

A decorative graphic on the left side of the slide, consisting of a network of white lines and small circles on a blue gradient background, resembling a circuit board or neural network.

# CREATE YOUR FIRST ALEXA SKILL


JULY 2017

# WHAT/WHO IS ALEXA?

A **voice-controlled personal assistant** developed by Amazon. But also an example of...



**Artificial Intelligence** (AI). Alexa uses a service called Amazon Lex which uses **deep learning** to convert speech to text, and **natural language understanding** (NLU) to figure out the intent of the text.

The background of the slide is a solid blue color. In the corners, there are decorative white line art elements that resemble circuit boards or neural network connections, with lines and small circles branching out.

“The age of touch could soon come to an end. From smartphones and smartwatches, to home devices, to in-car infotainment systems, touch is no longer the primary user interface.”

Source: Design News

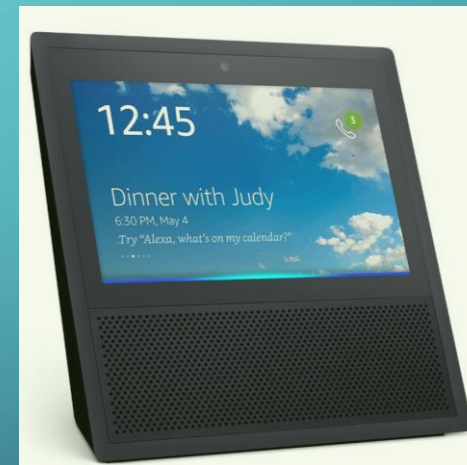
# DEVICES THAT USE ALEXA – THE “INTERNET OF THINGS”



**Added in 2017:**



Echo Look



Echo Show



Dash Wand

# WHAT CAN ALEXA DO?



## Home Automation

*"Alexa, set the basement to 68 degrees"*



## Play Music

*"Alexa, ask Spotify to play Katy Perry."*



## Order Food

*"Alexa, open Domino's and place my Easy Order"*



## Information

*"Alexa, what's the weather?"*

*"Alexa, how many tablespoons are in a cup?"*

# WHAT ARE ALEXA SKILLS?

- Alexa has some built-in features like the ability to connect to your music and calendar accounts and answer general questions, but “**skills**” can be created by any developer or company to add new capabilities to Alexa.
- Anyone with a device that uses Alexa can enable any skill through the Alexa app or Amazon.com.



# STEP 1: SET UP THE VOICE USER INTERFACE USING THE ALEXA SKILLS KIT



# OPEN THE SAMPLE CODE IN GITHUB

<https://github.com/full-steam-ahead/alexa>



# LOGIN TO OUR DEMO AMAZON DEVELOPERS ACCOUNT

<https://developer.amazon.com>

**Username:** full-steam@techemstudios.com

**Password:** full-steam



A **voice user interface** (VUI) allows people to use their voice to control computers and devices.

# TERMINOLOGY

Alexa, tell Personality Type to start the quiz.

Wake word

Launch

Skill Invocation Name

Utterance



Executes the "Quiz" intent

Alexa, ask Personality Type for a fun fact.

Wake word

Launch

Skill Invocation Name

Utterance



Executes the "Fact" intent

## STEP 2: CREATE YOUR SKILL LOGIC USING AN AWS LAMBDA FUNCTION



# WHAT IS THE CLOUD?

***There is no cloud**  
It's just someone else's computer*



The **cloud** is software and services that run on the internet (a.k.a someone else's server) instead of from your computer.



Amazon Web Services (AWS) is a cloud services platform.

AWS Lambda is one of those services – it lets you run your code online.

# LOGIN TO OUR DEMO AWS ACCOUNT

<https://694910018021.signin.aws.amazon.com/console>

**Username:** full-steam@techemstudios.com

**Password:** full-steam



# STEP 3: CONNECT YOUR VOICE USER INTERFACE TO YOUR LAMBDA FUNCTION

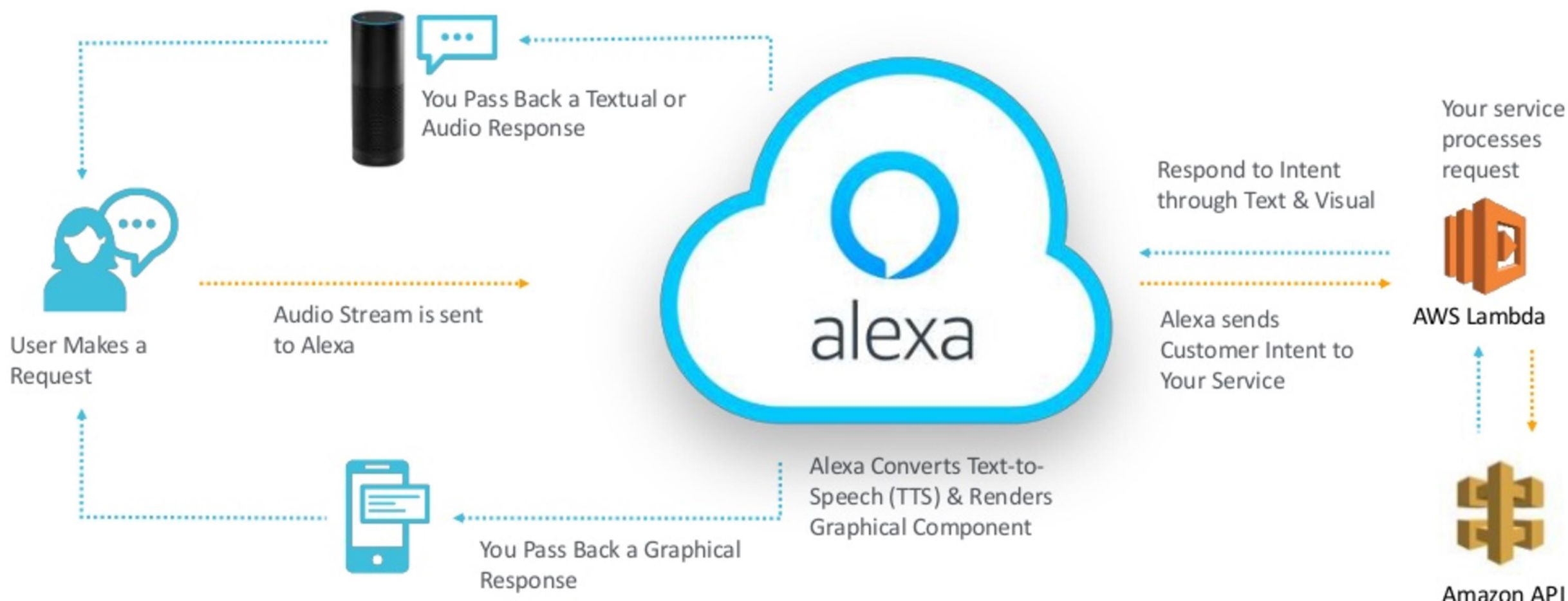


# COMPONENTS OF AN ALEXA SKILL

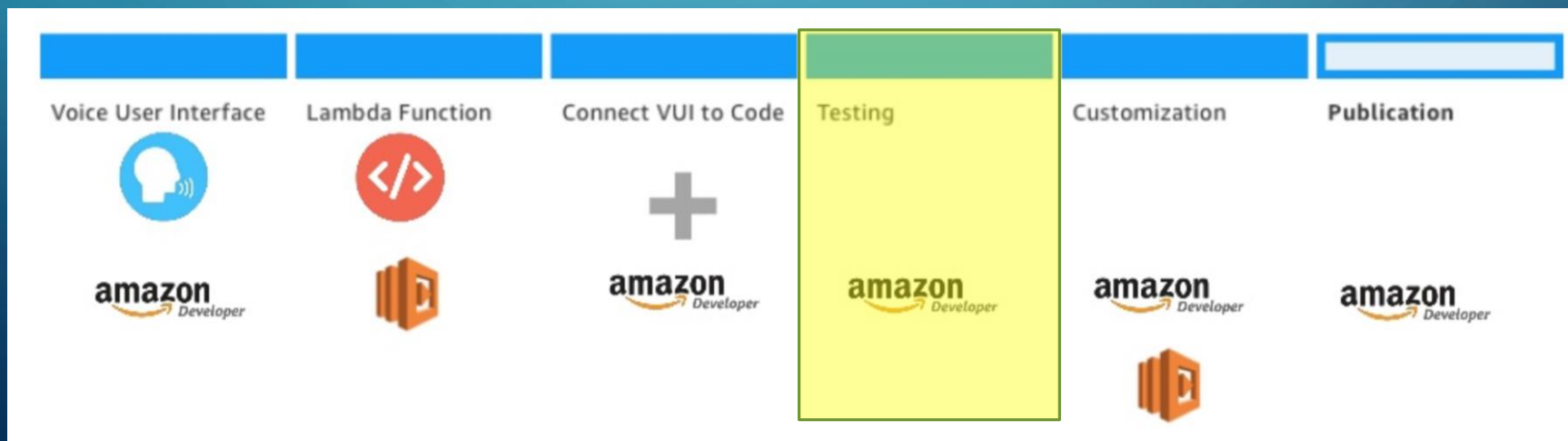


# The Life Cycle of our Skill

A look at how the Alexa Skills Kit process a request and returns an appropriate response



## STEP 4: TEST THE ALEXA SKILL



# Alexa Skill Testing Tool

An Amazon account is required. [Log in with Amazon.](#)

 [Login with Amazon](#)



# STEP 5: CUSTOMIZE THE SKILL TO BE YOURS





## STEP 6: OPTIONAL - GET YOUR SKILL CERTIFIED AND PUBLISHED



# HOW TO PUBLISH YOUR SKILL

- Publish your Alexa skill by following [these instructions](#)!
  - Amazon will either provide feedback or publish the skill within 7 days of you submitting it for certification, but the turn-around time is usually only a couple of days. It may take you several submissions to get your skill certified if it doesn't meet all of [Amazon's requirements](#).
- If your skill is published before July 31st, you can fill out [this form](#) and get a FREE Echo dot!

# GO FORTH AND DEVELOP ALEXA SKILLS!!

- 1) Sign up for an [Amazon Developers account](#)\*.
- 2) Sign up for an [AWS account](#)\*. When registering, select the Personal Account option. It will ask you for credit card information but will not charge your card if you're using the account just to create Alexa skills.  
*\* If you already have an Amazon account, just sign in using your existing login.*
- 3) For step-by-step instructions on **how to create skills** including a facts skill, a trivia skill, and a quiz game skill, go to Amazon's [Alexa Skills Kit Tutorials](#).

## Additional References:

- If you want to make more complex skills, we recommend learning how to [program with Python](#).
- Learn more about AWS and the cloud with this free [AWS Tech Essentials](#) course by **A Cloud Guru**.

# CHALLENGE: BUILD AN ALEXA SKILL TO “SPEAK UP” FOR SOCIAL GOOD!

Join the Alexa “Speak Up!” Challenge by publishing a skill that amplifies a positive message, or cultivates awareness and understanding of a cause. Enter your submission to the challenge for a chance to win an Amazon Echo Show and lifetime subscription to A Cloud Guru!

[Contest rules are here!](#)

# QUESTIONS?

If you want help with developing your Alexa skill, you can email Tech Em Studios at [alexa@techemstudios.com](mailto:alexa@techemstudios.com)

