Building Alexa Skills

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Alexa Skill Crash Course

User says: Alexa, Open Pizza King!

Alexa replies: Welcome to Pizza King.
You can get started by saying I would like to order a pizza

User says: I'd like to order a pizza

Alexa replies: Would you like a small , medium or large pizza?

Building an Alexa Skill

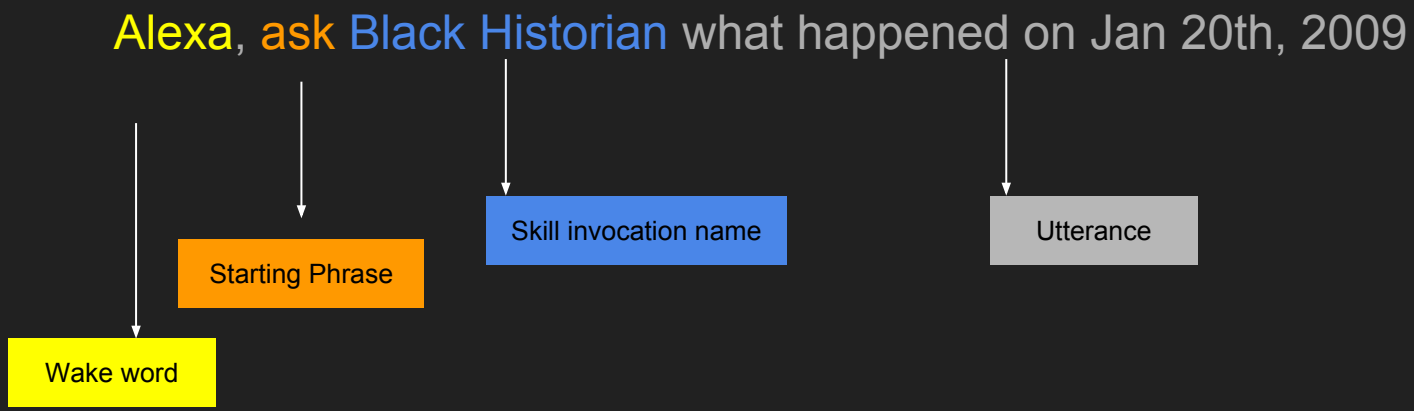
All skills contain two parts: *Interaction Model* (the frontend) and the *Hosted Service* (the backend).

- Interaction Model (frontend) — Much like the graphical user interface (appearance) of a mobile app, Alexa skills need a Voice User Interface (VUI).
- We refer to the VUI as the interaction model — it defines what functionalities or behaviors the skill is able to handle.
- Hosted Service (backend) — The programming logic, hosted on the internet, that responds to a user's requests.

More About Alexa

- *Alexa* is the cloud based service that handles all the speech recognition, machine learning, and natural language understanding for Alexa enabled devices, like Amazon Echo, Echo Show etc.
- *Alexa* is the default wake word for all voice-enabled Amazon devices.
- *Intents* are the behaviors your skill will have. A skill can and probably will have multiple intents.
- *Sample Utterances* help Alexa connect the intents to likely spoken phrases from our users.

Interacting with an Alexa Skill



Ways to invoke / call an Alexa skill

Alexa, open (**invocation Name goes here**)

Alexa, tell (**invocation Name goes here**) to (**Utterance**)

Alexa, (**invocation Name goes here**)

Head over to : https://developer.amazon.com/alexa

amazon alexa

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Create a Free Account

Add In-Skill Purchasing (ISP) in the Developer Console

Now you can build a skill with in-skill purchasing (ISP) directly in the developer console.

Learn more

Create Alexa Skills

Build Alexa Devices

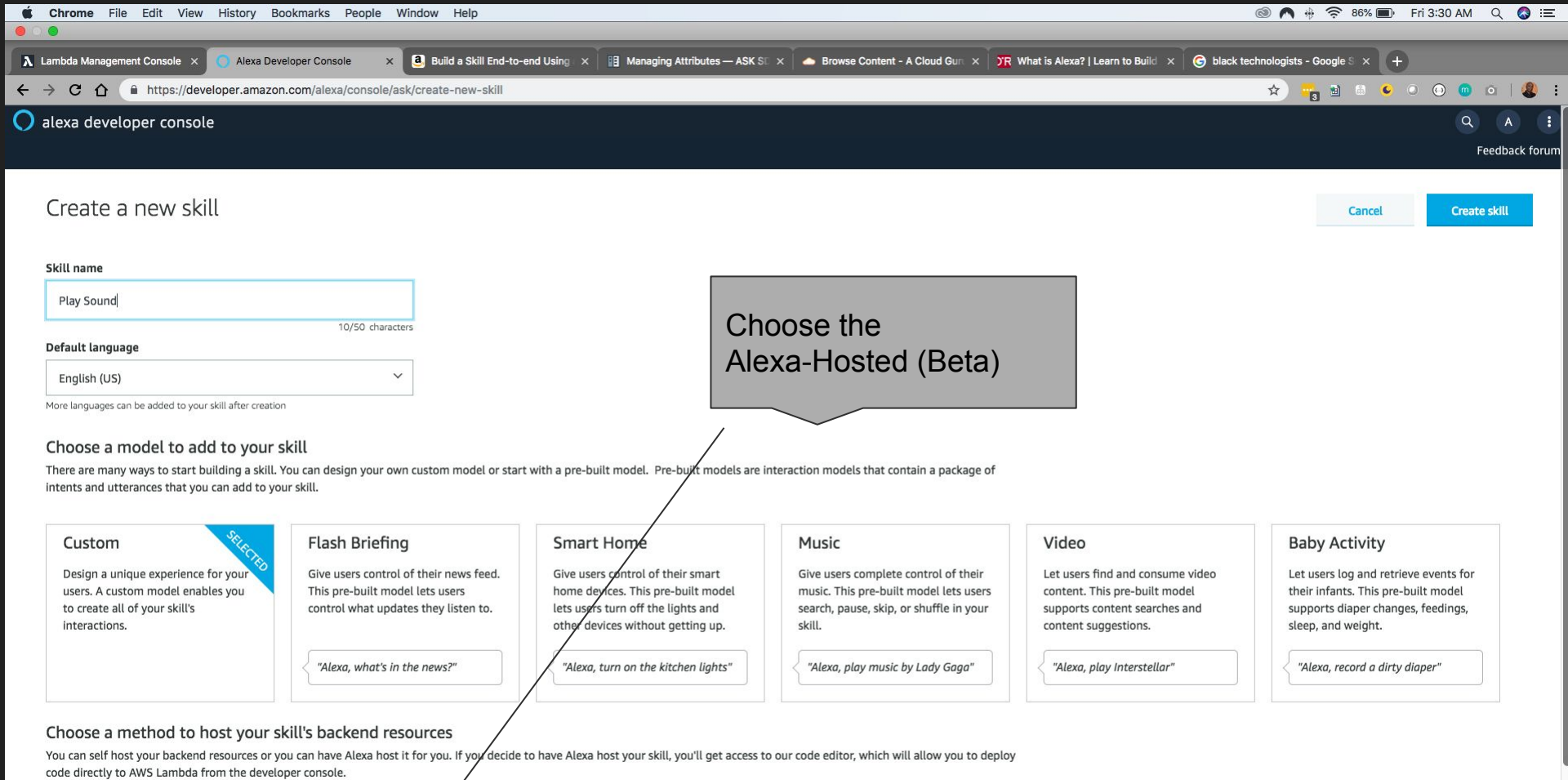
Explore Business Solutions

Why Alexa?

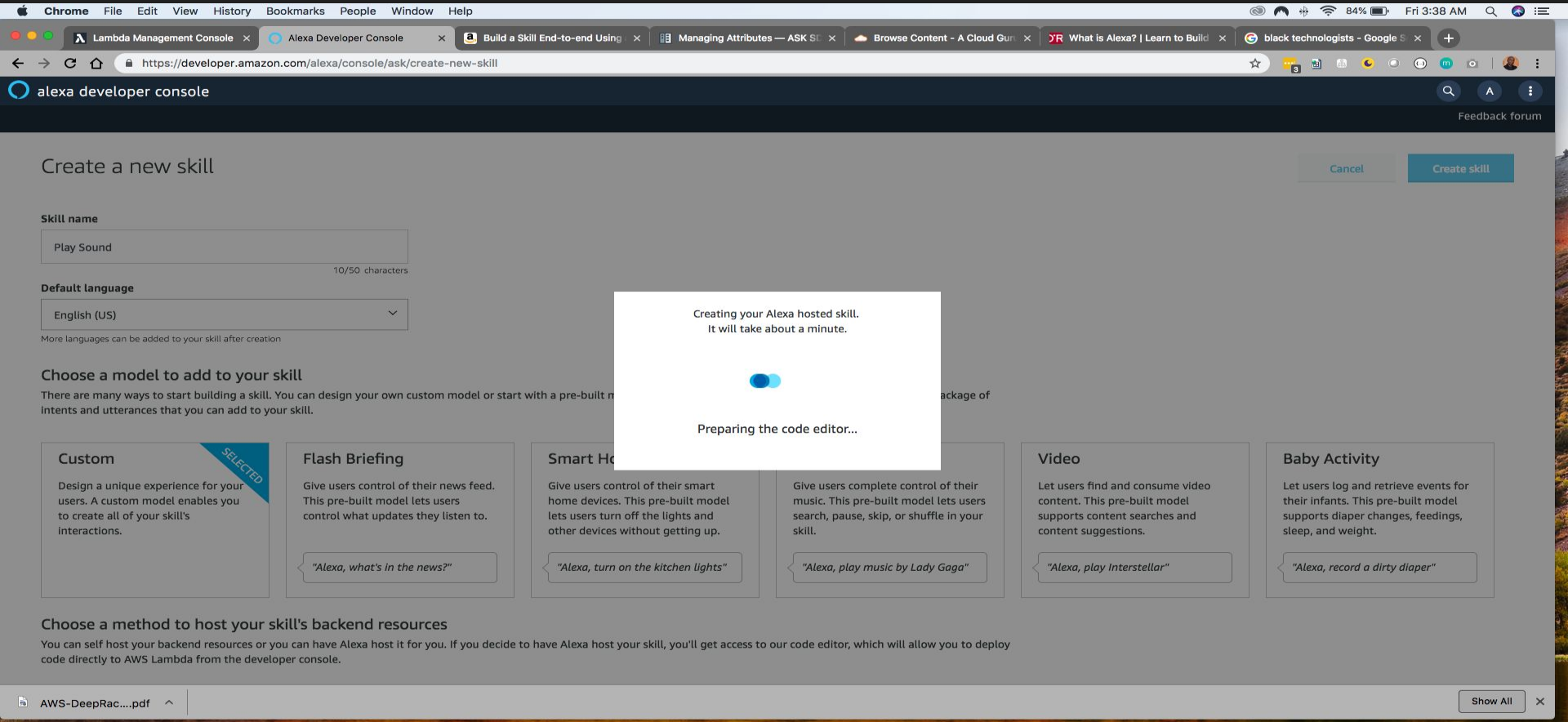
Alexa is Amazon's cloud-based voice service available on over 100 million of devices from Amazon and third-party device manufacturers. With Alexa, you can build natural voice experiences that offer customers a more intuitive way to interact with the technology they use every day. Our collection of tools, APIs, reference solutions, and documentation makes it easy for anyone to build with Alexa.

Start building for voice today by adding new capabilities to Alexa, connecting Alexa to devices, or integrating Alexa directly into your products.

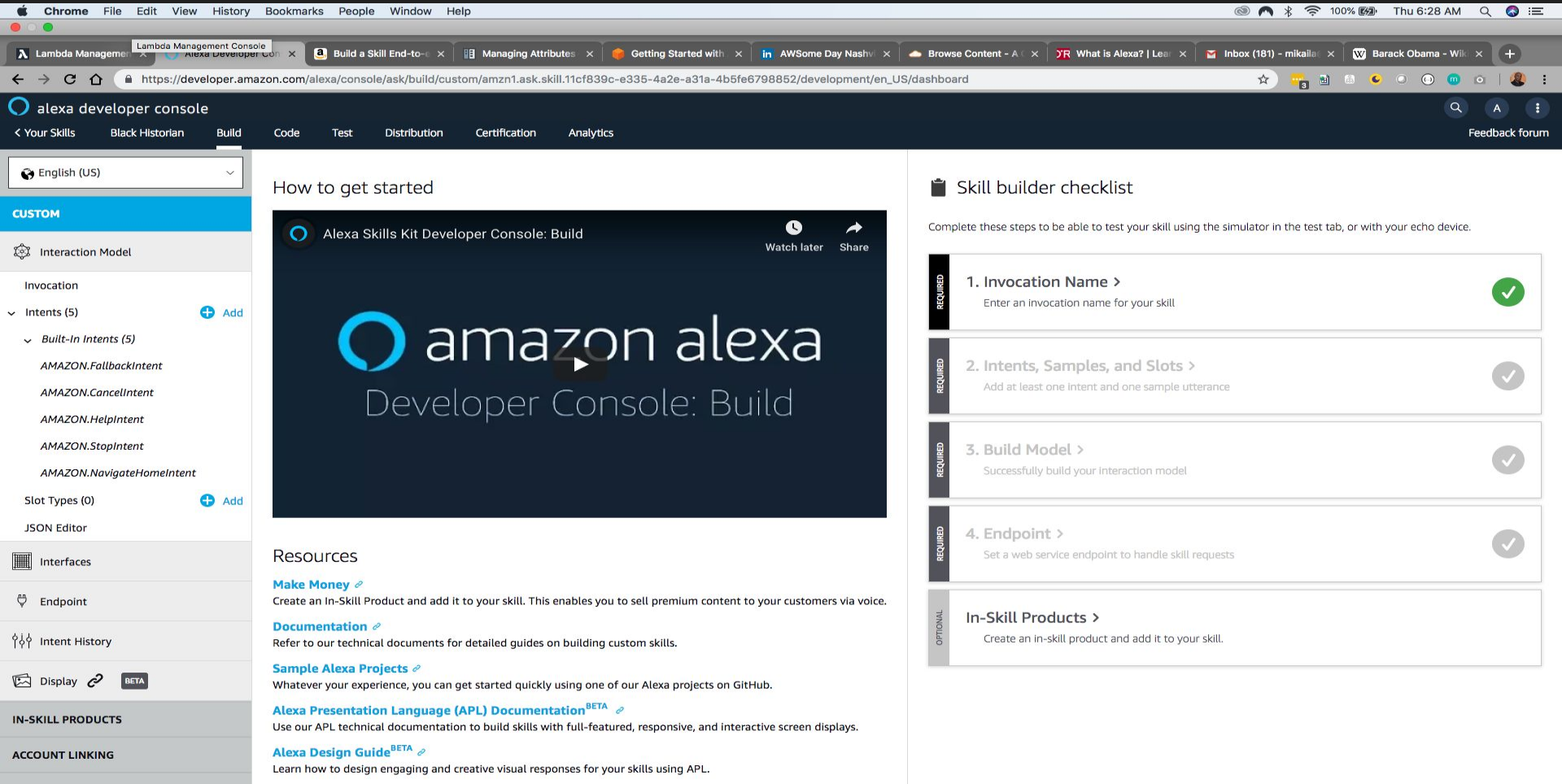
Building the frontend / VUI



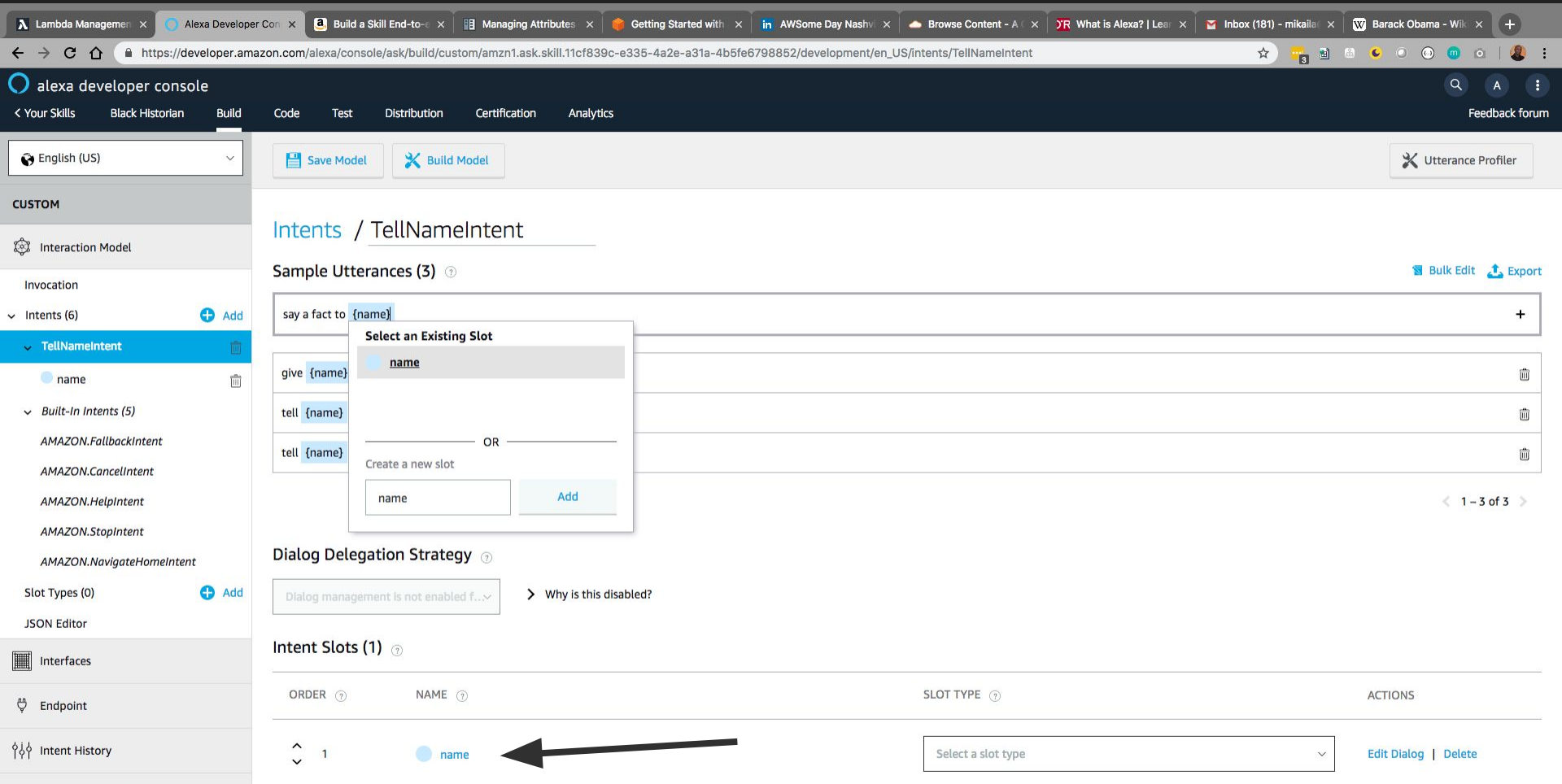
Generating and connecting backend to frontend….



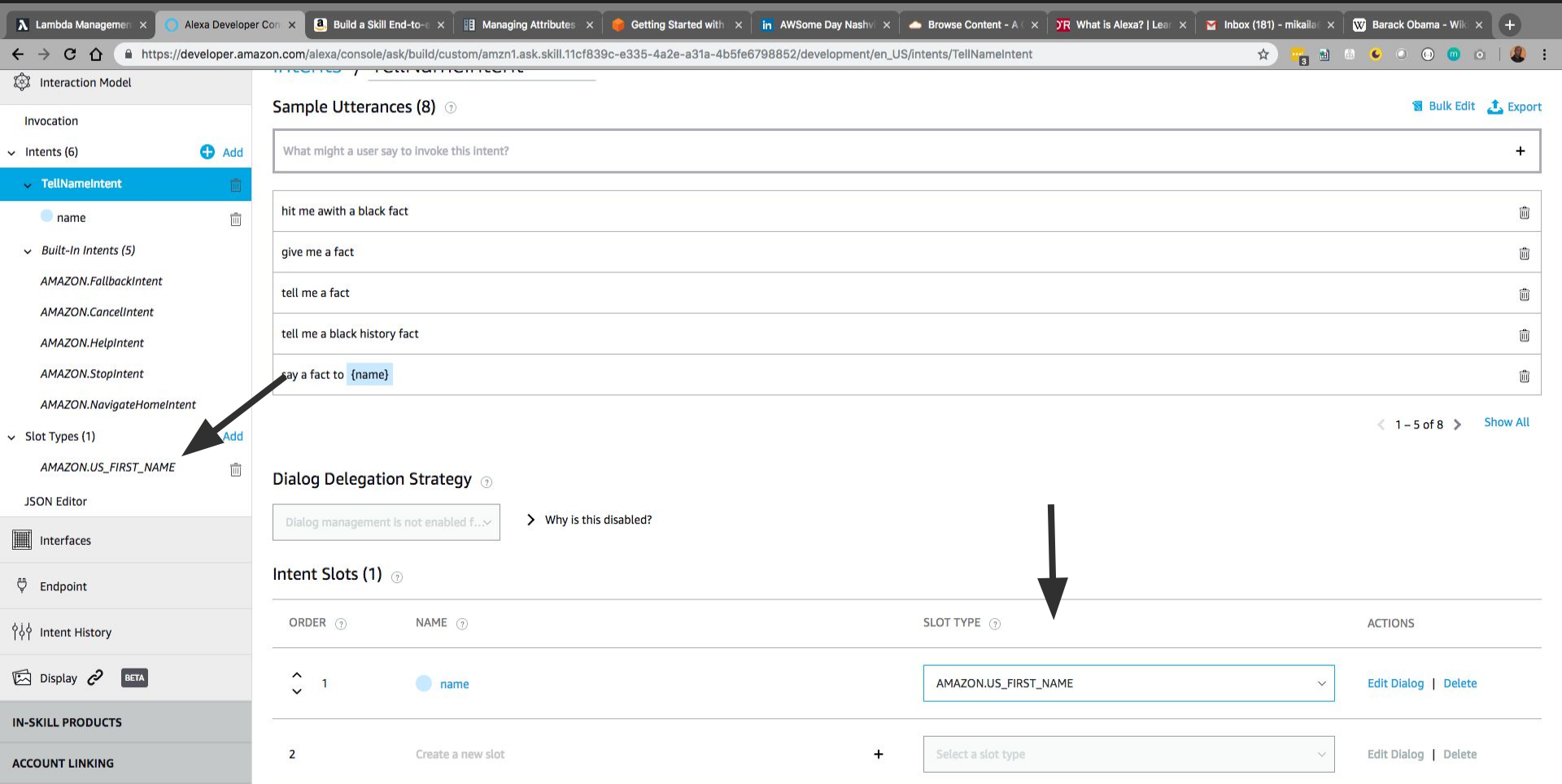
Building our Interaction Model - Utterances



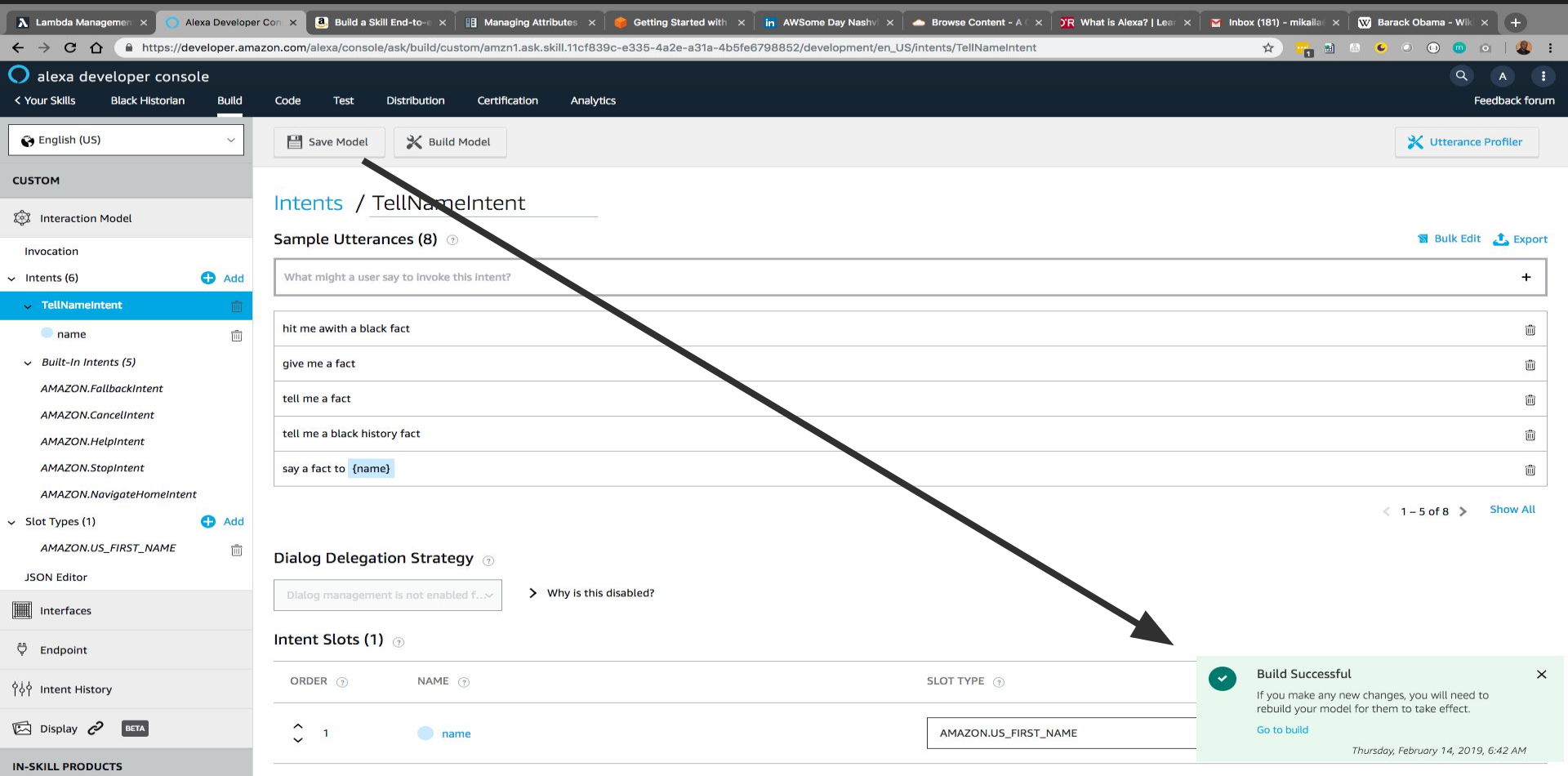
Building our Interaction Model - Slots



Building our Interaction Model - Slot Types



Save and Build the Interaction Model




WHAT IF I TOLD YOU
IT'S ALREADY DONE?

WE ARE DONE WITH THE FRONTEND!

Next step?
code the back end…..

NOT SO FAST……

Let’s take a quick </br>eak!

What is AWS Lambda?

Amazon Lamda let's you run code without provisioning or manager servers. Plus you only pay for compute time that you consume. There is NO charge if your code is not running.

User

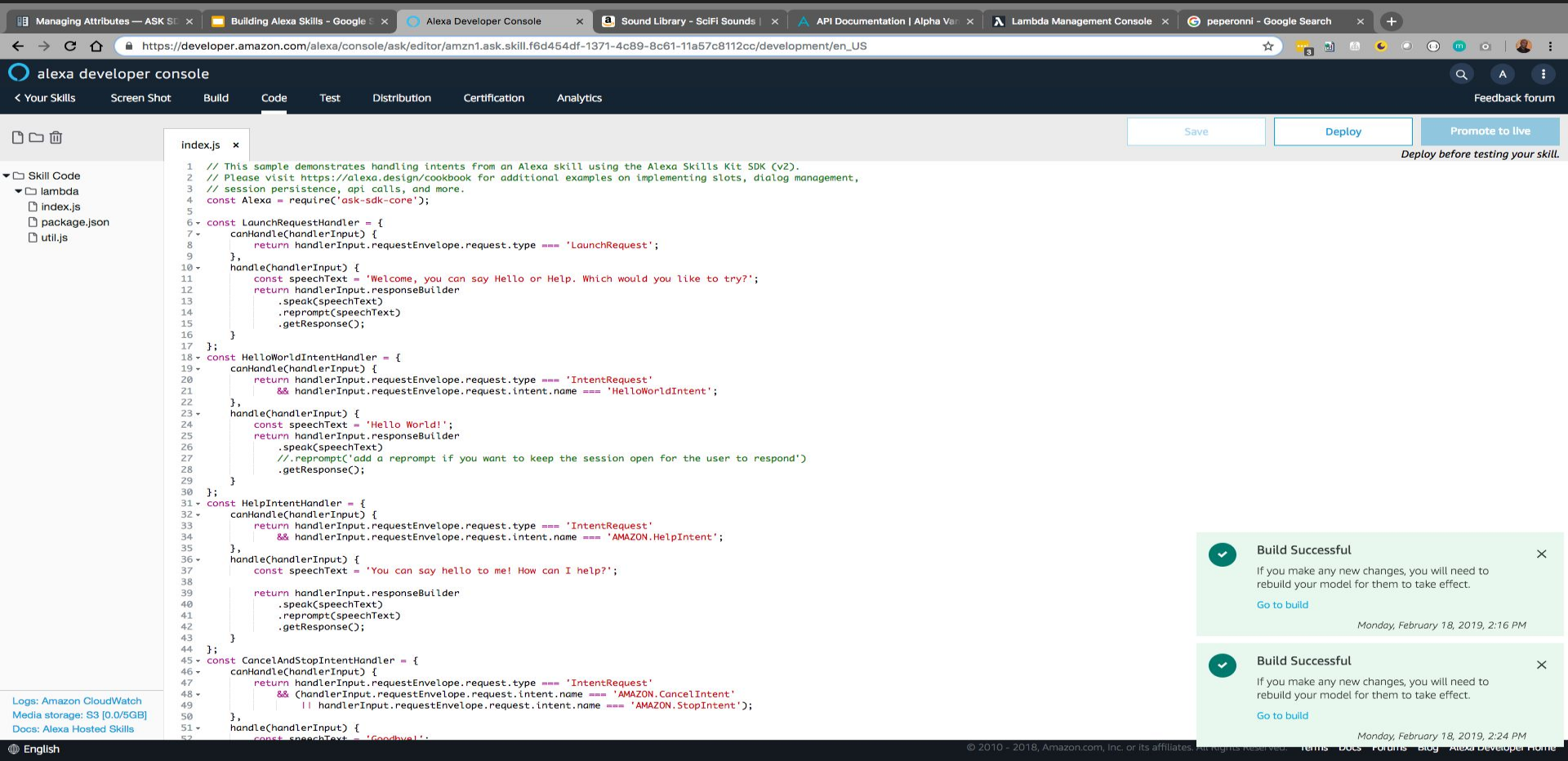
Device

Alexa Voice Service

Alexa Skill

AWS Lambda

Get Started with Lambda Function



HANDLERS

```
const LaunchRequestHandler = {
    canHandle(handlerInput) {
        return handlerInput.requestEnvelope.request.type === 'LaunchRequest';
 },

handle(handlerInput) {
          const speechText = `Welcome to Pizza King You can saysomething like, I want to order a pizza`;

       return handlerInput.responseBuilder .speak(speechText) .reprompt(speechText) .getResponse();

    }

};
```

ACCESSING SLOT VALUES

```
handle(handlerInput) { }
handlerInput.requestEnvelope.request.name.value;
```

RESPONSE BUILDER

We get to respond to the user by leveraging the responseBuilder Object and its methods. Below is an example of a responseBuilder.

```
return handlerInput.responseBuilder
    .speak('Sorry, an error occurred.')
    .reprompt('Sorry, an error occurred.')
    .getResponse();
```

Speech Synthesis Markup Language

Think of it like HTML but for Voice. We use it to markup and add sounds, effects and more to our Voice Application. Below is an example.

```
const speechText = ` <audio src='soundbank://soundlibrary/transportation/amzn_sfx_car_accelerate_01'/><audio src='soundbank://soundlibrary/transportation/amzn_sfx_car_honk_1x_01'/> `

+  ` Welcome to Car Dealer. You can ask me to suggest a car for you by saying something like, which car should i buy`;
```

Questions?

Let’s build our first voice app!

Day One

Let’s build a simple greeting app that greets a friend in a special way and Incorporate SSML

<Speech Synthesis Markup Language>

https://github.com/MikailaAkeredolu/alexa-skill-code

Day Two

Let’s build a Pizza Ordering App for a Pizza Shop

https://github.com/MikailaAkeredolu/alexa-skill-code