



# Bixby 101

## Getting Started

**Roger Kibbe**

Senior Evangelist, Viv Labs/Samsung

@rogerkibbe



# Who Am I



@rogerkibbe

#SDC19

Roger Kibbe

Senior Developer Evangelist  
Viv Labs / Samsung

*“Technology empowers and enables”  
“Technology should get out of the way”*

Dad - two teen daughters  
Bay Area Native  
UC Berkeley Graduate – Go Bears!



# How to Get Started Developing for Bixby

# www.bixbydevelopers.com

The screenshot shows the homepage of the Bixby Developer Center. The header features the Samsung logo and a search bar. The main title is "Welcome to the Bixby Developer Center!". Below it, a paragraph explains that Bixby is a next-generation, conversational assistant platform. A section for "Quick Actions" includes links to download sample capsules, browse the library, create a team, and see useful hotkeys. Another section for "Join The Community" lists events, StackOverflow, the official community, and the developer newsroom. On the left, a sidebar menu lists "Getting Started", "Guides", "References", "Sample Capsules", and "Teams & Capsules". At the bottom right, there's a footer for the Samsung Developer Conference.

Viv Labs, Inc. [US] | bixbydevelopers.com

SAMSUNG

Bixby Developer Center

Getting Started

Guides

References

Sample Capsules

Teams & Capsules

## Welcome to the Bixby Developer Center!

Bixby is a next-generation, conversational assistant platform that was created to help users get things done in a more efficient, personalized and natural way. You have access to all of the tools and documentation to start building for Bixby in our Developer Center. With our recent launch of the [Bixby Marketplace](#), you can publish your capsules for users to discover!

The Bixby Team

Download Bixby Developer Studio 7.1.0-r19p10772 See Latest Release Notes

Download for Windows 7 or later

Download for Mac OS X 10.12 or later

Download for Linux ALPHA: Ubuntu Desktop 18.04, Fedora 30+ .deb

Quick Actions

Download Sample Capsules

Browse Bixby Library Capsules

Create Your Team

See Useful Bixby Studio Hotkeys

Join The Community

Bixby Events

StackOverflow

Official Bixby Community

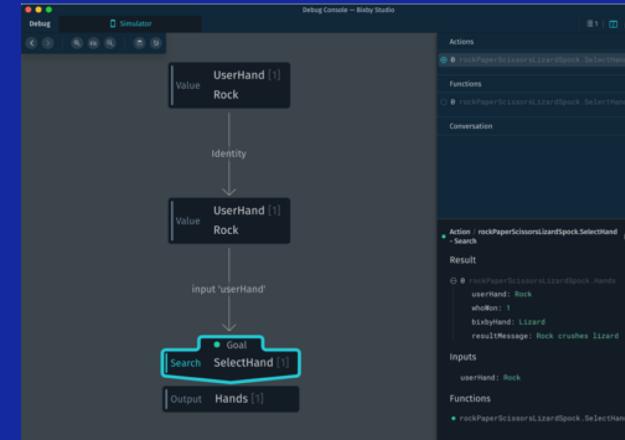
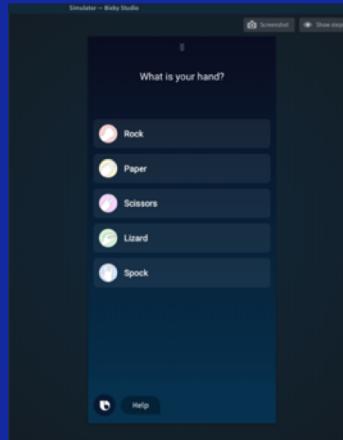
Developer Newsroom

# Bixby Developer Studio

The screenshot shows the Bixby Developer Studio interface with the code editor open. The file is named ShootHands.js and contains JavaScript code for a game. The code includes imports for console, exports for shootHands, and logic for generating a random hand, selecting a result, and logging the outcome. It also handles user input and rules for Rock-Paper-Scissors-Lizard-Spock.

```
playground.rockPaperScissorsLizardSpock
  ShootHands.js
  ShootHands.js
  playground.rockPaperScissorsLizardSpock
  resources
  en
  exports
  code
  EmptyIndexInits
  ShootHands.js
  models
  base
  training
  dialog
  layout
  layout
  views
  homedialog.vocab.bbv
  glogproto
  LICENSE
  README.md
  SBSIndex.bbv

  ShootHands.js
  1 //| console = require("console");
  2 module.exports = function shootHands(userHand) {
  3   var bixbyHand = HANDS[Math.floor(Math.random() * HANDS.length)];
  4   var result = rpselLogic(bixbyHand, userHand);
  5   var message = result.message;
  6   var whomWin = result.whomWin;
  7
  8   if (BIM) {
  9     console.log(`Result: win = ${result.whomWin} - message = ${result.message}`);
  10  }
  11
  12  return {
  13    userHand: userHand,
  14    bixbyHand: bixbyHand,
  15    resultMessage: result.message,
  16    whomWin: result.whomWin
  17  };
  18}
  19
  20 function rpselLogic(bixbyHand, userHand) {
  21   var result = {};
  22   if (bixbyHand == userHand) {
  23     result.message = null;
  24     result.whomWin = null;
  25     result.result = null;
  26   } else if (userHand in RULES) { // Error handling for bad input
  27     var fail = require('fail');
  28     throw fail.require('Unrecognized hand from user..', 'BadInput', null);
  29     //return Unrecognized hand;
  30   } else {
  31     if (bixbyHand in RULES[userHand]) {
  32       result.message = RULES[userHand][bixbyHand];
  33       result.whomWin = 1;
  34       result.result = true;
  35     } else {
  36       result.message = RULES[bixbyHand][userHand];
  37       result.whomWin = -1;
  38     }
  39   }
  40   return result;
  41 }
  42
  43 function RULES(userHand) {
  44   return {
  45     Rock: {
  46       Paper: -1,
  47       Scissors: 1,
  48       Lizard: 1,
  49       Spock: -1
  50     },
  51     Paper: {
  52       Rock: 1,
  53       Scissors: -1,
  54       Lizard: -1,
  55       Spock: 1
  56     },
  57     Scissors: {
  58       Rock: -1,
  59       Paper: 1,
  60       Lizard: 1,
  61       Spock: -1
  62     },
  63     Lizard: {
  64       Rock: 1,
  65       Paper: 1,
  66       Scissors: -1,
  67       Spock: -1
  68     },
  69     Spock: {
  70       Rock: -1,
  71       Paper: -1,
  72       Scissors: 1,
  73       Lizard: 1
  74     }
  75   };
  76 }
  77
  78 module.exports = shootHands;
```



The screenshot shows the Bixby Developer Studio test console. It displays a story step for a "Play Rock" action. The step is aligned with the "Rock" intent and has a success status. The story step details include the action name, parameters (userHand: Rock, bixbyHand: Lizard), result message ("Rock crushes lizard"), and inputs (userHand: Rock). The "Actions" section shows the "rockPaperScissorsLizardSpock.SelectHand" function.

Develop

Simulate

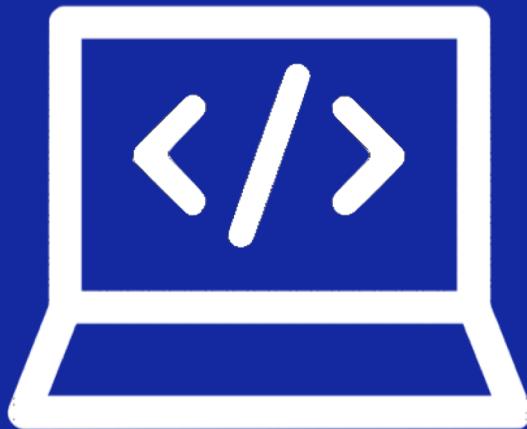
Debug

Test

# Simple Movie Search Capsule Demo

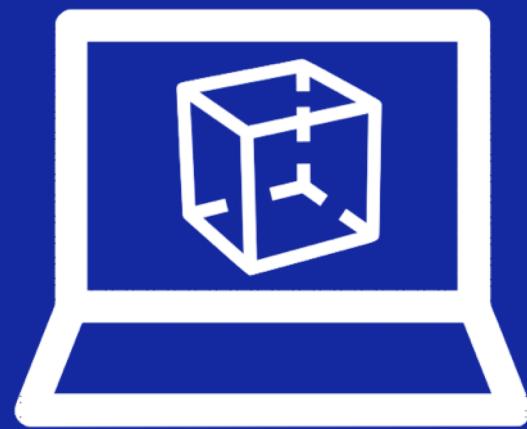
*Debugging and Testing your Capsules in Bixby Developer Studio*  
**Tuesday @ 3:30PM – Room 210A**

# Bixby Development Style



Traditional

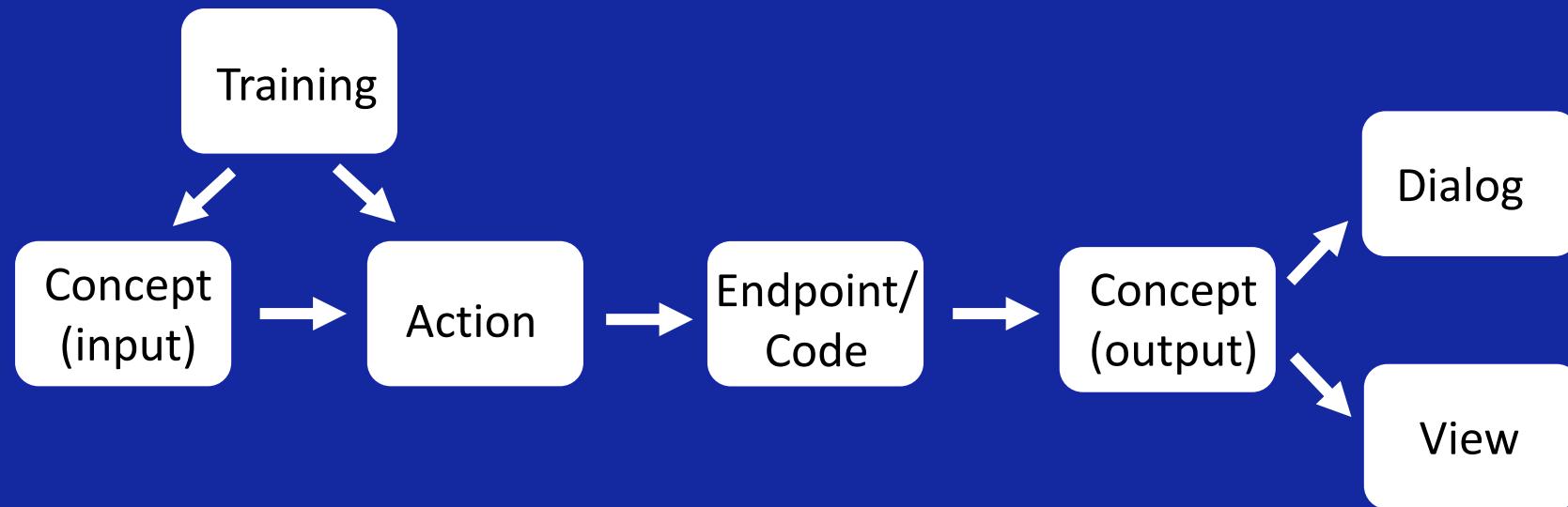
- Imperative
- Code Driven
- “How to do”



Bixby

- Declarative
- Model Driven
- “What to do”

# Bixby Development - Components

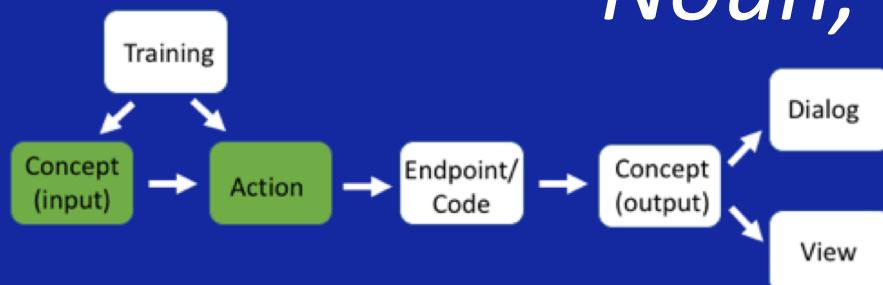


# Input Concepts and Actions

“Find an adventure movie released **this year**”

Action:  
**Find Movie**  
*Verb, Intent*

Concepts:  
**Genre: adventure**  
**DateTime: this year**  
*Noun, Slot*



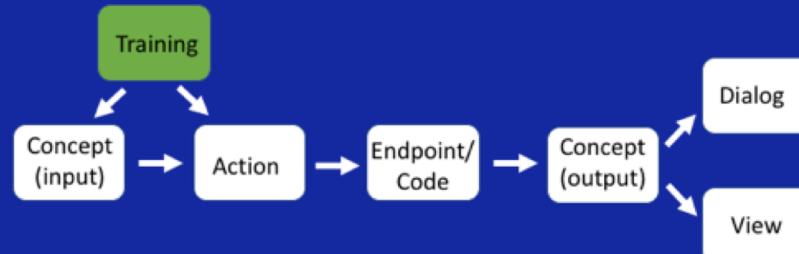
# Concepts and Actions Demo

# Natural Language Training

“Find an adventure movie released this year”

“Find a 2019 adventure movie”

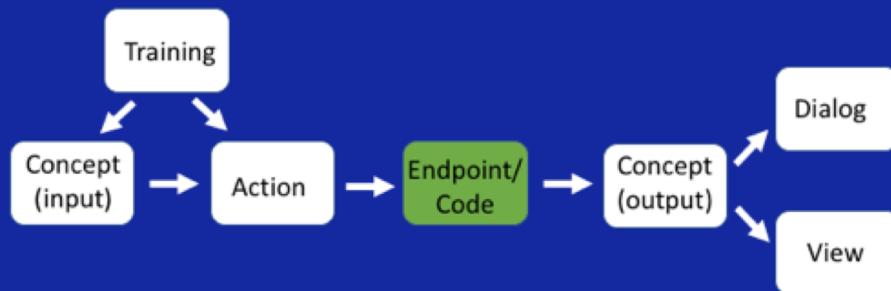
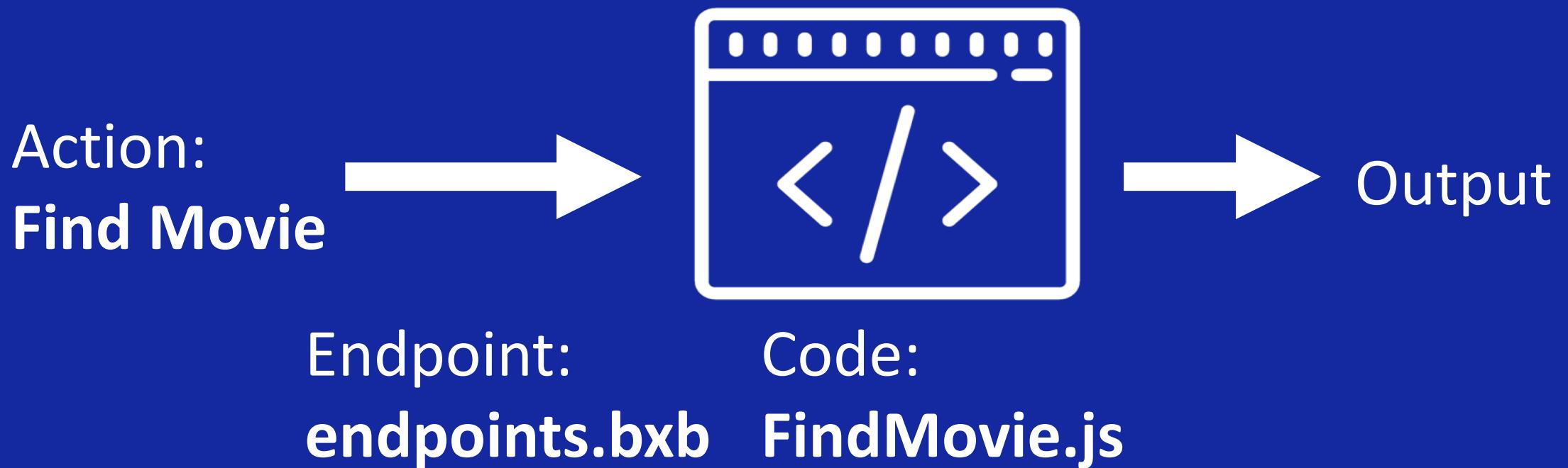
“Show me an adventure movie released this year”



# Training Demo

*Natural Language Training: Best Practices for Bixby*  
**Tuesday @ 4:30PM – Room 210A**

# Endpoints and Code



# End Points and Code Demo

# Output Concepts

Image:



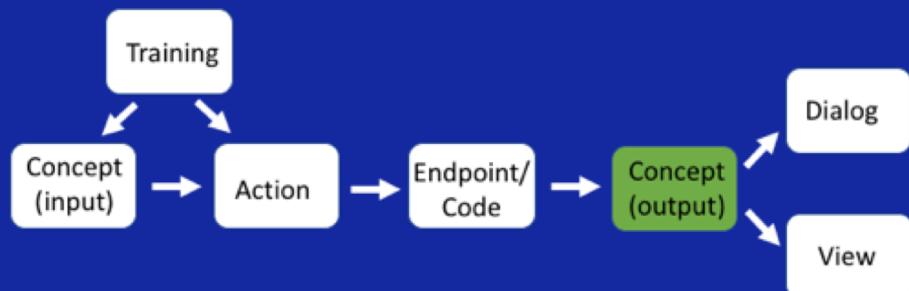
Name: **Spider-Man: Far from Home**

Release Year: **2019**

Summary: Peter Parker and his ...

Genre(s): **Action, Adventure, Science Fiction**

Structure:  
**Movie**



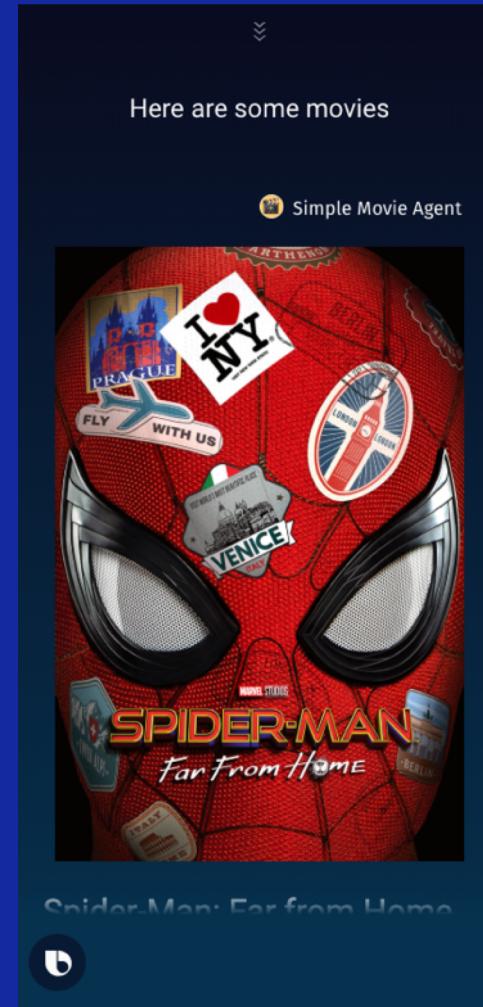
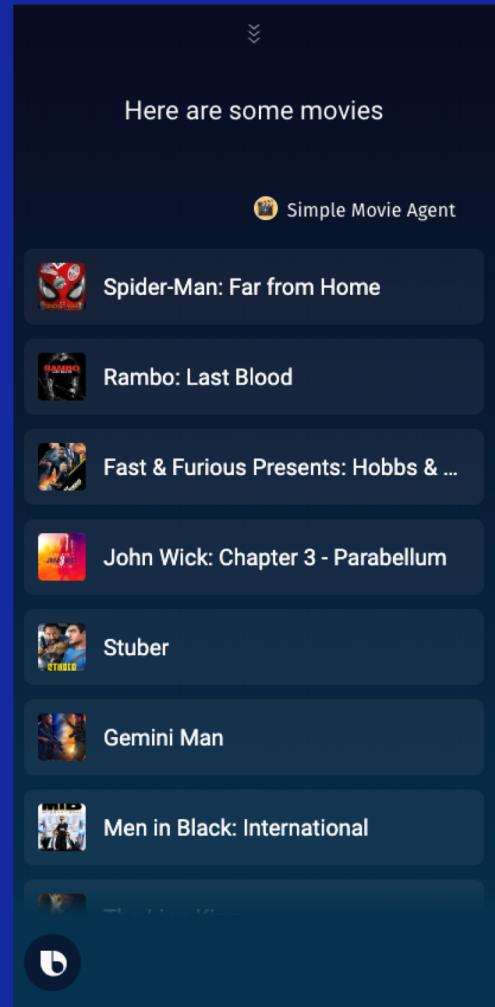
# Output Concept Demo

# Dialog and View

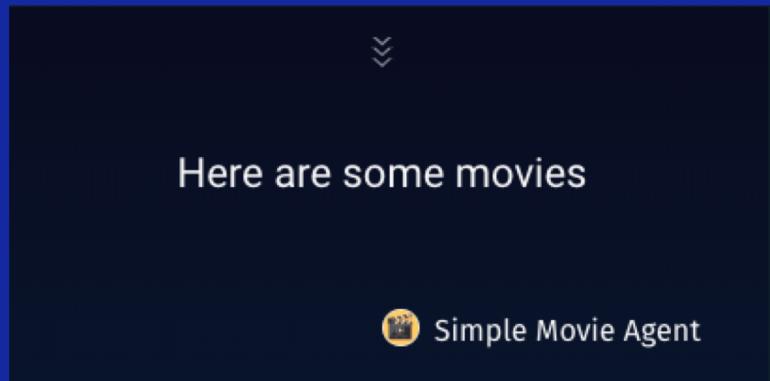
Dialog +



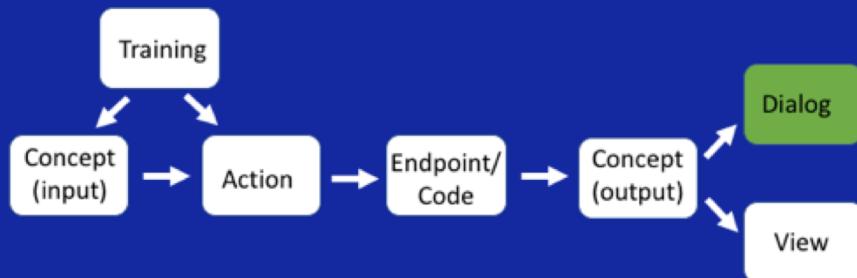
View (UI)



# Dialog



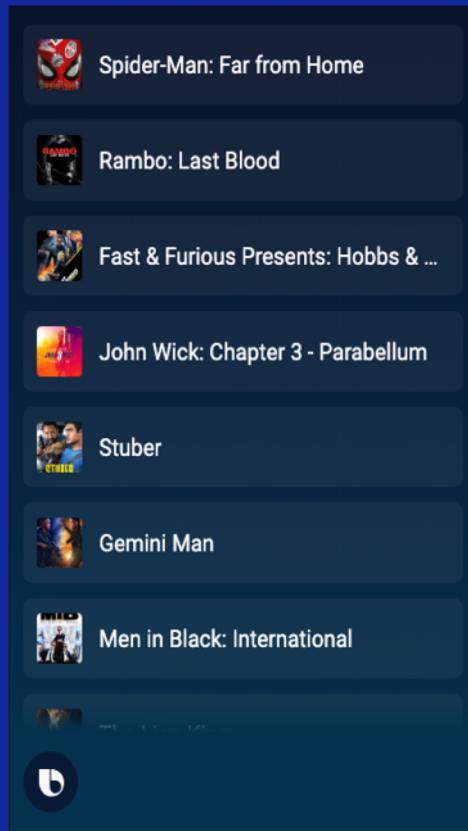
+



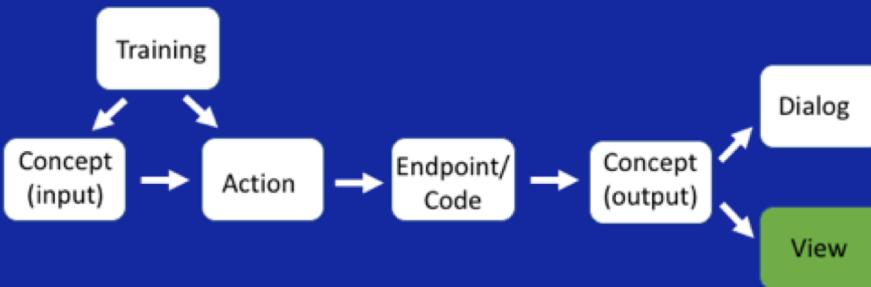
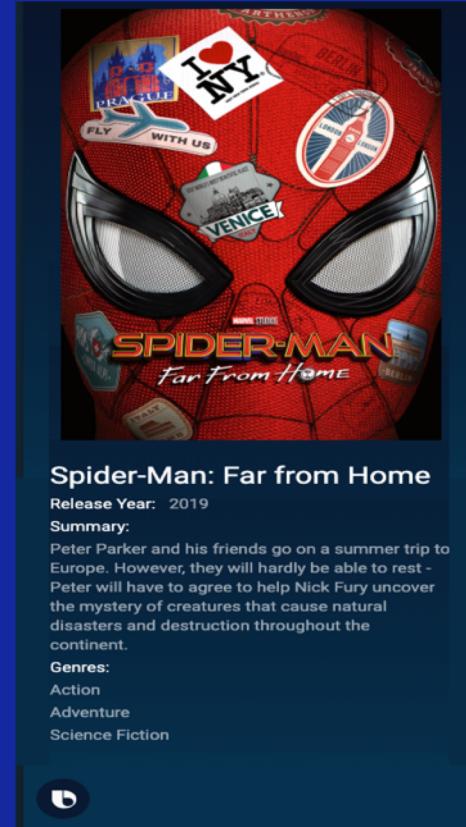
# View

## List View

Created using  
Movie  
structured  
concept



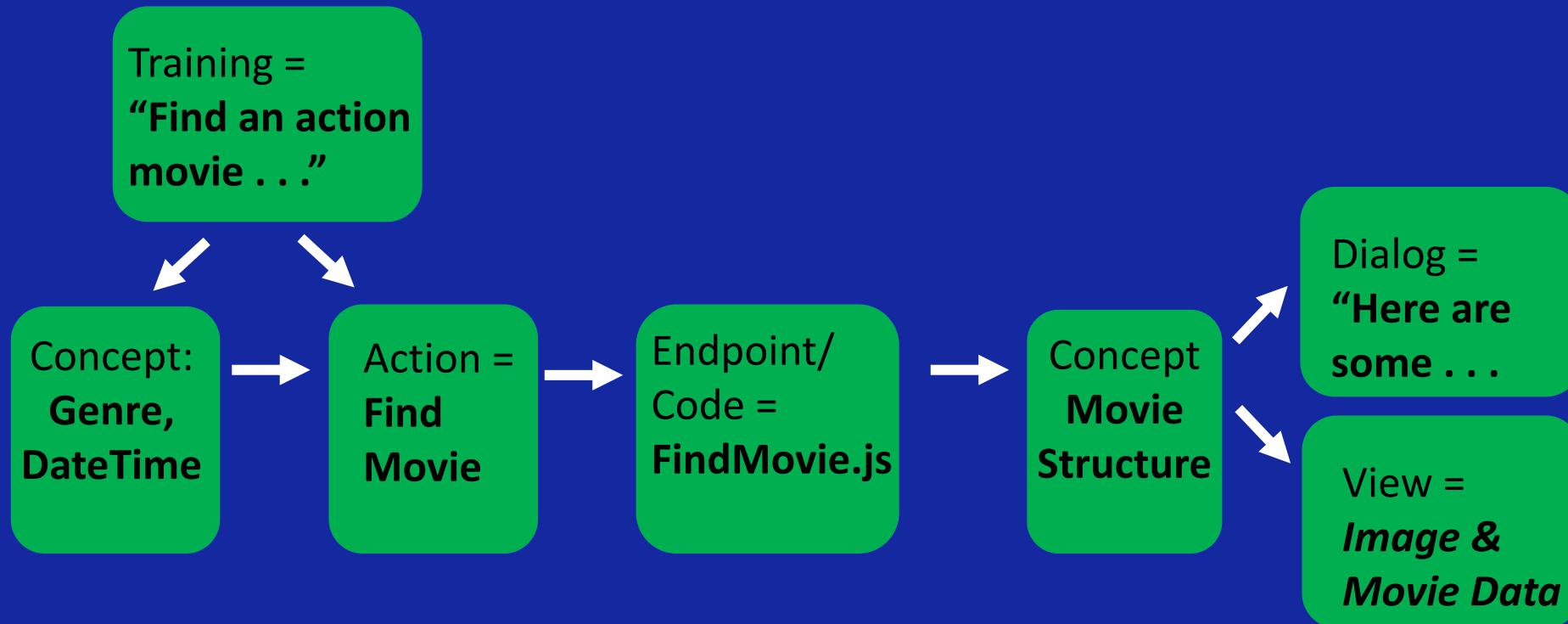
## Detail View



# Dialog and View Demo

*Bixby Views and User Experience Best Practices*  
**Tuesday @ 5:30PM – Room 210A**

# Review: Components of a Bixby Capsule



# Bixby Templates

- Wizard driven Bixby starter capsules
- Creates basic Bixby capsule to extend

*Bixby Building Blocks*

Wednesday @ 3:30PM – Room 210A

#SDC19

Select a template

Choose from a number of pre-designed Bixby templates. Featuring Learning & Knowledge templates, Fun & Games and Business templates.

 Facts Template 1.0.5 Oct 15, 2019  
Do you have some interesting facts about a hobby or passion to share? The Facts Template is the perfect place to share that content by building a Bixby capsule.  
Bixby Team

 Import and Search Template 1.0.7 Oct 14, 2019  
Generates a capsule from data in CSV files  
Bixby Team

 Jokes Template 1.0.4 Oct 15, 2019  
Do you have a set of LOL jokes to share? The Jokes Template is the perfect place to share that content by building a Bixby capsule.  
Bixby Team

 Podcast Template 1.0.4 Oct 15, 2019  
Do you have a podcast to share? The Podcast Template is the perfect place to share your podcast by building a Bixby capsule.  
Bixby Team

 Quiz Template 1.0.13 Oct 15, 2019  
Do you have a great idea for a quiz that will entertain and delight Bixby users? The Quiz Template is the perfect place to start building a Bixby quiz capsule.  
Bixby Team

# Bixby on Github

## [github.com/bixbydevelopers](https://github.com/bixbydevelopers)

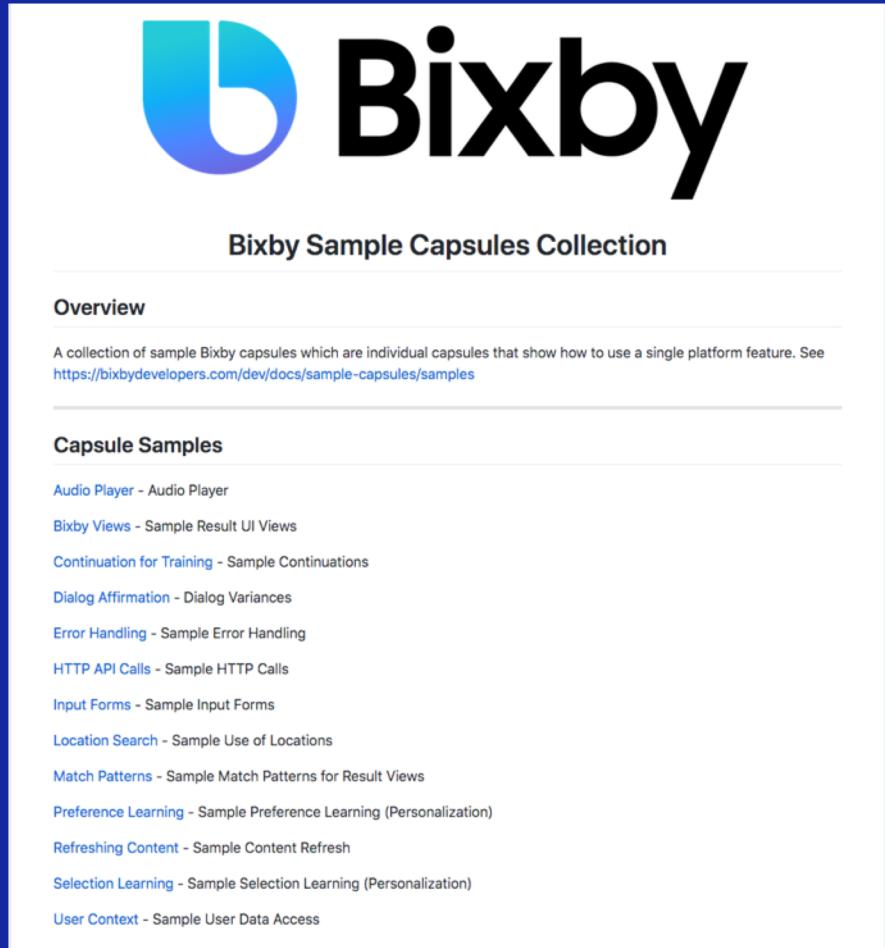
The image displays two side-by-side screenshots of the GitHub web interface. The left screenshot shows the main repository page for 'Bixby Developers' (https://github.com/bixbydevelopers). It features a prominent header with the repository name and a 'Verified' badge. Below the header, there's a section for 'Pinned repositories' containing six sample capsules: 'capsule-sample-dice', 'capsule-sample-space-resorts', 'capsule-sample-fact', 'capsule-sample-quiz', 'capsule-samples-collection', and 'capsule-sample-meme-generator'. Each pinned repository has a small thumbnail, a title, a brief description, and some statistics like stars and forks. The right screenshot shows a detailed view of a specific capsule, 'capsule-sample-quiz' (https://github.com/bixbydevelopers/capsule-sample-quiz). This page includes a brief description of the capsule's purpose, a commit history showing contributions from 'johncolarusso', and a large 'Bixby' logo at the bottom.

# Capsule Samples Collection

[github.com/bixbydevelopers/capsule-samples-collection](https://github.com/bixbydevelopers/capsule-samples-collection)

Cookbook of sample collections -  
Particularly useful:

- Audio Player: Stream Audio
- Bixby Views: Result UI Views
- HTTP API Calls: HTTP calls
- Input Forms: Input Forms



The screenshot shows the 'Bixby Sample Capsules Collection' page. At the top is the Bixby logo. Below it is the title 'Bixby Sample Capsules Collection'. A horizontal line separates this from the 'Overview' section, which contains a brief description of the collection and a link to the documentation. Another horizontal line separates the overview from the 'Capsule Samples' section, which lists various sample capsules: Audio Player - Audio Player, Bixby Views - Sample Result UI Views, Continuation for Training - Sample Continuations, Dialog Affirmation - Dialog Variances, Error Handling - Sample Error Handling, HTTP API Calls - Sample HTTP Calls, Input Forms - Sample Input Forms, Location Search - Sample Use of Locations, Match Patterns - Sample Match Patterns for Result Views, Preference Learning - Sample Preference Learning (Personalization), Refreshing Content - Sample Content Refresh, Selection Learning - Sample Selection Learning (Personalization), and User Context - Sample User Data Access.

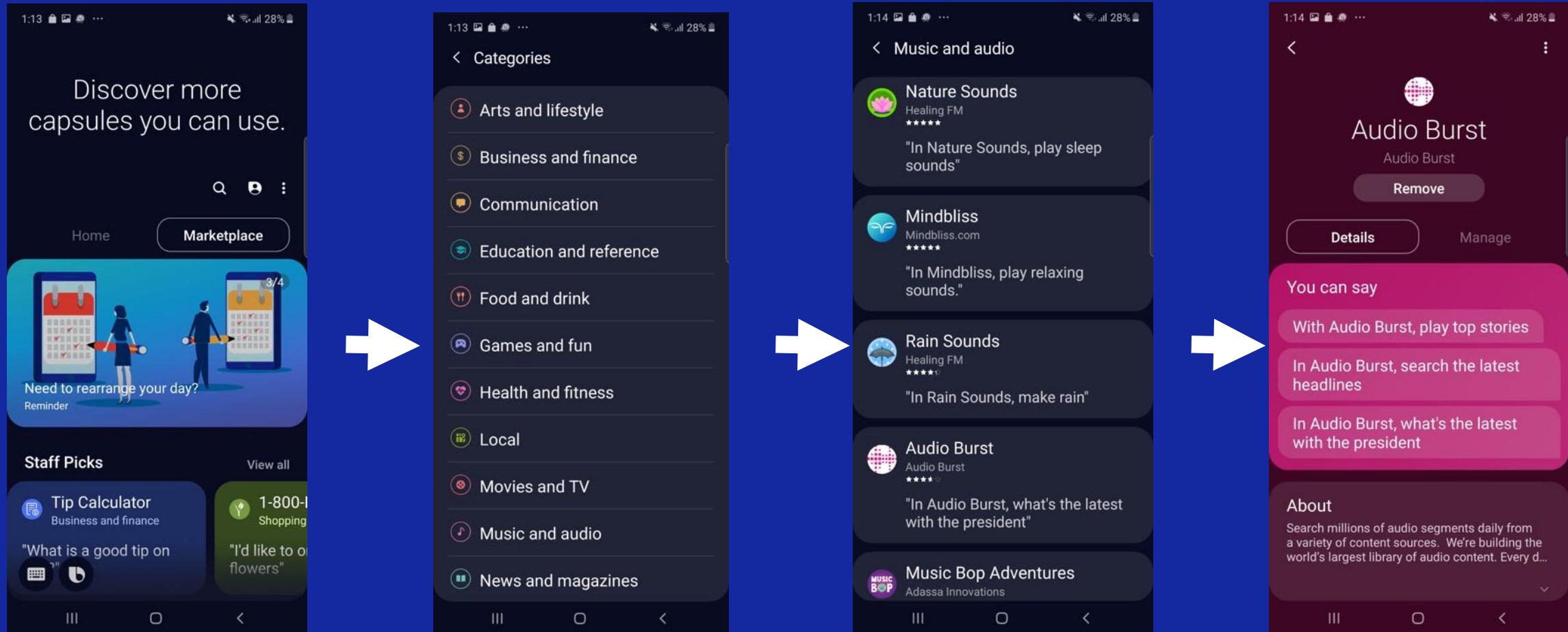


# Publishing Your Capsule

#SDC19



# Marketplace



# Capsule Metadata Demo

*Bixby Developer Center and Marketplace*  
**Wednesday @ 2:30PM – Room 210A**

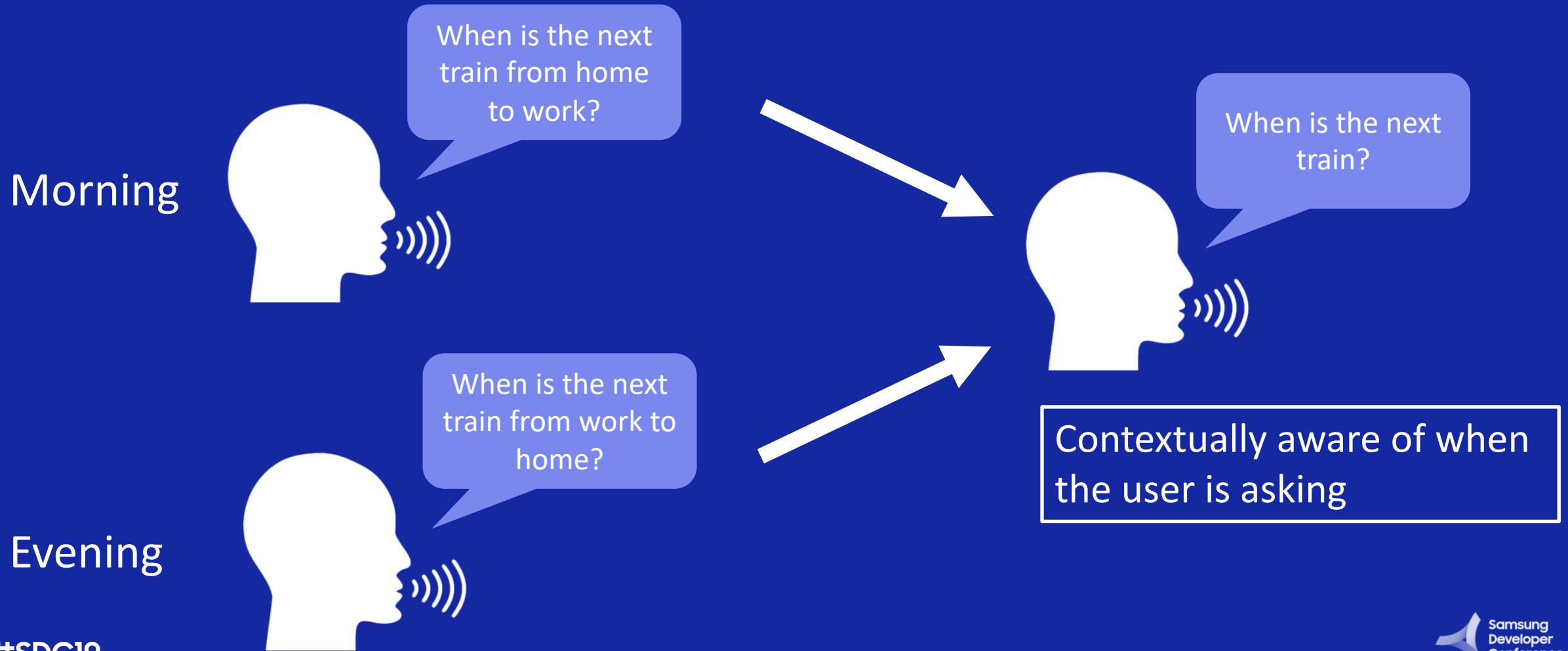


# Beyond the Basics

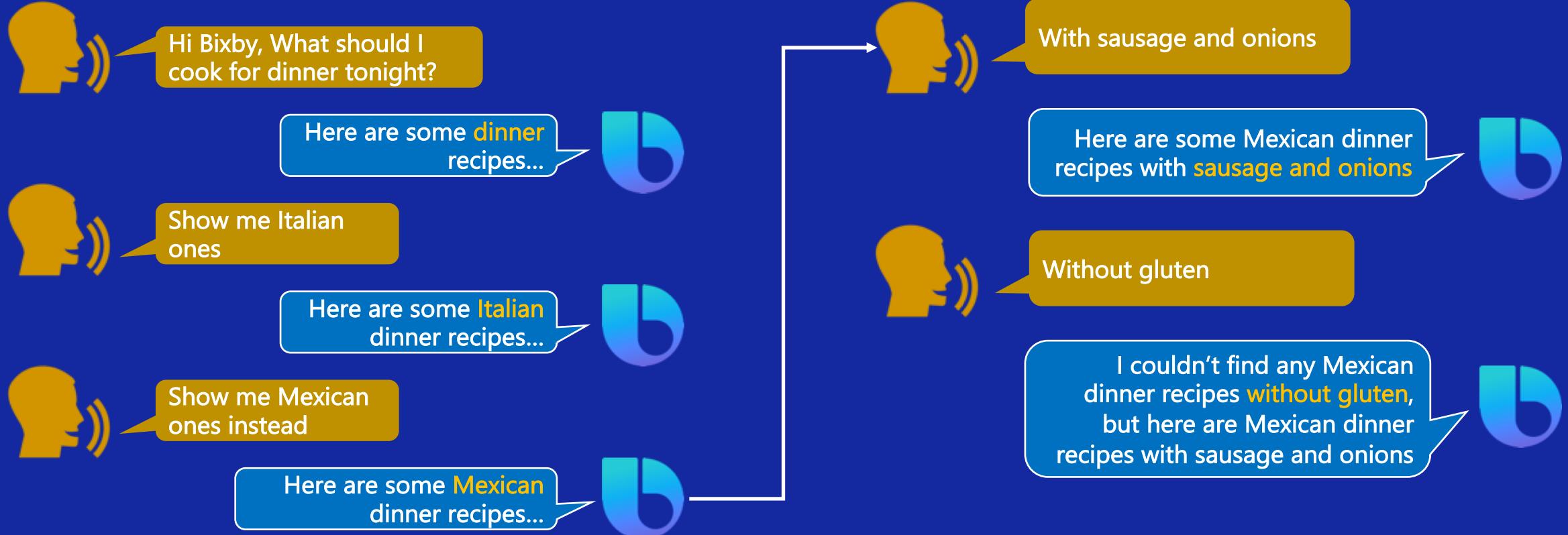
#SDC19



# Personalization



# Rich Conversations



# Natural Language Categories



- Natural discovery
- Rideshare Example: Lyft and Uber
- More natural conversations
- User choice
- Find and use capsules more

# NL Categories - First Release

- Radio
- Podcast
- News
- Ride Share
- Hotels
- Navigation
- Cooking N Recipe
- Local Businesses
- Restaurant Search
- Translators
- Delivery N Takeout
- HomeServices
- Stock Info
- Astrology

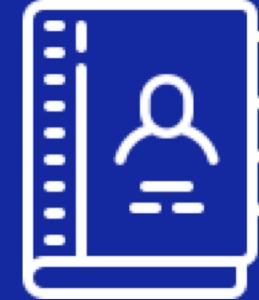
# Library Capsules



Audio Player



Geography



Contacts



Date Time



Location



Profile

and More . . .

*Bixby Building Blocks*

Wednesday @ 3:30PM – Room 210A

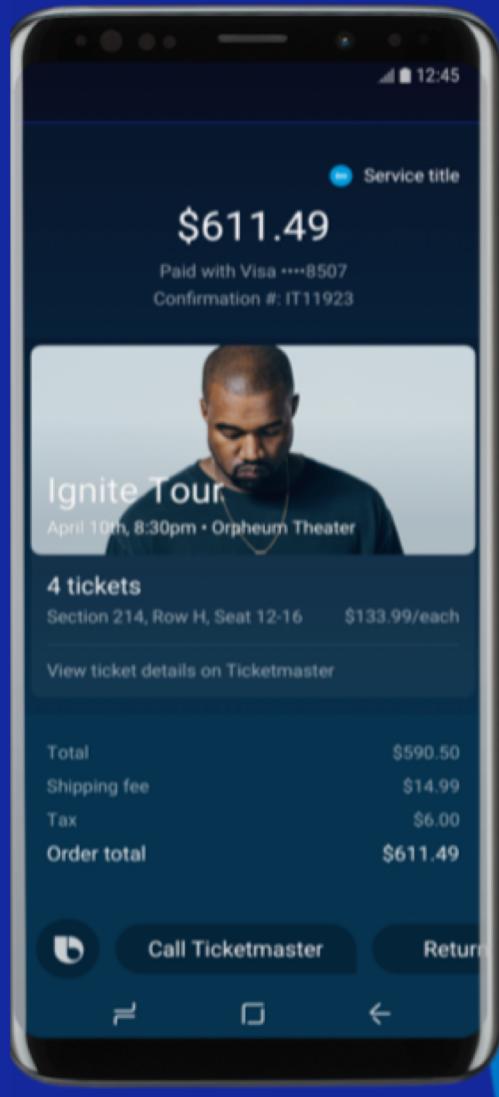
#SDC19

Samsung  
Developer  
Conference

# Payments & Transactions



"Find a concert in  
New York City this  
Weekend"



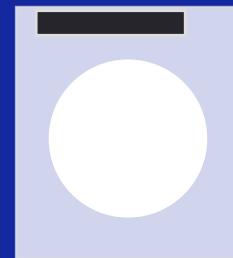
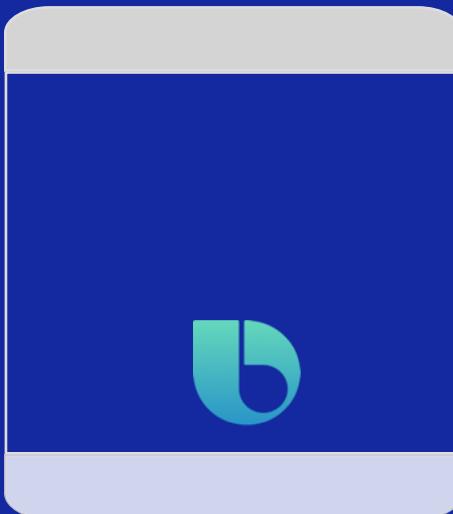
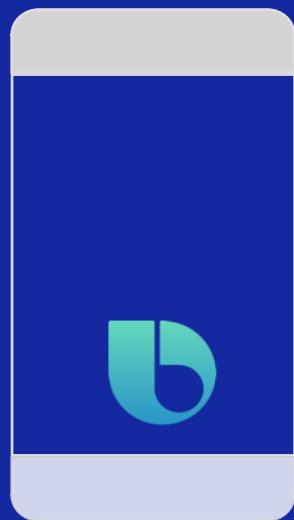
Rich Transactional  
Support

Payment support  
Using Samsung Pay

OAuth Authentication

# Devices

100's of Millions of Bixby Enabled  
Devices Shipped per Year



New Bixby Devices: No Longer Limited to Phones (Demo)  
Wednesday @ 1:30PM – Room 210D

#SDC19

Samsung  
Developer  
Conference

# The Bixby DevJam Developer Showcase

Publish a Bixby Capsule, earn \$300 Samsung Store Credit.  
Compete for \$125,000 in cash and prizes!



[bixbydevjam.com](https://bixbydevjam.com)

#SDC19

Samsung  
Developer  
Conference

# Overview of Sessions

## Tuesday

*Bixby 101: Getting Started*

**12:30PM – Room 210A**

*Game Changing Voice Assistant: Industry Perspectives (Panel)*

**1:30PM – Room 210D**

*Debugging and Testing Capsules in Bixby Developer Studio*

**3:30PM – Room 210A**

*Natural Language Training: Best Practices for Bixby*

**4:30PM – Room 210A**

*Bixby Views and User Experience Best Practices*

**5:30PM – Room 210A**

## Wednesday

*Building Bixby Conversational Experiences for Hands-Free Use*

**12:30PM – Room 210A**

*New Bixby Devices: No Longer Limited to Phones (Demo)*

**1:30PM – Room 210D**

*Bixby Developer Center and Marketplace*

**2:30PM – Room 210A**

*Bixby Building Blocks*

**3:30PM – Room 210A**

# Build Something Great

[www.bixbydevelopers.com](http://www.bixbydevelopers.com)

[github.com/bixbydevelopers](https://github.com/bixbydevelopers)

[bixbydevjam.com](http://bixbydevjam.com)

Roger Kibbe

@rogerkibbe

#SDC19

