Alexa Skill Terminology

Alexa, ask "nonsmoker" "how many days it's been since I quit"
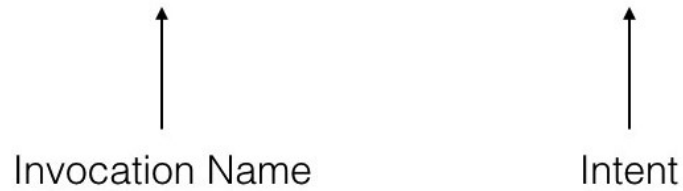
Invocation Name   Intent

Each Alexa skill is comprised of an "Invocation Name," which you can think of as your app name, a set of "Intents," the phrases that map to each intent, and the software that can detect the intent and return an appropriate result.

"Hello, World" Skill

Alexa, tell <your last name> to say hello world.

Build your first Alexa Skill

We are going to create an adaptation of the classic "Hello, World!" program. Once we finish, Alexa will learn this "skill" and be able to appropriately respond to new voice commands that apply to it.
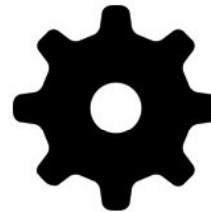
Alexa Skill Steps



Lambda

Alexa Skills Portal

Test

Customize

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Building your first skill will comprise of **four steps**.

- First we're going to copy the "Hello, World!" code into Amazon Lambda, which will be responsible for running the code.
- Next we're going to set up our skill in the Amazon Alexa Skills Developer Portal, and link our lambda account to that skill.
- Then we're going to test using the Amazon service simulator and on an Alexa-enabled device.
- Lastly, we'll walk through the steps of customizing your skill to your needs.

bit.ly/alexaskill
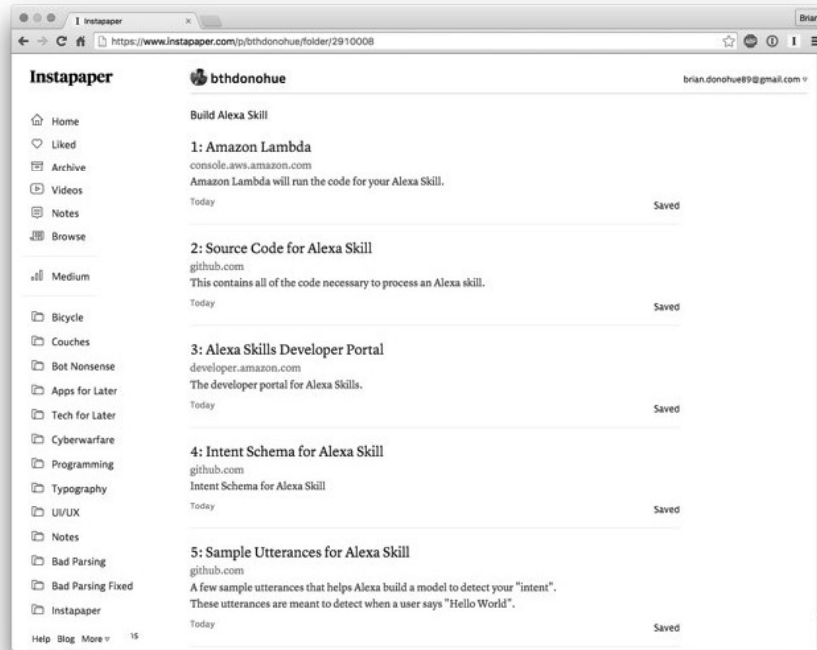
Build your first Alexa Skill   5

I put together a list of resources at https://bit.ly/alexaskill, which is a public Instapaper folder I've set up to make sharing my list of links easier. The slides will refer to each of these links. I'd recommend having this open in a separate tab, so you can refer back to the links easily.
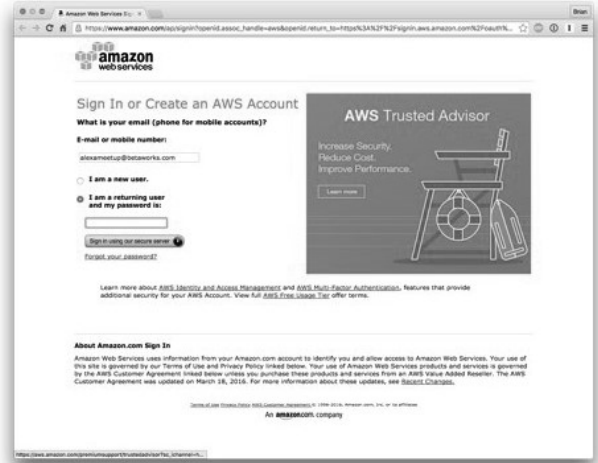
Step 1

Step 1: Lambda

Lambda

1a: Amazon Lambda Login

· Click Link 1

· Login or create an account with the same Amazon account that your Echo is linked to.

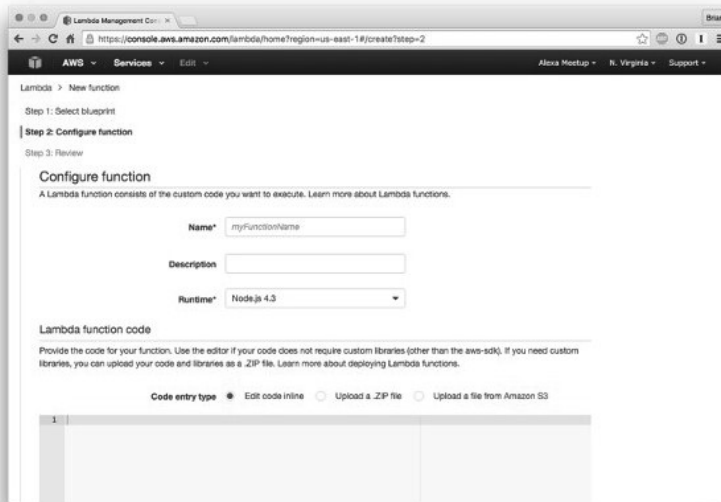• Login using the same Amazon account to which your Alexa device is linked (recommended) or create a new account.
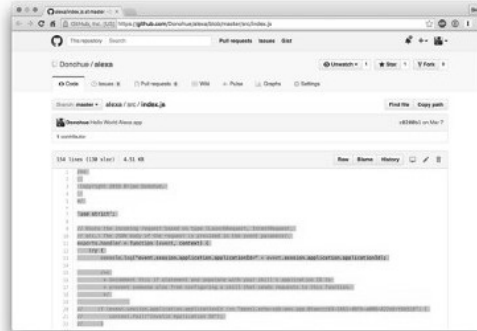
1b: Amazon Lambda Function

Enter the name of your Lambda function. This name needs to be unique. For now, you can simply use "HelloWorld". In the top right, it

should say "N. Virginia". If that's not the case, please select "US-East (N. Virginia)" from the dropdown menu.

1c: Copy Source Code

• Click Link 2

• Copy all of the source code in the box

1d: Paste Source Code

Back in Lambda, you're going to scroll down a bit and paste the code you copied from GitHub into the large text box under "Lambda

function code".

1e: Set Execution Role

- Click "Role" dropdown

- Scroll dropdown menu to bottom

- Click "lambda_basic_execution"

Scroll down a bit further to the "Lambda function handler and role" section. Set the role to "lambda_basic_execution".

If this is your first time using Lambda, you'll have to create the "lambda_basic_execution" role. You can do that by selecting the first option "* Basic Execution" and clicking the blue button on the next page. After you take that step, you should be able to select "lambda_basic_execution".

1f: Finish Creating Function
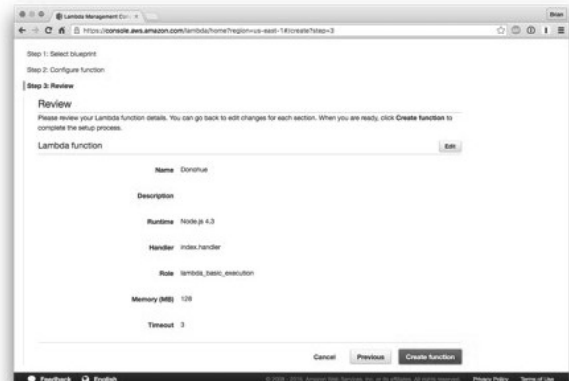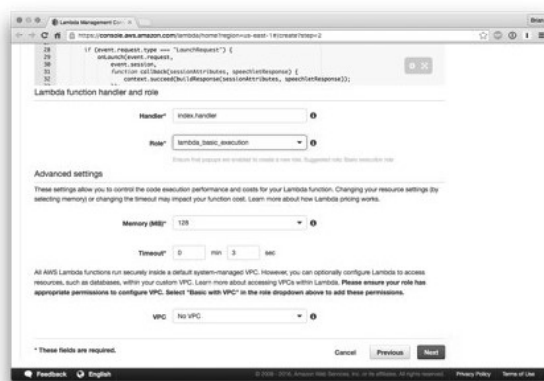
Once you've created the function, click on the "Event Sources" tab. Then click the blue "Add event source" link, then select "Alexa Skills Kit" from the modal dropdown.

Please note if you've never signed up for the Amazon Developer Portal, you'll have to do that first before the "Alexa Skills Kit" will appear from the Event Sources dropdown. Please also make sure to use the same Amazon account as the one that's being used with AWS and your Alexa device.

Step 1 Done

Keep the Amazon Lambda tab open though, we'll come back to it!

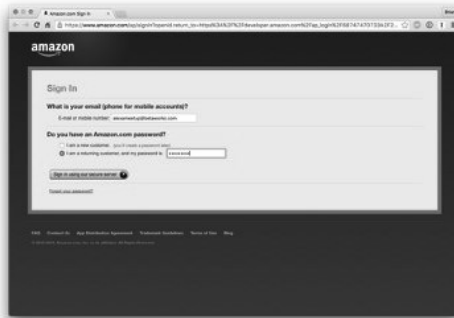## Step 2

Step 2: Amazon Skills Portal

Alexa Skills Portal

2a: Amazon Developer Login
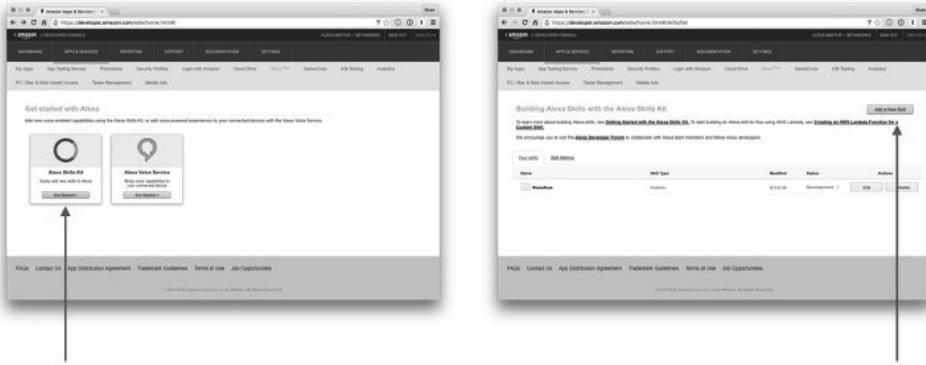
• Click Link 3

• Login or create an account
  with the same Amazon account
  that your Echo is linked to.

2b: Navigate to Add New Skill

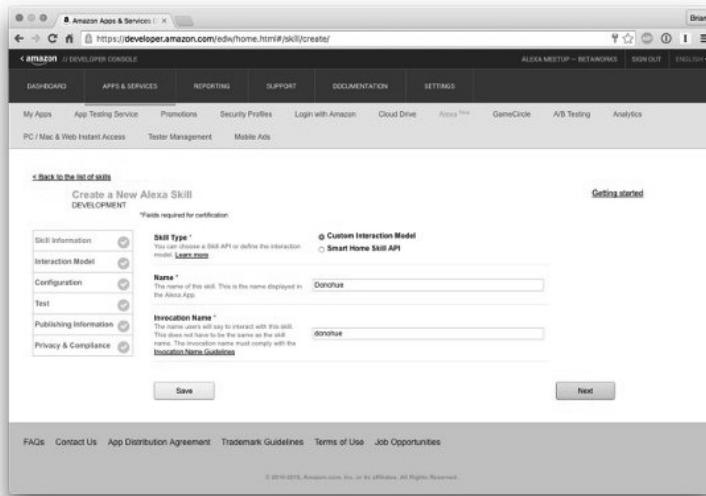Click the yellow "Get Started >" button under "Alexa Skills Kit". Then, click the yellow "Add a New Skill" button on the next page.
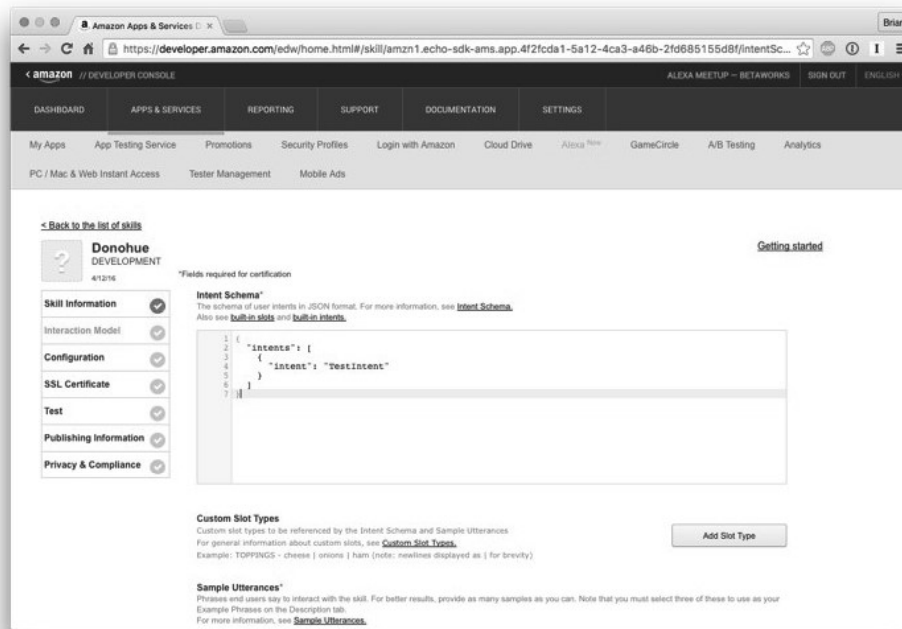
2c: Name and Invocation Name

The name of your Amazon Alexa skill must be unique for your account, and the invocation name is what you'll use to activate the skill. "Alexa, tell to say Hello, World".

If you can't think of anything else, no worries! You can use "Hello World" as the invocation name. Click the yellow "Next" button when you're ready!

2d: Interaction Model

This is where we tell the skill which intents we support and which words will trigger each intent. Get ready to copy-paste.

2e: Copy Intent Schema

· Click Link 4

· Copy all of the text in the box

2f: Paste Intent Schema

Back in the Amazon Skills portal, paste the copied schema into the "Intent Schema" field.

2g: Copy Sample Utterances

· Click Link 5

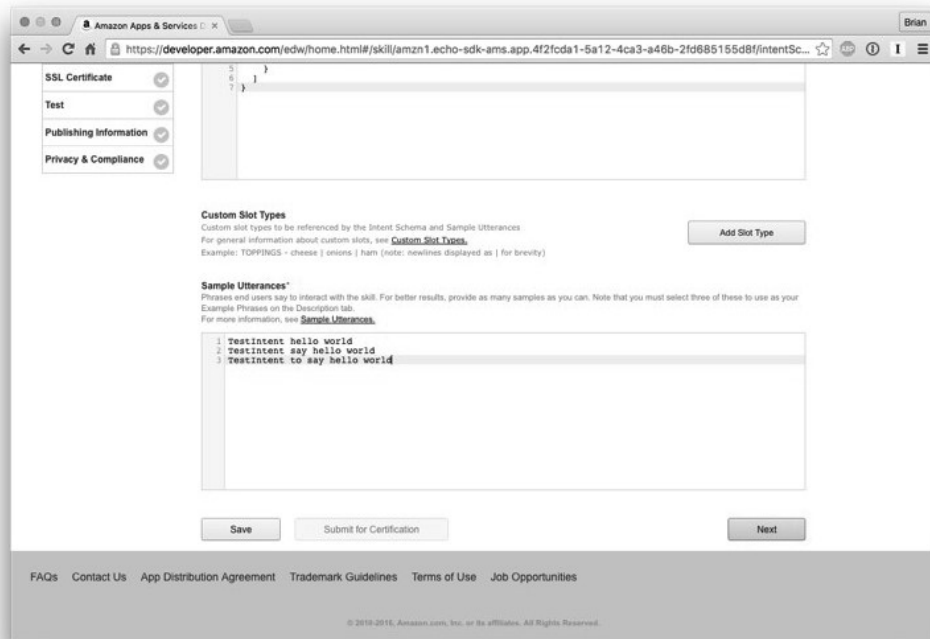· Copy all of the text in the box
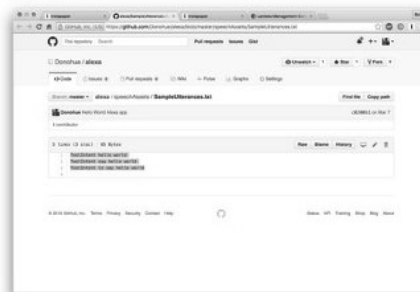
2h: Paste Sample Utterances

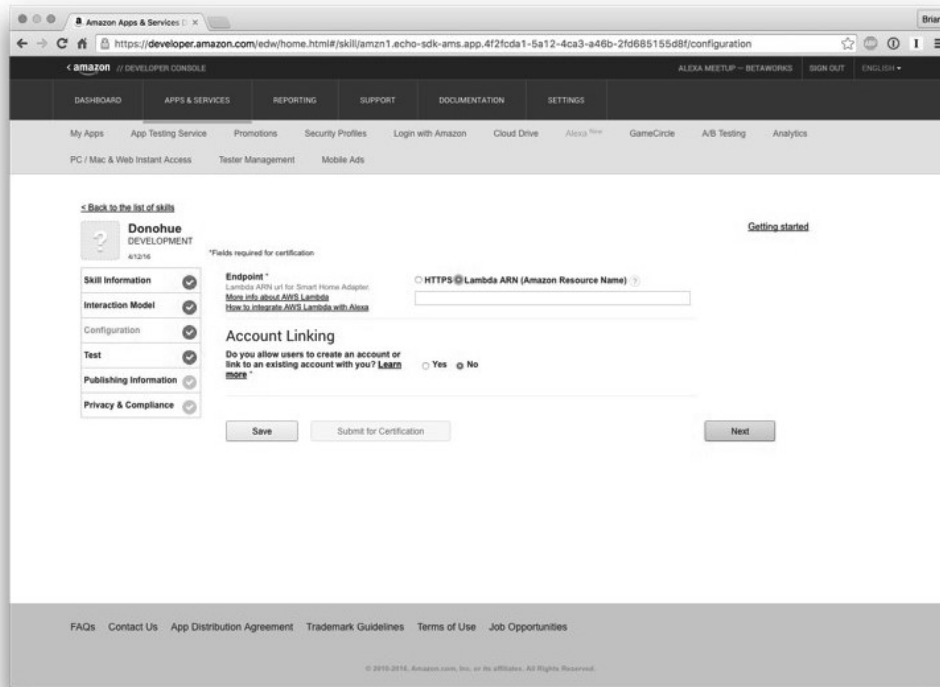Build your first Alexa Skill   23

Back in the Amazon Skills portal, paste the sample utterances you copied into the Sample Utterances field. Click the yellow "Next" button after you've pasted the Sample Utterances.

2i: Configuration

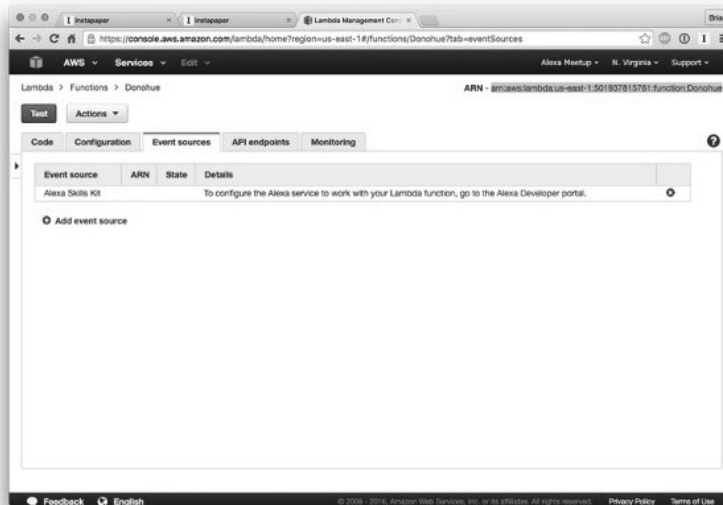Change the radio button from "HTTPS" to "Lambda ARN", and select the "No" radio button under "Account Linking". Now we'll have to go and grab the Lambda Amazon Resource Name (ARN) from our Lambda tab. You still have that open, right?
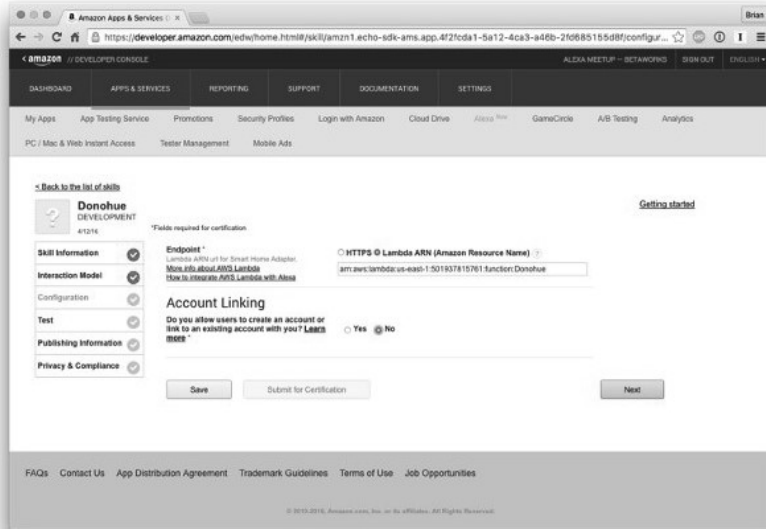
2j: Copy ARN

The ARN is at the top right of the Lambda function page. I have it selected in the image above. You'll want to copy the selection next to "ARN". This field looks somewhat like a source path.
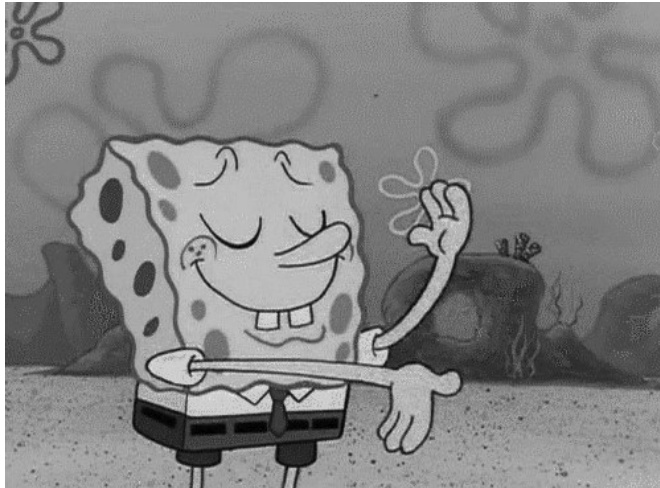

Paste the ARN into the text field, and press "Next".

Step 2 Done

Step 3

Step 3: Amazon Skills Test

Test

3a: Service Simulator

Input

Output

After you click "Next" on the "Configuration" tab, you should be on the "Test" tab. Under the "Service Simulator" portion, you'll be able to enter a sample utterance to trigger your skill. For the "Hello, World" example you should type something like "Say hello world." On the right you should see the output from the Lambda function you created: "Hello, World!"

3b: Test on Device

Alexa, tell <your last name> to say hello world.

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If you got the correct output using the Service Simulator, try it on the Amazon Echo. We were using "last name" as the invocation name in this presentation, but you should use the invocation name you set in step 2c.
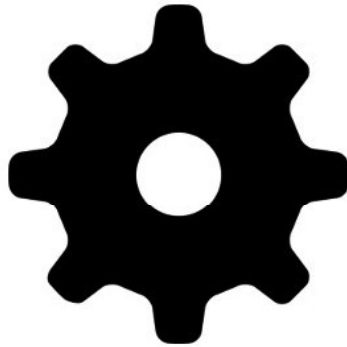
Alexa, tell Hello World to say Hello World

Step 3 Done

Step 4: Customize

Step 4: Customize

4a: Change "Sample Utterances"

• Go to "Interaction Model" in dev portal.

• In Sample Utterances, edit the words to the right of "TestIntent" with what you want to say (input).

Go back to the "Interaction Model" tab in the Alexa Skill Developer portal, and edit the words on the right of "TestIntent" with the words you would like to say to Alexa. An example might be "Who is the coolest person on earth?". In this case, you would prompt by saying "Alexa, ask who is the coolest person on earth?"

Next we'll customize the output.

4b: Change Lambda Output

- Go to "Code" tab in Lambda

- Scroll to line 104 and replace Hello, World with your output.

- Keep the quotes around your output

- Click "Save".

- Test in Amazon Developer Portal.

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- Go to the "Code" tab in Lambda.

- Scroll to line 104 and replace "Hello, World" with your output (Keep quotes around your output).

- Test in the Amazon Developer Portal.

Step 4 Done

Congratulations, you just created your first Alexa skill! 👏👏 Keep making more skills to enable Alexa to perform new tasks.