

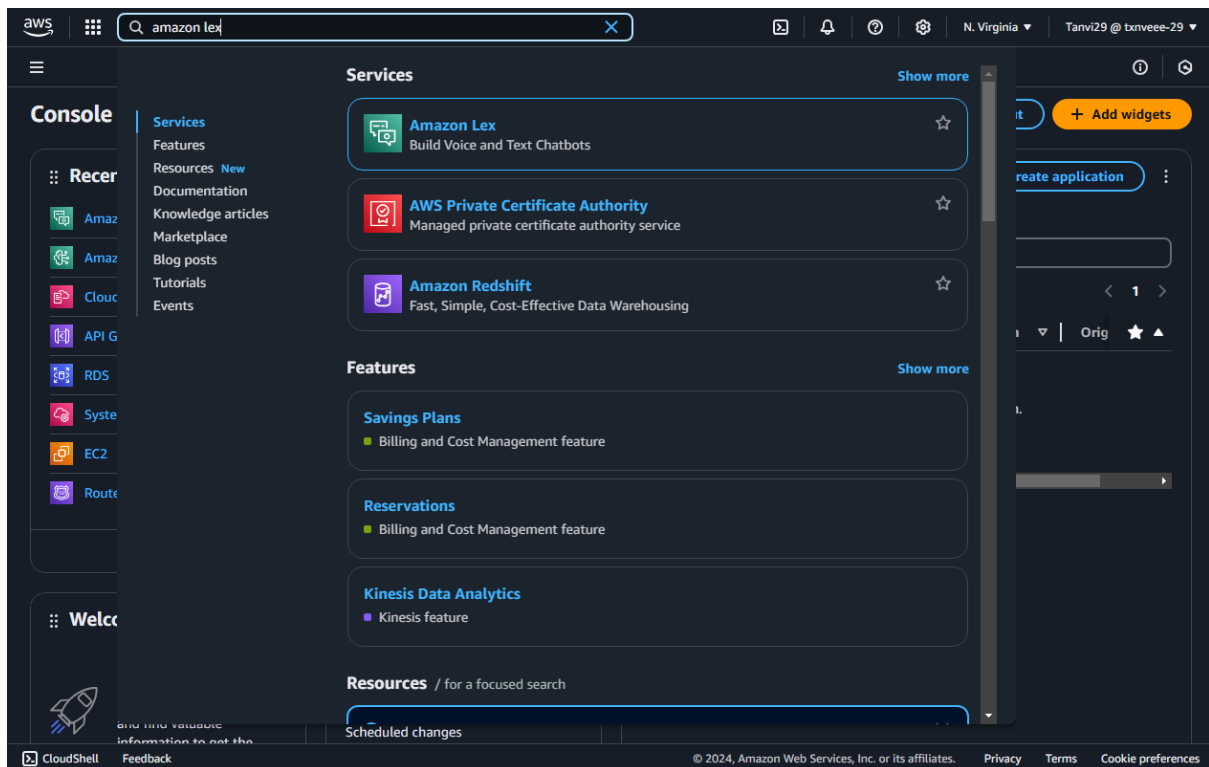
• PROJECT

Build a Chatbot with Amazon Lex



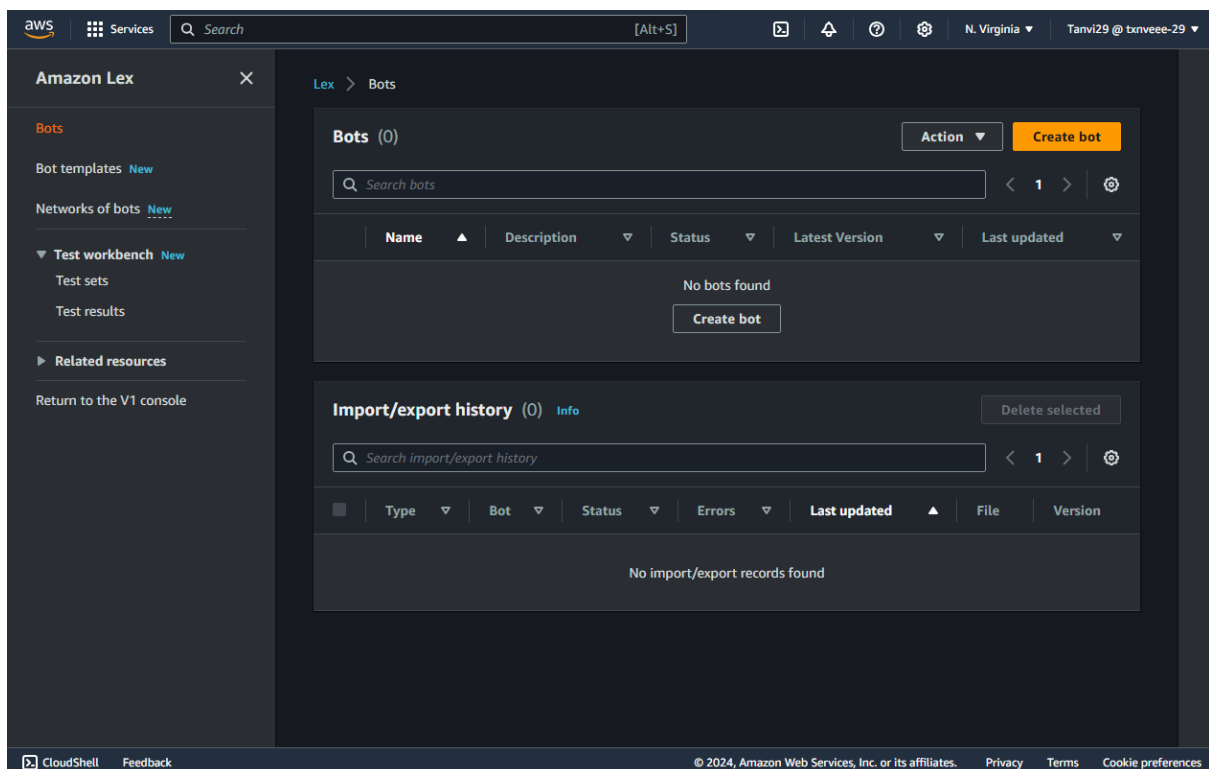
Log in to your AWS account.

Navigate to **Amazon Lex** (type lex into the search bar of your console).



Select **Create bot**.

Select Create a **blank bot**.



For **Bot name**, enter **Bankerbot**

For **Description**, enter **Banker Bot to help customer check their balance and make transfers.**

The screenshot shows the 'Configure bot settings' page in the AWS Lex console. The left sidebar indicates 'Step 1: Configure bot settings' and 'Step 2: Add languages'. The main content area is titled 'Configure bot settings' and includes an 'Info' link. Under the 'Creation method' section, there are two tabs: 'Traditional' and 'Generative AI'. Three options are listed: 'Create a blank bot' (selected), 'Start with an example', and 'Start with transcripts'. The 'Bot configuration' section contains a 'Bot name' field with the value 'BankerBot' and a 'Description - optional' field with the text 'Banker Bot to help customer check their balance and make transfers.'.

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Lex > Bots > Create bot

Step 1
Configure bot settings

Step 2
Add languages

Configure bot settings Info

Creation method

Traditional Generative AI

- ☒ **Create a blank bot**
Create a basic bot with no preconfigured languages, intents, and slot types.
- ☐ **Start with an example**
An example bot has preconfigured languages, intents, and slot types. You can change these settings.
- ☐ **Start with transcripts**
Automatically generate intents from conversation transcripts that you upload. Only English (US) language is available when starting with a transcript.

Bot configuration

Bot name

BankerBot

Maximum 100 characters. Valid characters: A-Z, a-z, 0-9, -, _

Description - *optional*
This description appears on bot list page. It can help you identify the purpose of your bot.

Banker Bot to help customer check their balance and make transfers.

Maximum 200 characters.

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Under **IAM Permissions**, select **Create a role with basic Amazon Lex permissions.**

The screenshot shows the 'IAM permissions' page in the AWS IAM console. The left sidebar indicates 'IAM permissions' and 'Info'. The main content area is titled 'IAM permissions' and includes an 'Info' link. Under the 'Runtime role' section, there are two options: 'Create a role with basic Amazon Lex permissions.' (selected) and 'Use an existing role.'. A warning message states: 'Creating a role takes a few minutes. Don't delete the role or edit the trust or permissions policies in this role until we've finished creating it.' The 'New role' section shows the role name 'AWSServiceRoleForLexV2Bots_ZOOQ26CR1R'. The 'Children's Online Privacy Protection Act (COPPA)' section has a checkbox for 'Is use of your bot subject to the Children's Online Privacy Protection Act (COPPA)?' with 'No' selected. The 'Idle session timeout' section has a field for 'Session timeout'.

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IAM permissions Info

IAM roles are used to access other services on your behalf.

Runtime role

Choose a role that defines permissions for your bot. To create a custom role, use the IAM console.

- ☒ **Create a role with basic Amazon Lex permissions.**
- ☐ Use an existing role.

Creating a role takes a few minutes. Don't delete the role or edit the trust or permissions policies in this role until we've finished creating it.

New role

Amazon Lex creates a runtime role with permission to upload to Amazon CloudWatch Logs.

AWSServiceRoleForLexV2Bots_ZOOQ26CR1R

Children's Online Privacy Protection Act (COPPA) Info

Is use of your bot subject to the [Children's Online Privacy Protection Act \(COPPA\)](#)?

- ☐ Yes
- ☒ No

Idle session timeout

You can configure how long a session is maintained when the user does not provide any input and the session is idle. Amazon Lex retains context information until a session ends.

Session timeout

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Under **Children's Online Privacy Protection Act (COPPA)**, Select **No**.

Under **Idle session timeout**, keep the default of **5 minutes**.

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Creating a role takes a few minutes. Don't delete the role or edit the trust or permissions policies in this role until we've finished creating it.

New role
Amazon Lex creates a runtime role with permission to upload to Amazon CloudWatch Logs.
AWSServiceRoleForLexV2Bots_ZOOQ26CR1R

Children's Online Privacy Protection Act (COPPA) Info

Is use of your bot subject to the [Children's Online Privacy Protection Act \(COPPA\)](#)?

☐ Yes
☒ No

Idle session timeout
You can configure how long a session is maintained when the user does not provide any input and the session is idle. Amazon Lex retains context information until a session ends.

Session timeout
5 minute(s)
By default, session duration is 5 minutes, but you can specify any duration between 1 and 1440 minutes (24 hours).

► **Advanced settings - optional** Info

Cancel Next

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Select **Next**.

Keep the **language** as **English** so you can explore Lex's full set of features in this project.

Under **Voice interaction**, click on the dropdown that says **Danielle**.

For **Intent classification confidence score threshold**, keep the default value of **0.40**.

Select **Done**.

The screenshot shows the 'Add language to bot' page in the AWS Lex console. The page is titled 'Add language to bot' with an 'Info' icon. On the left, there's a sidebar with 'Step 1: Configure bot settings' and 'Step 2: Add languages'. The main content area is for adding a language. It has a section 'Language: English (US)' with a dropdown menu set to 'English (US)'. Below this is a 'Description - optional' text area. Further down is the 'Voice interaction' section, which includes a dropdown for 'Danielle' and a 'Voice sample' text area with the text 'Hello, my name is Danielle. Let me know how I can assist you.' and a 'Play' button. At the bottom of this section is the 'Intent classification confidence score threshold' set to '0.40'. At the very bottom of the page are buttons for 'Cancel', 'Add another language', and 'Done'.

When your bot is created, you will automatically see a page called **Intent: NewIntent**.

Under **Intent details**, enter **WelcomeIntent** for the Intent name.

Add the description: **Welcoming a user when they say hello.**

The screenshot shows the 'Intent: NewIntent' page in the AWS Lex console. The page has a header with 'Amazon Lex' and a search bar. On the left, there's a sidebar with 'Back to intents list (2)', a search bar, and a list of intents: 'NewIntent' (marked as 'Unsaved') and 'FallbackIntent'. The main content area is titled 'Intent: NewIntent' with an 'Info' icon. It has a section 'Conversation flow' and a section 'Intent details'. The 'Intent details' section has a text input for 'Intent name' with the value 'WelcomeIntent', a text area for 'Intent and utterance generation description' with the text 'Welcoming a user when they say hello.', and a text input for 'ID' with the value 'CX5BVAAHJS'. At the bottom of the page are buttons for 'Editor', 'Visual builder', and 'Save intent'.

Scroll down to the **Sample utterances** panel.

Click the **Plain Text** button

Copy the text below, which represent the user inputs (called utterances) that will trigger this input, and paste it into the text window:

Hi

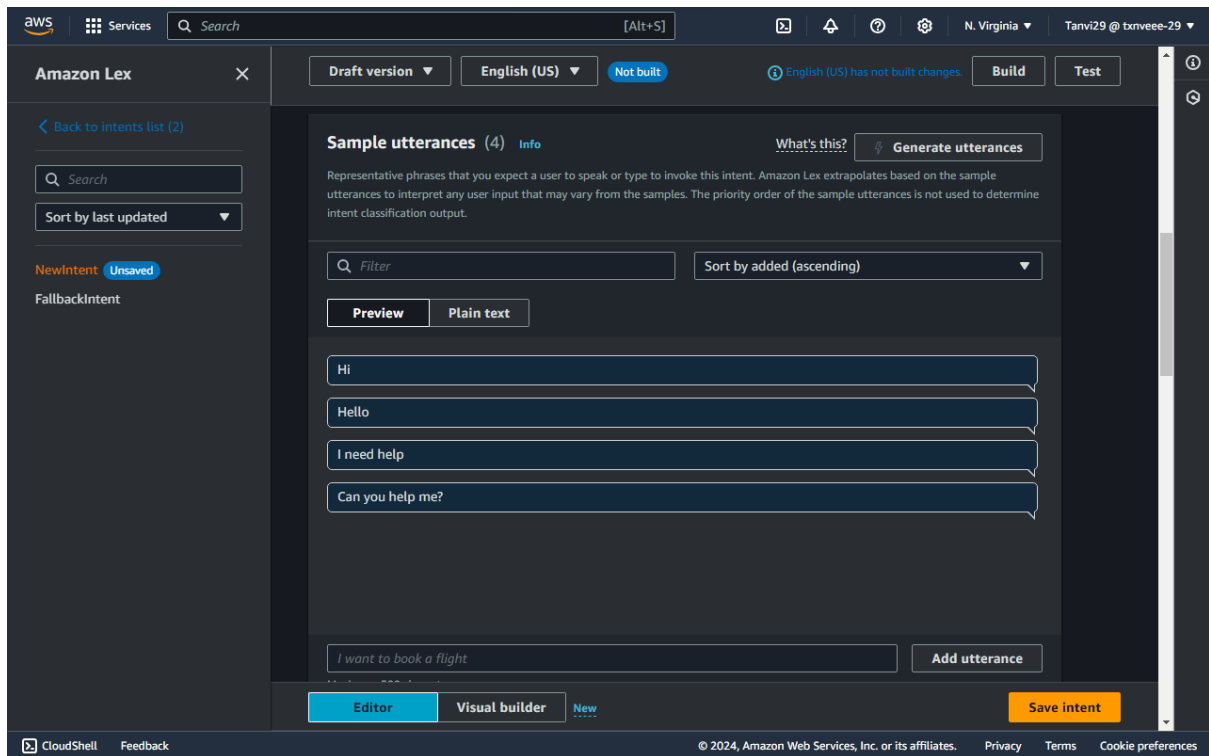
Hello

I need help

Can you help me?

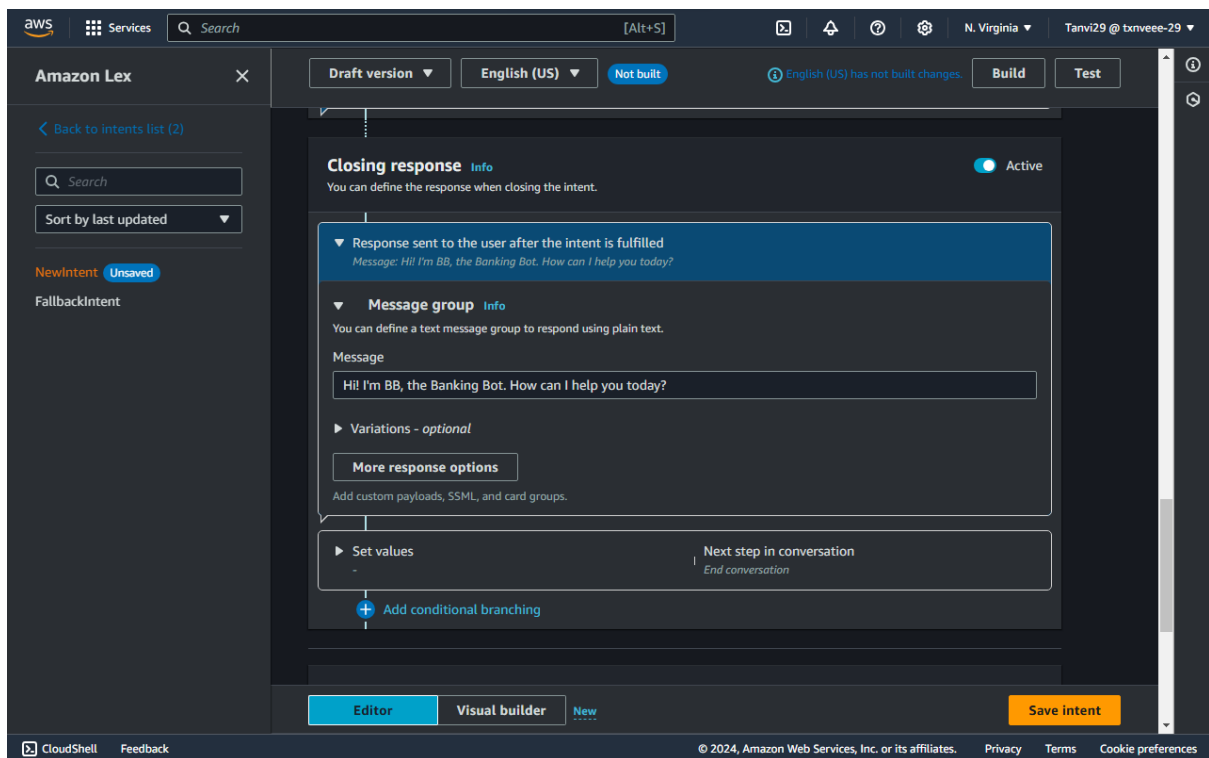
The screenshot shows the Amazon Lex console interface. The top navigation bar includes the AWS logo, 'Services', a search bar, and user information. The main header for the Amazon Lex console shows 'Draft version', 'English (US)', and a 'Not built' status. The 'Sample utterances' panel is active, displaying a list of four sample utterances: 'Hi', 'Hello', 'I need help', and 'Can you help me?'. The 'Plain text' tab is selected, and the 'Preview' button is visible at the bottom. The 'Save intent' button is also present.

Click back to the **Preview** button to see these utterances in chat form.



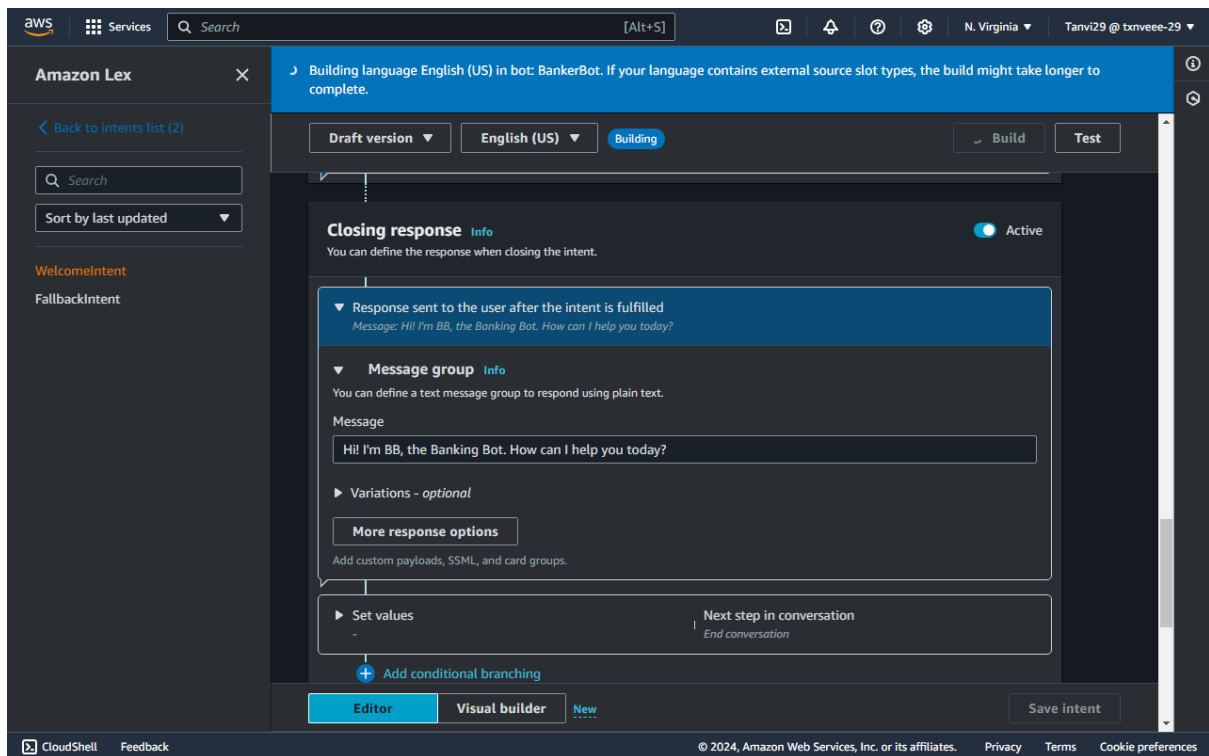
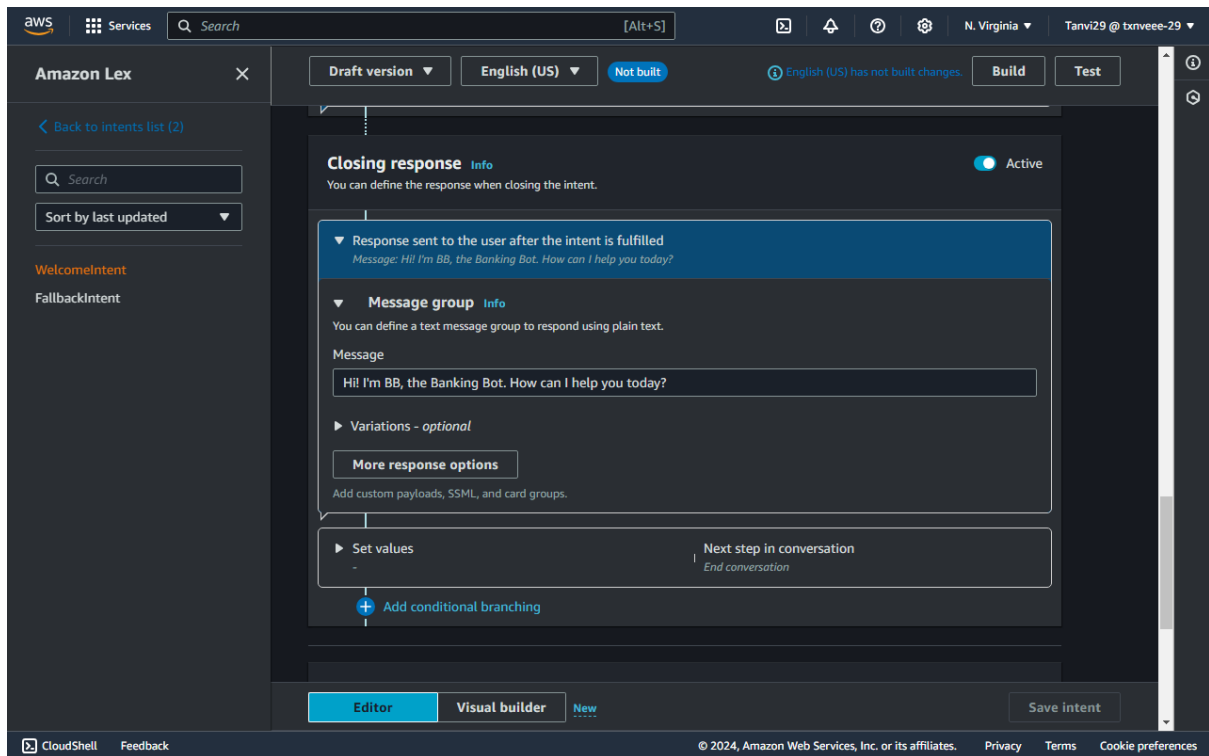
Scroll down to **Closing response**, and expand the arrow for **Response sent to the user after the intent is fulfilled**.

In the **Message** field, enter the following message: **Hi! I'm BB, the Banking Bot. How can I help you today?**



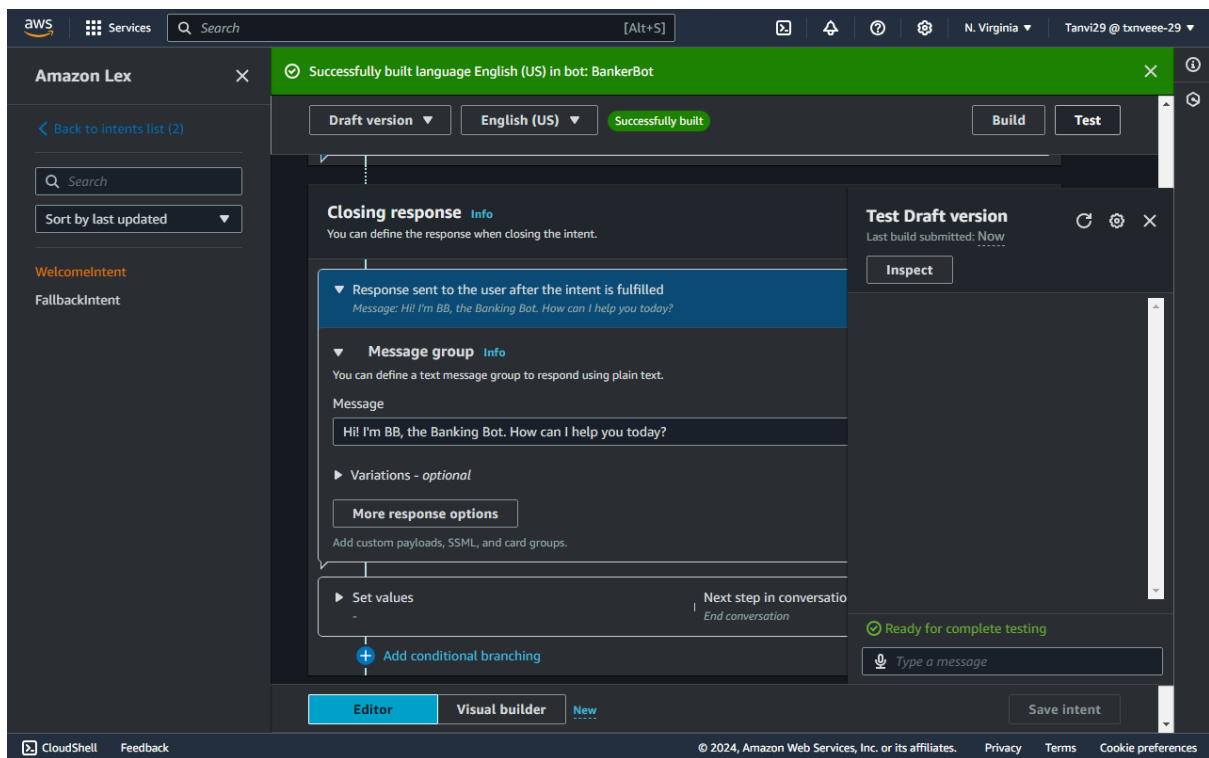
Choose **Save intent**.

Choose **Build**, which is close to the top of the screen.

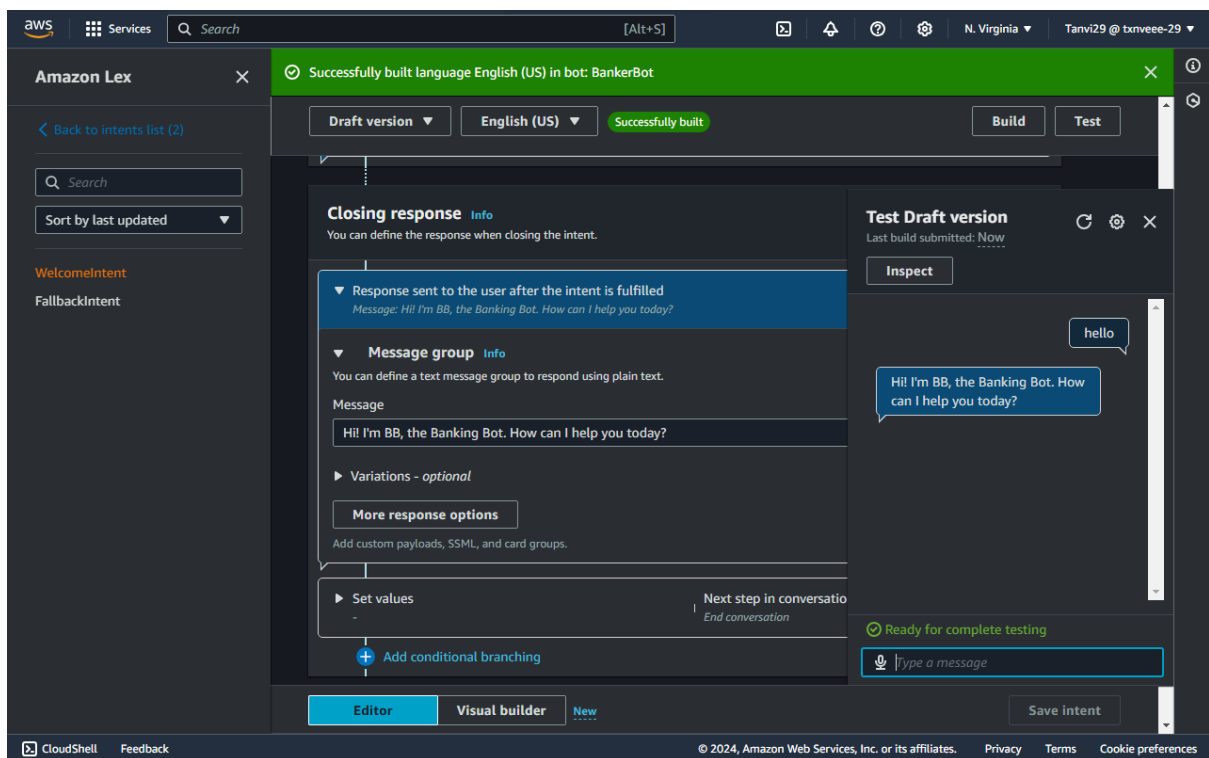


Choose **Test**.

The following dialog will pop up, and you can interact with the bot by entering your opening message.



Trying saying Hello, it gives a response.



Now try different phrases and see what comes up!

The ones that you have literally defined in your Utterances section will definitely work.

But what about other Utterances?

Since we have an intent classification confidence score of 0.40, other phrases with similar intents to the ones we've defined could work too.

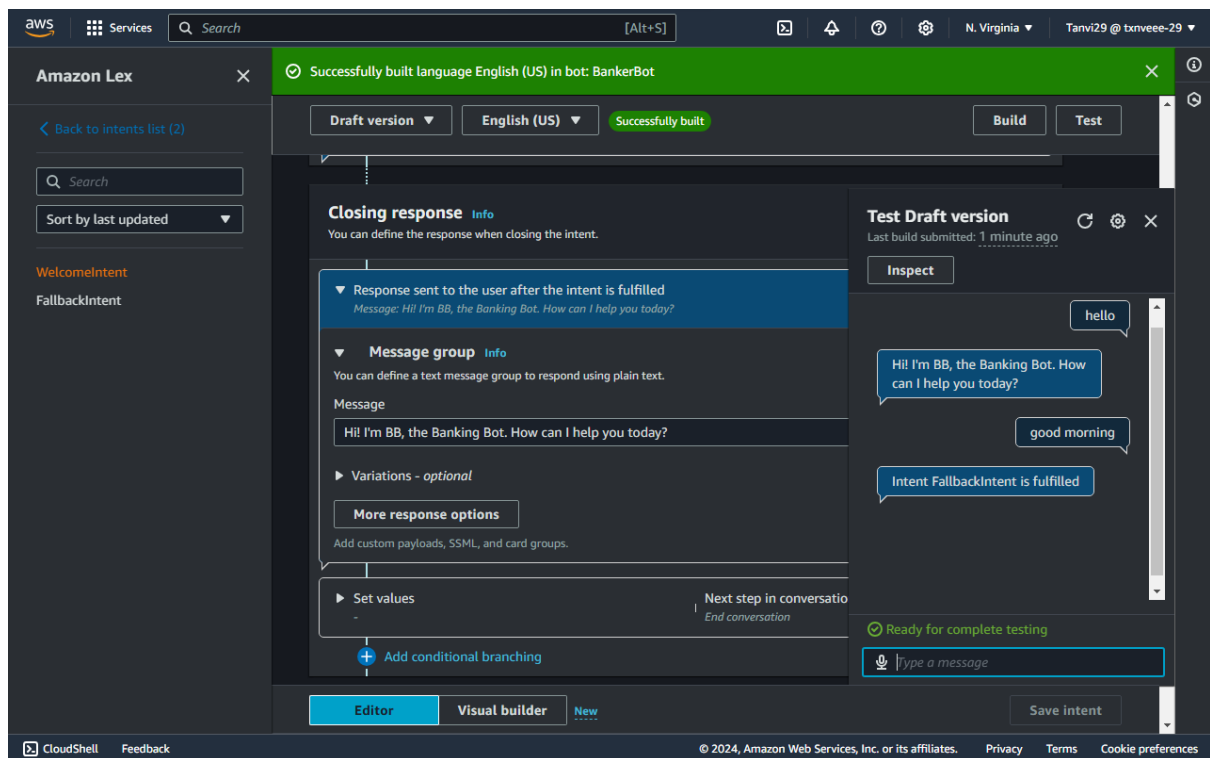
Test these:

Help me

Hiya

How are you

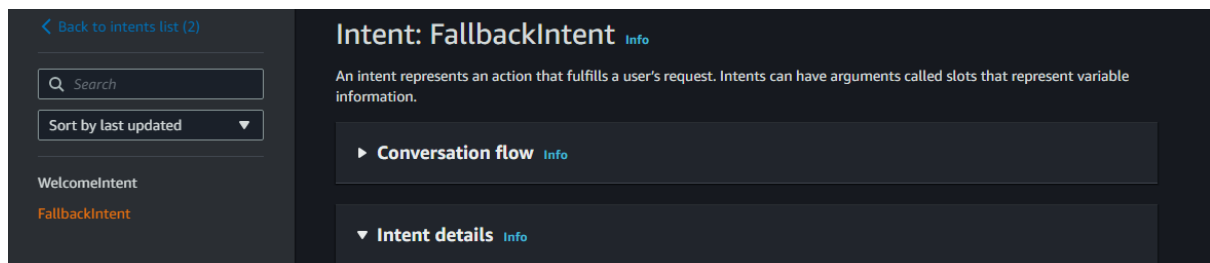
Good morning



So our chatbot will “**Intent FallbackIntent is not fulfilled**” when it doesn’t understand the user.

In this step, we will customize **FallbackIntent** to send user-friendly messages.

In your left hand navigation panel, choose **FallbackIntent**.



The default FallbackIntent message you saw just now (“**Intent FallbackIntent is fulfilled**”) can be a little confusing.

Scroll down to **Closing responses**.

Expand the arrow for **Response sent to the user after the intent is fulfilled**.

In the **message** field, add the following text: **Sorry I am having trouble understanding. Can you describe what you'd like to do in a few words? I can help you find your account balance, transfer funds and make payment.**

The screenshot shows the Amazon Lex console interface. On the left, there's a sidebar with 'Amazon Lex' and a search bar. The main area is titled 'Closing response' and shows the configuration for a specific intent. The 'Response sent to the user after the intent is fulfilled' section is expanded, displaying a message field with the text: 'Sorry I am having trouble understanding. Can you describe what you'd like to do in a few words? I can help you find your account balance, transfer funds and make a payment.' The 'Build' button is highlighted in orange.

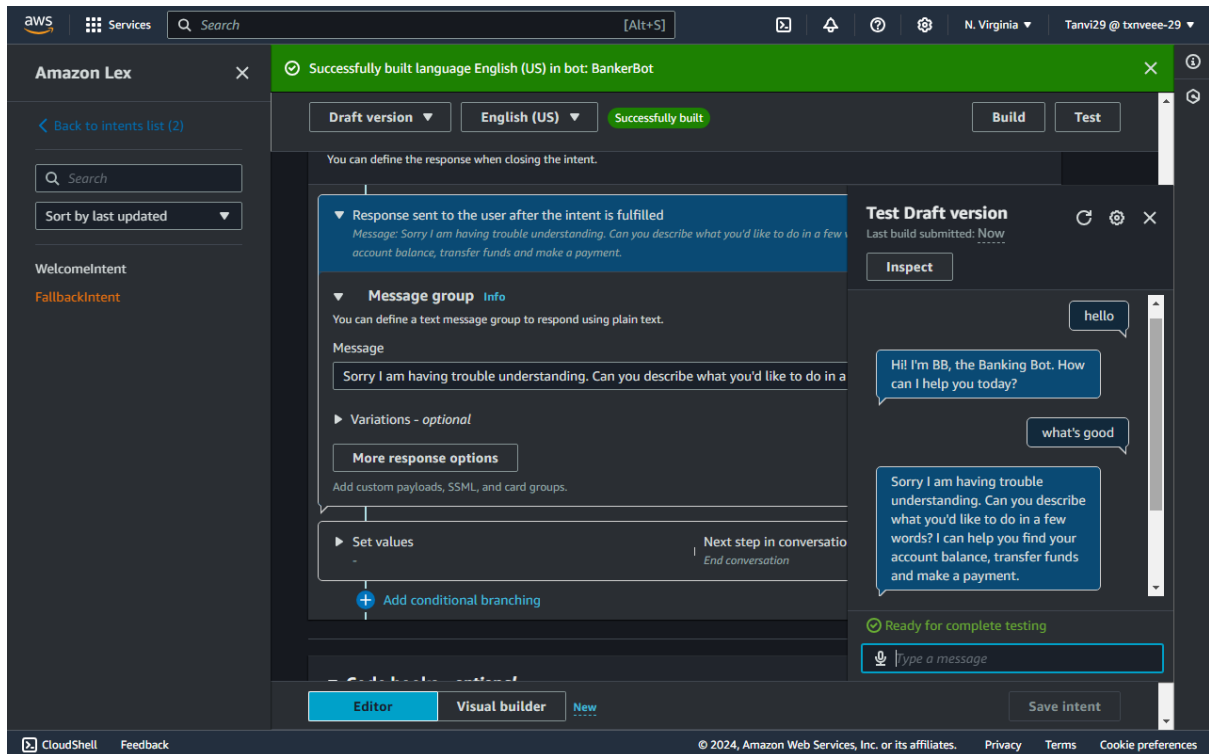
Choose **Save intent**.

Choose **build**.

The screenshot shows the Amazon Lex console interface after clicking the 'Build' button. A blue banner at the top indicates that the build process is in progress: 'Building language English (US) in bot: BankerBot. If your language contains external source slot types, the build might take longer to complete.' The 'Build' button is now disabled, and the 'Save intent' button is visible at the bottom right.

Choose **test**.

Try saying **What's good**.



Time to clean up those resources - let's make sure we don't rack up any charges.

➤ **STEPS BELOW:**

Head to your **Amazon Lex** console.

Choose **Bots** on the left-hand sidebar.

Choose the circle radio button next to BankerBot.

Choose **Delete** from your **Action** drop-down.

Choose **Delete**.

