

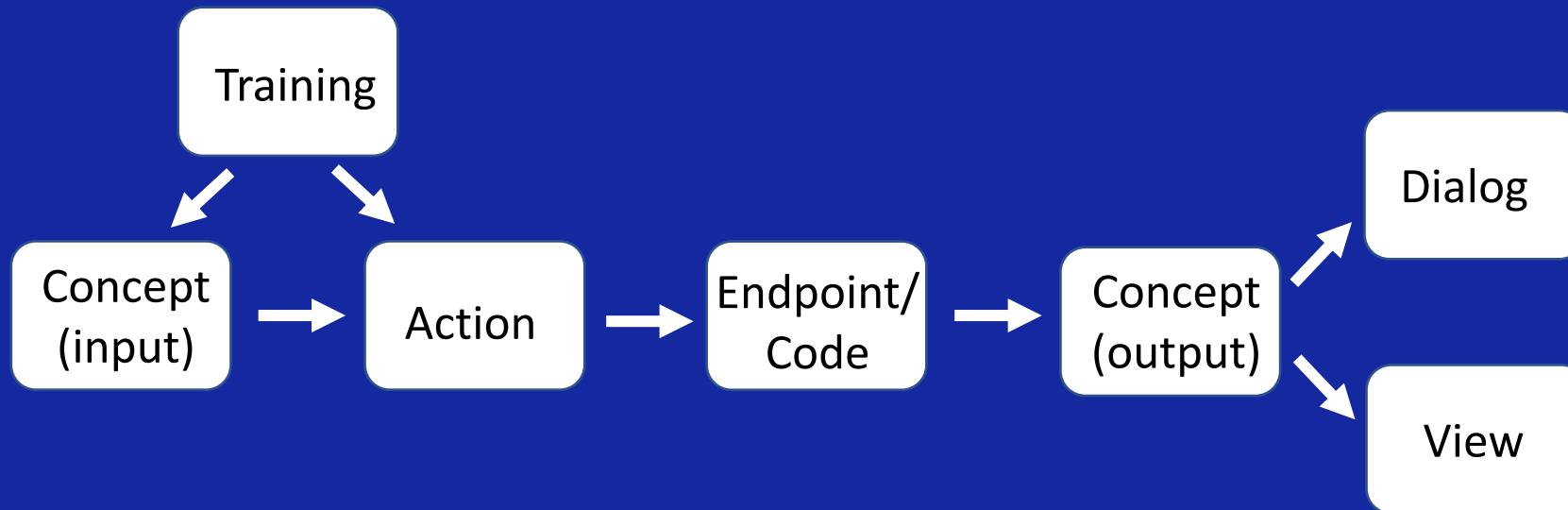
VoiceHacks Hackathon

Voice Summit 19

Roger Kibbe
Senior Developer Evangelist
@rogerkibbe



Bixby Development - Components



Input Concepts and Actions

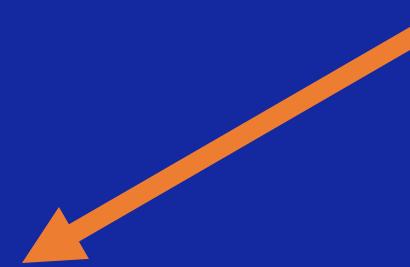
What is the capital of California?

Action:

Find Capital

*The verb or
the method*

Equivalent: Intent

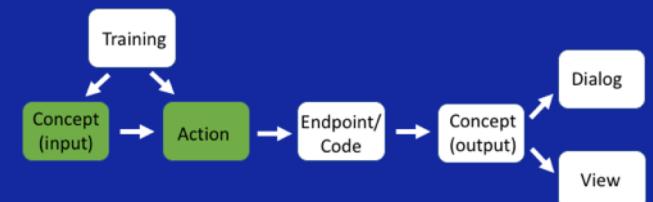


Concept:

The State e.g. California

*The noun or the
variable*

Equivalent: Slot



Output Concepts

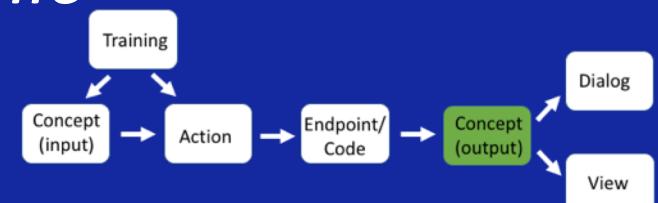
Sacramento



Concepts:
Capital
State Graphic

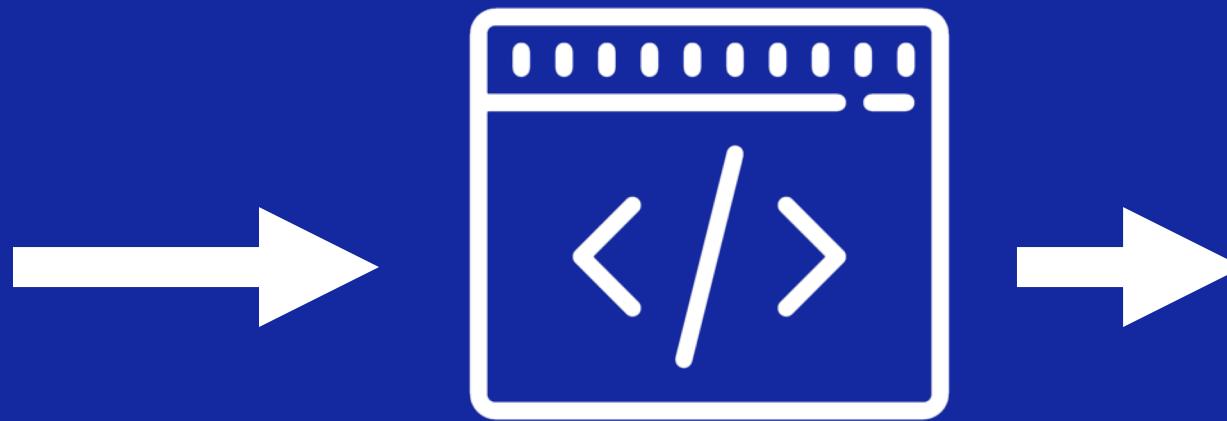


Structured Concept:
Object with both Capital and State Graphic



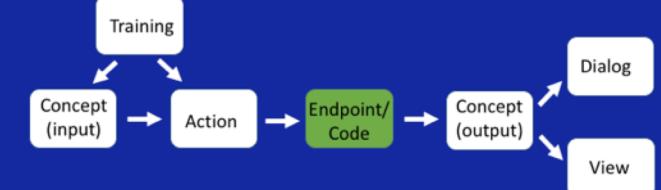
Business Logic: Endpoints and Code

Action:
Find Capitals



Endpoint: *Code:*
Ties Action
to Code *Business logic*
 CapitalLookup.js

Equivalent: Lambda, Webhook, Cloud Function



Dialog

The capital of California is Sacramento

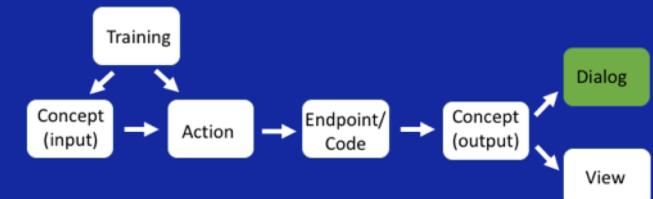


*Dialog:
The answer on
screen and
spoken*

Equivalent: request.speak, speech



Concepts

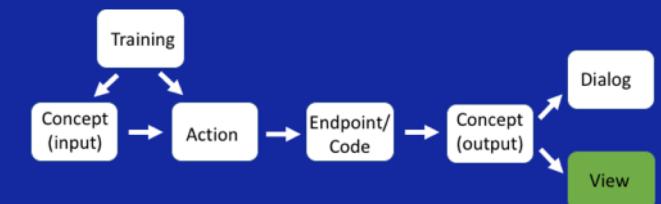


View (UI)



Equivalent: APL, Card, Rich Response

View:
State Graphic

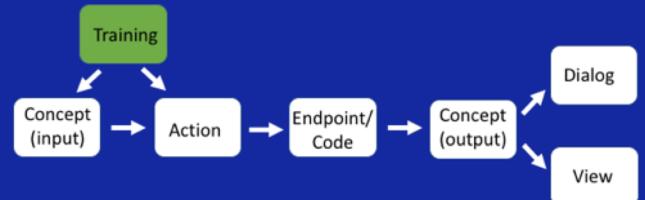


Natural Language Training

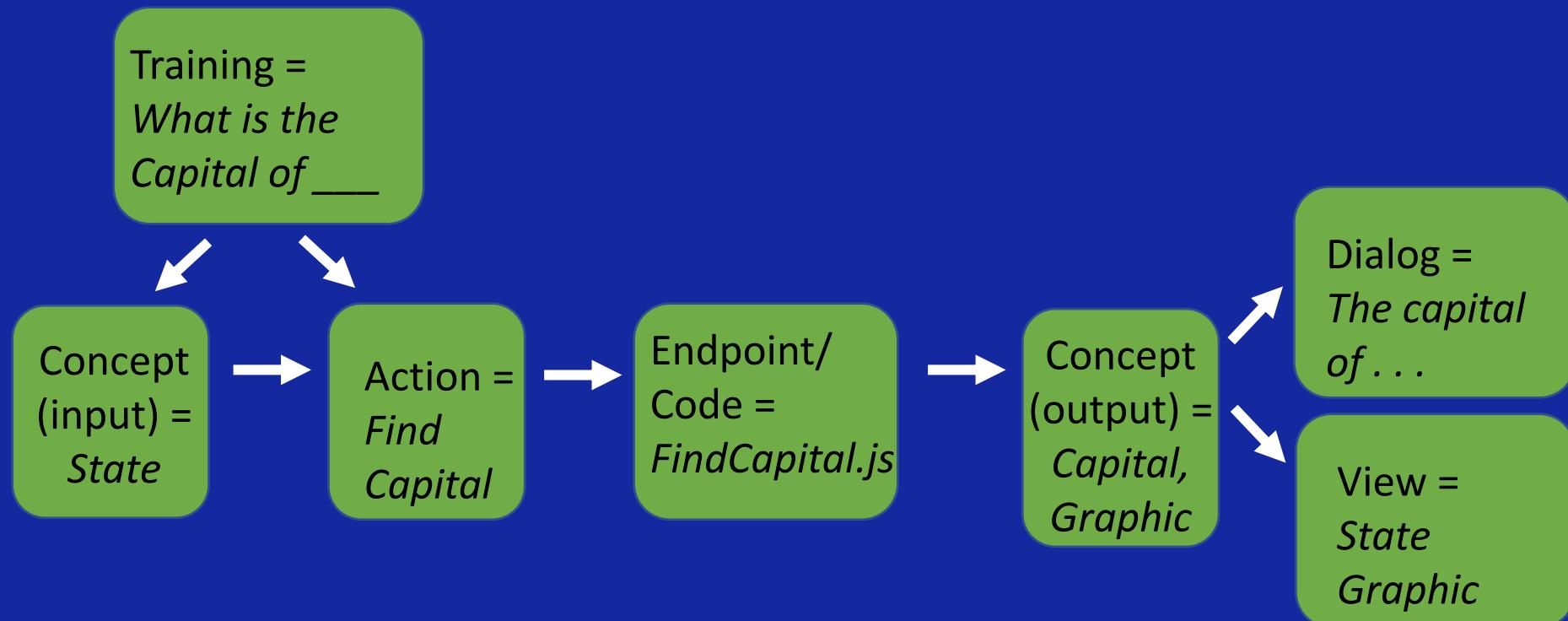
“What is the capital of _____” =

Training:
NLU (Natural
Language
understanding)

Equivalent: Utterances, Training Phrases

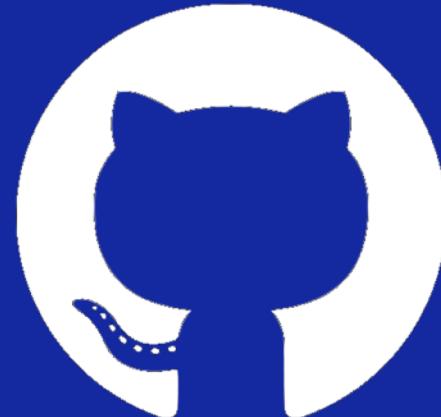


Review: Components of a Bixby Capsule



Bixby on Github

github.com/bixbydevelopers



Fact Sample Capsule

<https://github.com/bixbydevelopers/capsule-sample-fact>

- Fact voice applications tell you a fact/joke about something.
- Can also setup simple Q&A



Bixby Simulator

Enter Utterance in the control panel

Fact Sample Capsule - Customizing

- Edit code/content.js to customize
- JSON Format
 - text: required – the fact
 - image: optional but suggested
 - tags: optional – allow searching

```
{  
  text: "It would take a sloth one month to travel one mile",  
  image: {  
    url: "images/sloth.png"  
  },  
  {  
    text: "10% of the World's population is left handed"  
  },  
  {  
    tags: ["quotes", "sayings"],  
    text: "A broken clock is right two times every day",  
    image: {  
      url: "images/clock.png"  
    },  
  },  
},
```

Fact Sample Capsule - Spreadsheet “customizing the easy way”

text (fact)



tag



image url



text	tag (optional)	Image URL (optional)	tag_processing (ignore)	values for the content.js file (copy and paste all lines below this - everything in blue)
The tongue of a blue whale weighs more than most elephants		whale.png		{text: "The tongue of a blue whale weighs more than most elephants", image: {url: "images/whale.png"}},
A cow gives nearly 200,000 glasses of milk in a lifetime		cow.png		{text: "A cow gives nearly 200,000 glasses of milk in a lifetime", image: {url: "images/cow.png"}},
Dolphins sleep with one eye open		dolphin.png		{text: "Dolphins sleep with one eye open", image: {url: "images/dolphin.png"}},
What do you call a cold dog?... A chili dog!	dog, dogs	dog1.jpg	["dog", "dogs"]	{tags: ["dog", "dogs"], text: "What do you call a cold dog?... A chili dog!", image: {url: "images/dog1.jpg"}},

Spreadsheet location
contentUtility/CreateContent.xlsx



Copy and paste into
content.js

Fact Sample Capsule - API Call

- Try “Tell me a dad joke”
- Makes an API call to icanhazdadjoke.com

Customizing

- API call: `code/lib/getRemoteContent.js`
- See `code/GetContent.js` which calls above code

Fact Sample Capsule - Customizing Summary

- Edit `content.js` (use spreadsheet)
- Or call an API – `getRemoteContent.js`
- Change training
- Change tags
- Tags + training = large customizations possible

<https://github.com/bixbydevelopers/capsule-sample-fact>

Fact Sample Capsule - Ideas



History
Facts



Dad
Jokes



Tech
Facts



Geography
Facts



Animal
Jokes



Music
Facts



President
Facts



Crossed
the Road
Jokes

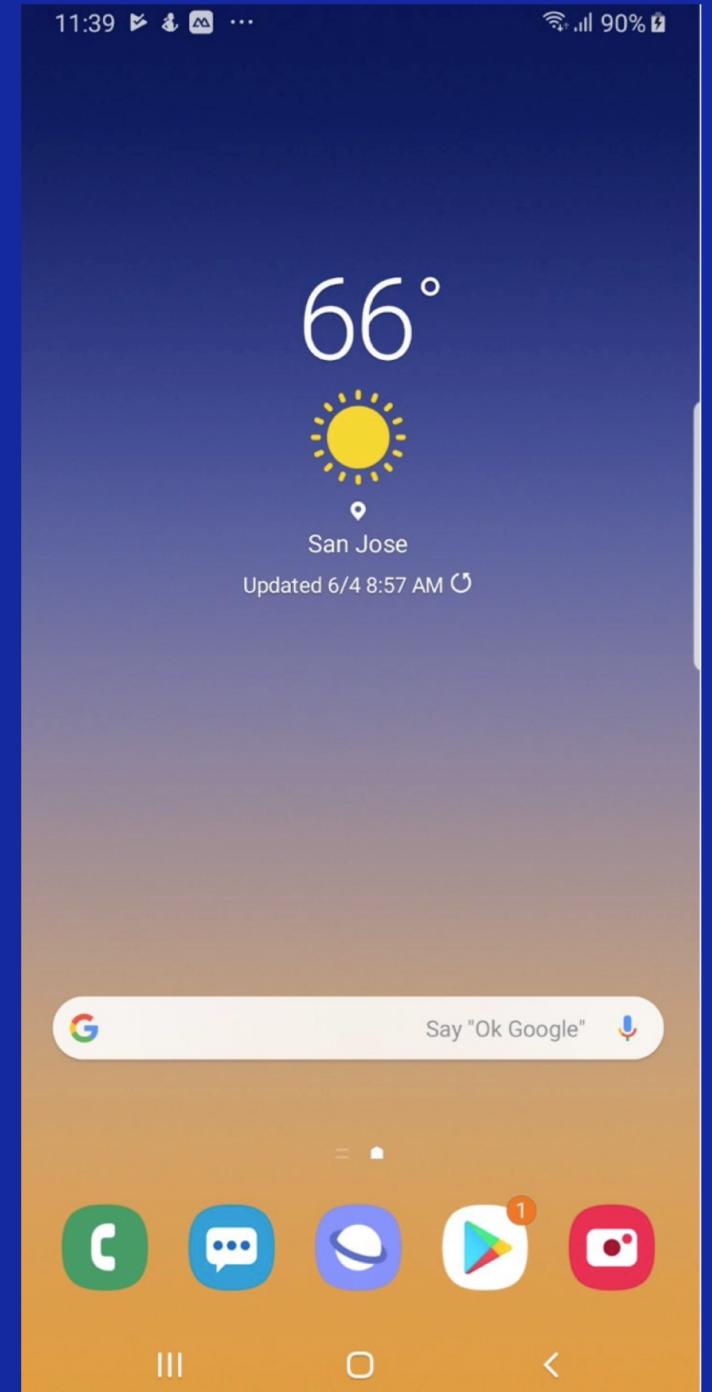


Sports
Facts

Quiz Sample Capsule

<https://github.com/bixbydevelopers/capsule-sample-quiz>

- Create a quiz
 - Multiple choice
 - Free entry



Quiz Sample Capsule - Customizing

- Edit code/data/quizzes.js to customize
- JSON Format
- Metadata
 - title – Quiz title
 - tags – Search tags
 - image – Quiz image
- questions – Array of questions
 - question – Question
 - options (optional)
 - Multiple choice options
 - No options = free text
 - answer
 - Option array index
 - Text options
 - explanation (optional) – explains answer – shown if answered wrong

```
// Start of president quiz
{
  title: "President Quiz",
  tags: ["president", "presidents"], //used to find this quiz
  image: {
    url: '/images/President.jpg'
  }, //optional
  questions: [
    {
      question: "Which president said 'Efforts and courage are not enough without purpose and direction.'?",
      options: ["Kennedy", "Obama"],
      answer: 0
    },
    {
      question: "Which president said 'Men are not prisoners of fate, but only prisoners of their own minds?'",
      options: ["Hoover", "Roosevelt", "Truman"],
      //you can provide a list of accepted answers instead of giving an index to the
      //options
      answer: ["Roosevelt", "FDR", "Franklin Roosevelt", "Franklin D Roosevelt"],
    },
    {
      question: "Which president said 'Speak softly, and carry a big stick?'",
      //you have to provide a list of accepted answers if there are no options
      answer: ["Teddy Roosevelt", "Roosevelt", "Theodore Roosevelt"],
      //you can optionally provide an explanation
      explanation: "That famous quote describes Teddy Roosevelt's foreign policy"
    }
  ]
},
```

Quiz Sample Capsule - Spreadsheet “customizing the easy way”

metadata



Spreadsheet location
`contentUtility/CreateQuizContent.xlsx`

Title	States Quiz				
Tags	states, state, united states				
Image	us_map.png				
Question - required	Options - optional	Answer - required	Explanation - optional	Computed - ignore	{ title: "States Quiz", tags: ["states", "state", "united states"], image: { url: '/images/us_map.png' }, questions: [
Which state has the nickname 'Spud State'?	Idaho, Wyoming, Florida	Idaho	Idaho is well known for growing potatoes and thus the nickname, Spud State	options: ["Idaho", "Wyoming", "Florida"] answer: "Idaho"	{question: "Which state has the nickname 'Spud State'", options: ["Idaho", "Wyoming", "Florida"], answer: "Idaho", explanation: "Idaho is well known for growing potatoes and thus the nickname, Spud State"}]
Which state has the nickname 'Peach State'?	Hawaii, California, Georgia		2	options: ["Hawaii", "California", "Georgia"] answer: 2 options:	{question: "Which state has the nickname 'Peach State'", options: ["Hawaii", "California", "Georgia"], answer: 2},

↑
question options answer explanation

↑
Copy and paste into
quizzes.js

Quiz Sample Capsule - Customizing Summary

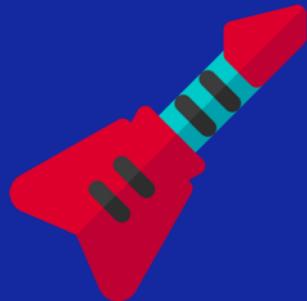
- Edit quizzes.js (use spreadsheet)
- Other ideas
 - Buzzfeed style quiz
 - Add images to questions

<https://github.com/bixbydevelopers/capsule-sample-quiz>

Quiz Sample Capsule - Ideas



States &
Capitals
Quiz



Music
Quiz



Video Game
Quiz



Presidents
Quiz



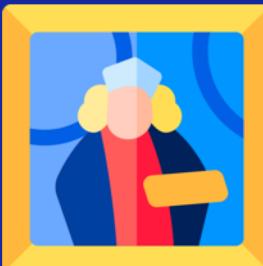
Movies
Quiz



TV
Quiz



Language
Quiz



Art
Quiz



Sports
Quiz

Sample Collection

<https://github.com/bixbydevelopers/capsule-samples-collection>

Cookbook of sample collections - Particularly useful:

- Bixby Views: Result UI Views
- HTTP API Calls: Sample HTTP calls
- Input Forms: Input Forms

SAMPLE
CODE

Free/Royalty Free Graphics *



ICONS

iconbros.com



GRAPHICS

unsplash.com

icons8.com

pixabay.com

*You may need to credit – especially for something public like a capsule.
Check the license. Put credits in the capsule description

Thank you & Questions

Presentation: bit.ly/bixbyVoiceHacks19

Roger Kibbe | Developer Evangelist | Twitter: @rogerkibbe

Sample Capsule Links

Fact:

<https://github.com/bixbydevelopers/capsule-sample-fact>

Edit data: code/content.js

Spreadsheet: contentUtility/CreateContent.xlsx

Quiz:

<https://github.com/bixbydevelopers/capsule-sample-quiz>

Edit data: code/data/quizzes.js

Spreadsheet: contentUtility/CreateQuizContent.xlsx

Sample Collection:

<https://github.com/bixbydevelopers/capsule-samples-collection>

Twitter
#BIXBYHACKS

