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Build a Chatbot with Multiple Slots



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The screenshot shows a chatbot interface titled "Test Draft version" with a subtitle "Last build submitted: 4 minutes ago". The interface includes a "Inspect" button and a "visa" slot indicator. The conversation log is as follows:

- User message: "How much money would you like to transfer?"
- Bot response: "1000"
- User message: "Got it. So we are transferring 1000 from Credit to Savings. Can I go ahead with the transfer?"
- Bot response: "yes"
- User message: "The transfer is complete. 1000 should now be available in your Savings account."

At the bottom, there is a green checkmark icon and the text "Ready for complete testing". A message input field at the bottom says "Type a message".

A circular profile picture of a young man with red hair and a blue scarf, set against a dark background.

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Introducing Today's Project!

What is Amazon Lex?

Amazon Lex is an AWS service that allows you to build and deploy chat bots and integrate it with other AWS services.

How I used Amazon Lex in this project

I used Amazon Lex today to add a new transferfunds intent and quickly redeploy bankerbot through AWS Cloudformation.

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

I did not expect the constant difficulties in managing permissions when using the bankerbot deployed from Cloudformation.

This project took me...

This project took me about 40minutes.

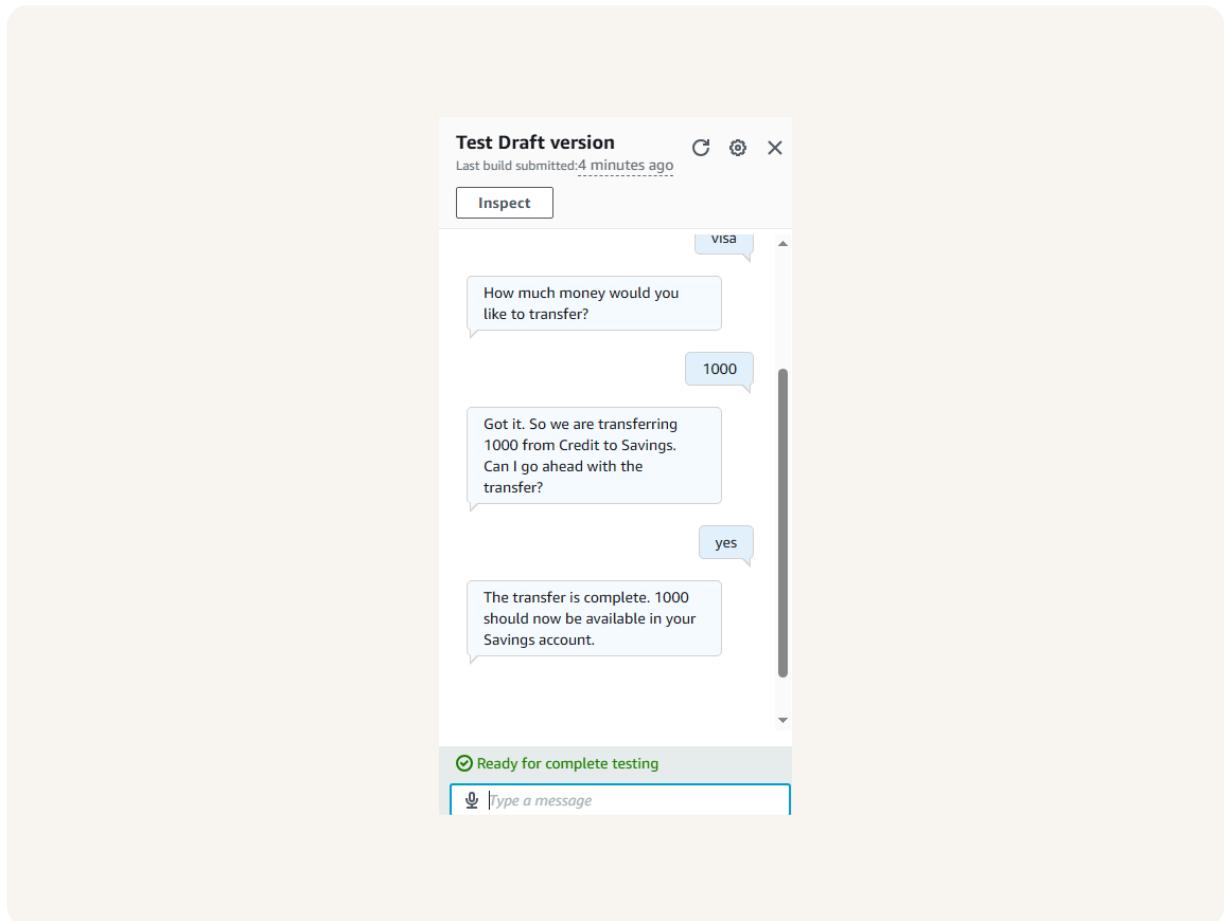


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TransferFunds

An intent I created for my chatbot was TransferFunds, which transfers a specified amount from one account to another.



Using multiple slots

For this intent, I had to use the same slot type twice. This is because both slots look for an account type that the bot requires for the transfer intent.

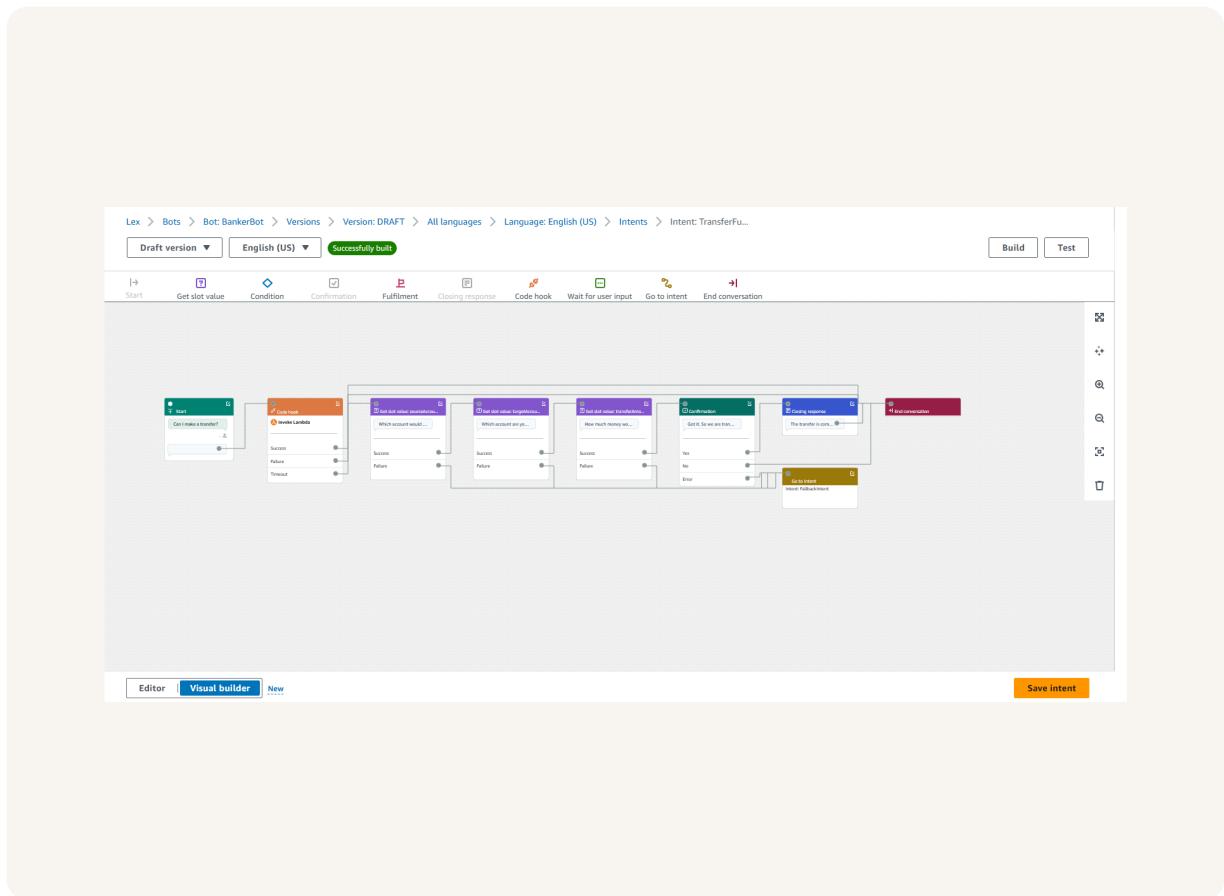
I also learnt how to create confirmation prompts, which are prompts where the user must confirm their intent before it is executed.

The screenshot shows the configuration for a Confirmation intent. At the top, there is a header with the title "Confirmation" and an "Info" link, followed by a status indicator "Active". Below the header, a note says "Prompts help to clarify whether the user wants to fulfil the intent or cancel it." The configuration is divided into two main sections: "Prompts to confirm the intent" and "Responses sent when the user declines the intent". Under "Prompts to confirm the intent", there is a "Confirmation prompt" section with the message "Got it. So we are transferring {transferAmount} from {sourceAccountType} to {targetAccountType}. Can I go ahead?". Under "Responses sent when the user declines the intent", there is a "Decline response" section with the message "The transfer has been cancelled.". At the bottom, 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 the intent is updated. It offers recommendations for what intents to setup.

You could also set up your intent using a visual builder! A visual builder allows you to visualize the flow of the chat bot's intent.



AWS CloudFormation

AWS CloudFormation is service that gives you an easy way to create and deploy AWS resources. It's an infrastructure as code service that describes all the resources you want to create and their dependencies as code and manage its resources.

I used CloudFormation to quickly deploy nextwork banker bot.

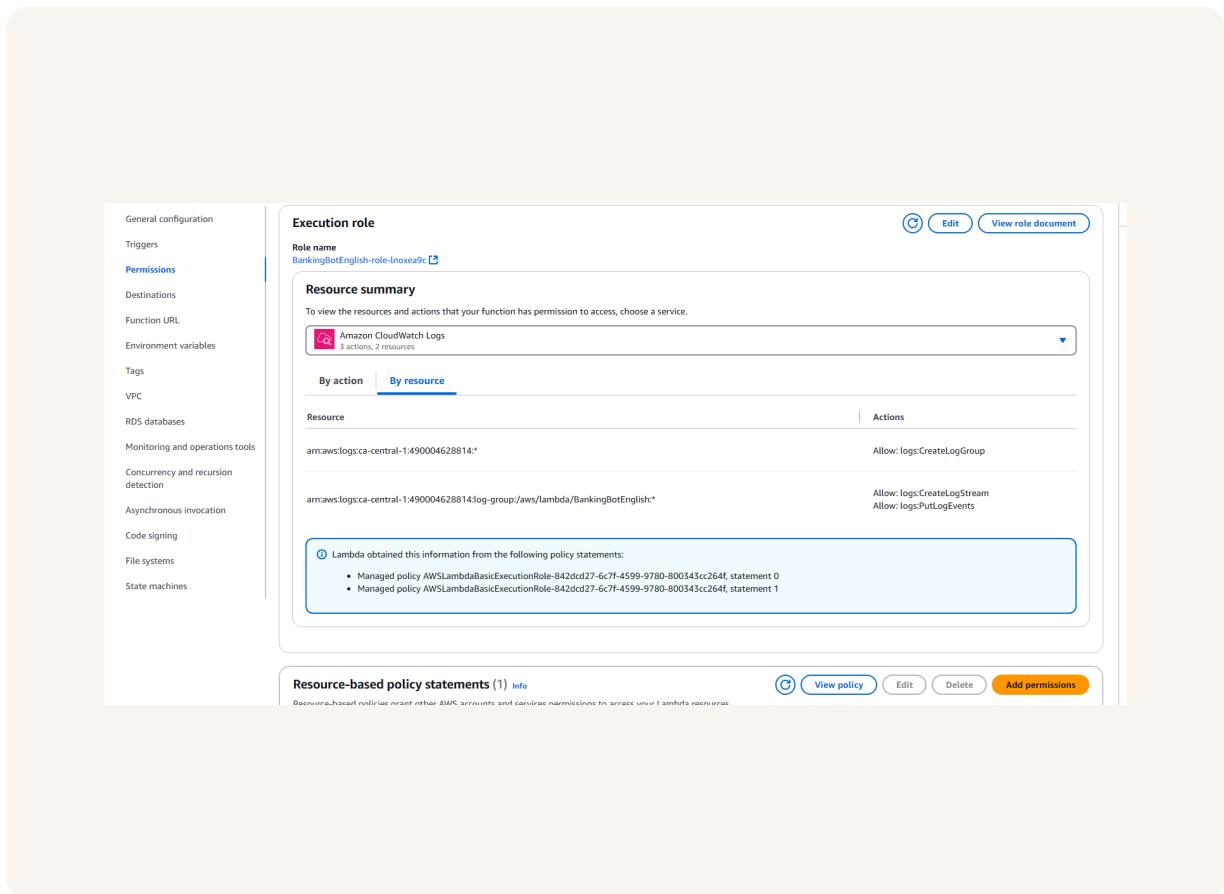
The screenshot shows the AWS Lex Intents interface. The top navigation bar includes links for Lex, Bots, Bot: nextwork-b..., Versions, Version: Draft, All languages, Language: English (US), and Intents. Below the navigation are buttons for Draft version, English (US), Successfully built, Build, and Test. The main section is titled "Intents (5) Info" and contains a note: "An intent represents an action that the user wants to perform." A search bar labeled "Search intents" is present. A table lists five intents:

Name	Description	Last edited
TransferFunds	Help user transfer funds between bank accounts	Now
FollowupCheckBalance	Intent to allow a follow-up balance check request without authentication	Now
CheckBalance	Intent to check the balance in the specified account type	Now
Welcome	Welcome intent	Now
FallbackIntent	Default fallback intent when no other intent matches	Now

The final result!

Re-building my bot with CloudFormation took me 2 minutes.

There was an error after I deployed my bot! The error was caused by a lack of permissions from the lambda function to the bot. I fixed this by adding permission to the lambda function for my user for the bot.





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