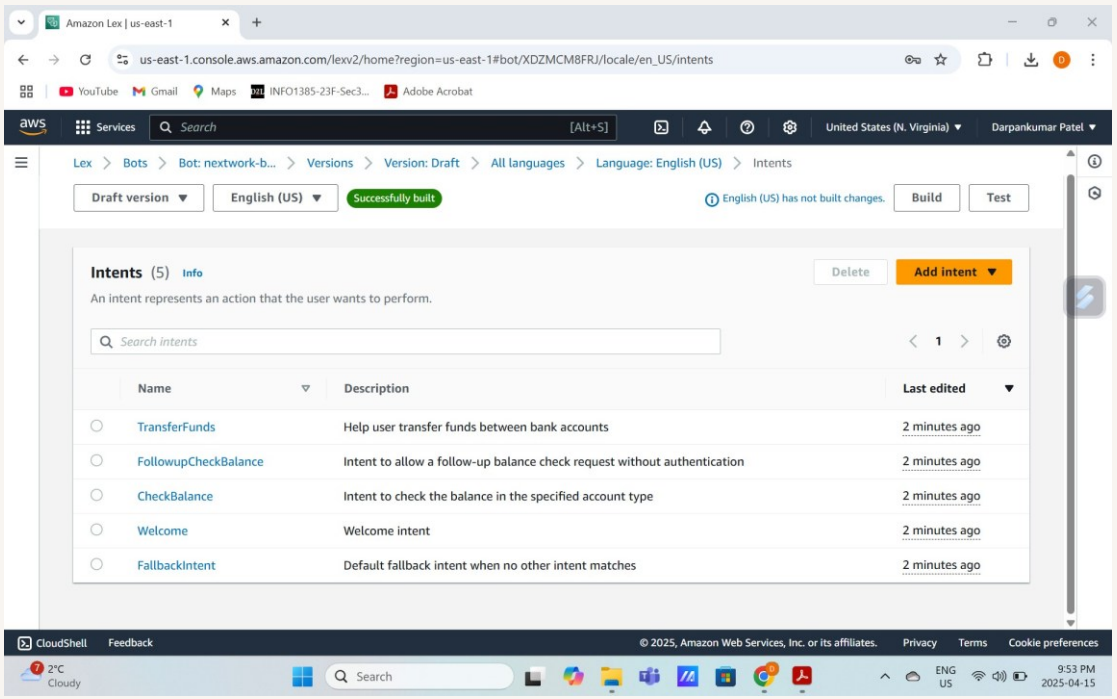
AWS CloudFormation

AWS CloudFormation is a service that lets you define AWS infrastructure as code. You write templates listing resources like Lambda or S3, and CloudFormation sets them up automatically—making deployment quicker and more consistent.

I used CloudFormation to deploy all the AWS resources for my BankerBot, like Lambda functions and permissions, using a single YAML template. It helped automate setup, saving time and avoiding manual errors.



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The final result!

Re-building my bot with CloudFormation took me around 15–20 minutes. Once I had the template ready, it was quick to launch all the resources automatically without having to configure each one manually.

There was an error after I deployed my bot! It happened due to wrong permissions in my Lambda function, so it wasn't passing values to Lex. I fixed it by updating the Lambda's IAM role and ensuring the response format matched what Lex expects.