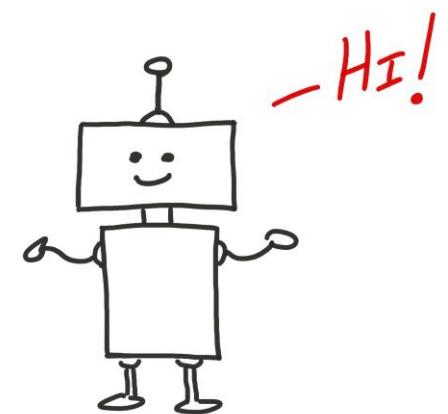


I, For One, Welcome, Our New Bot Overlords!

AN INTRO TO MICROSOFT'S
BOT FRAMEWORK



Matthew Soucoup
PRINCIPAL
@codemillmatt codemilltech.com
github.com/codemillmatt/bots



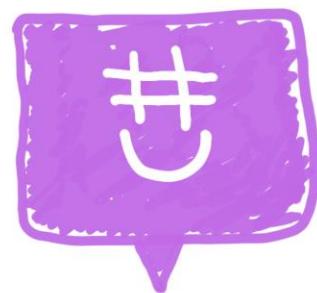
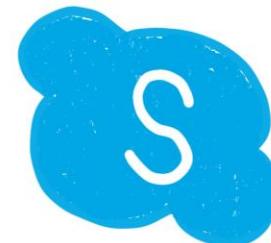
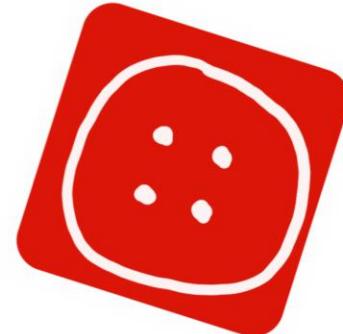


<https://bit.ly/ps-forms>

There are lots of messaging apps...



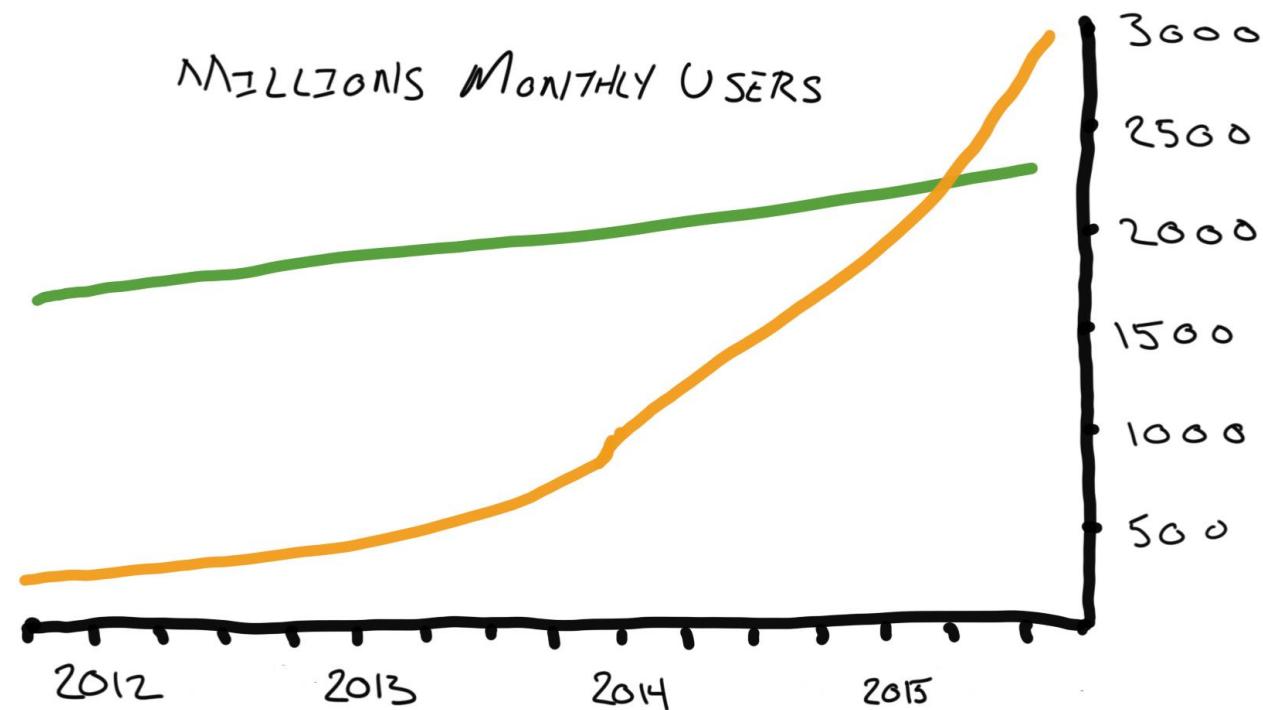
kik.



... and lots of people use them ...

■ = BIG 4 MESSAGING APPS

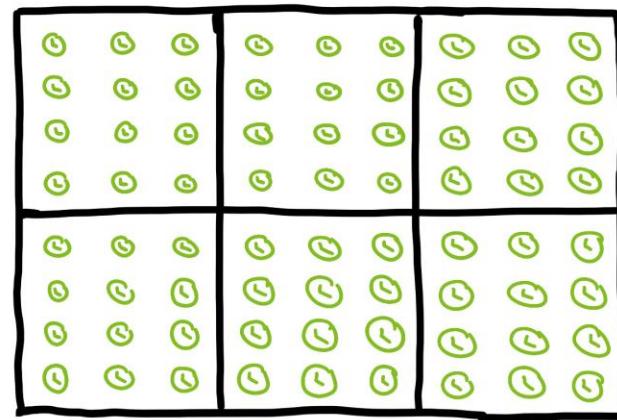
■ = BIG 4 SOCIAL MEDIA APPS



... and people spend lots of time in them.



AVERAGE USER



6 SESSIONS / DAY

12 MINUTES / SESSION

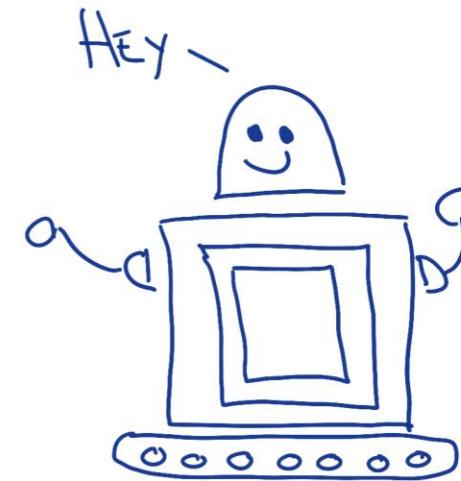
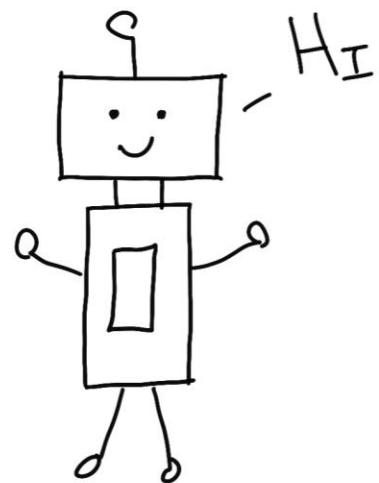
SUPER USER 157 $\frac{\text{MIN}}{\text{DAY}}$



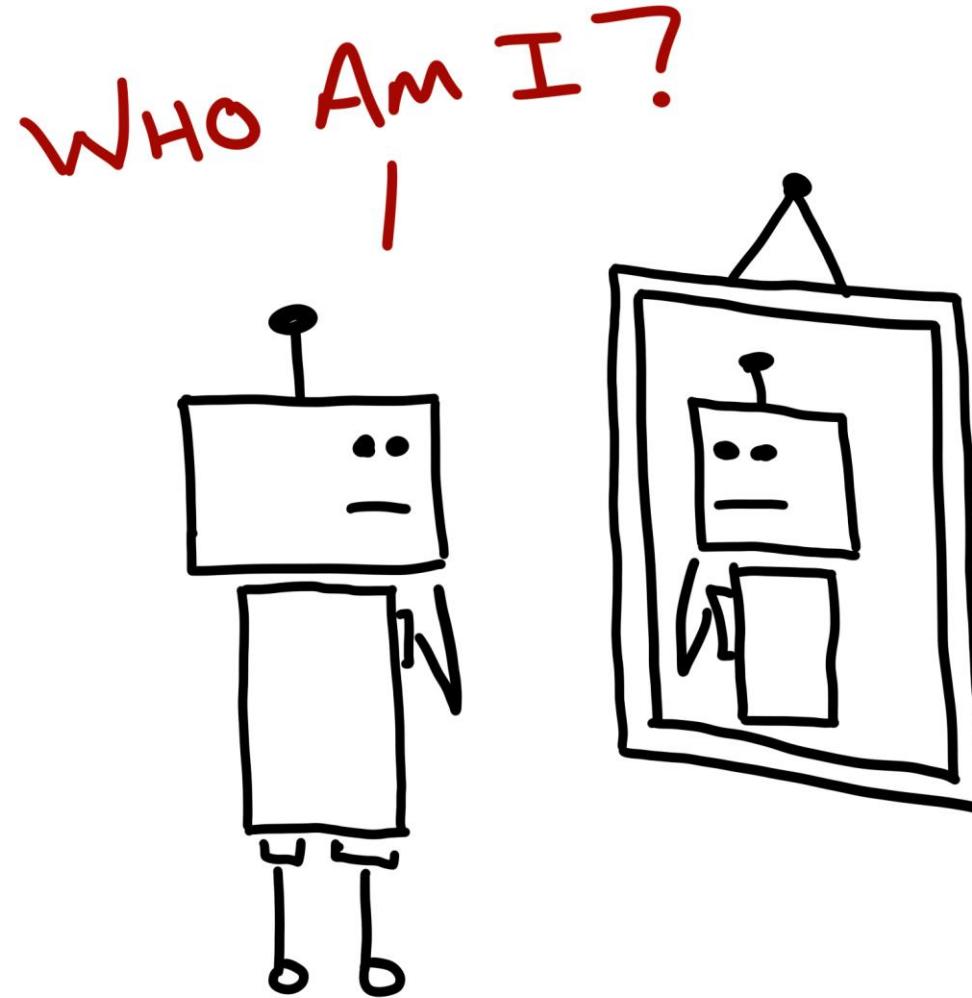
Bots also spend time chatting

 - 11,000

 - 6,000



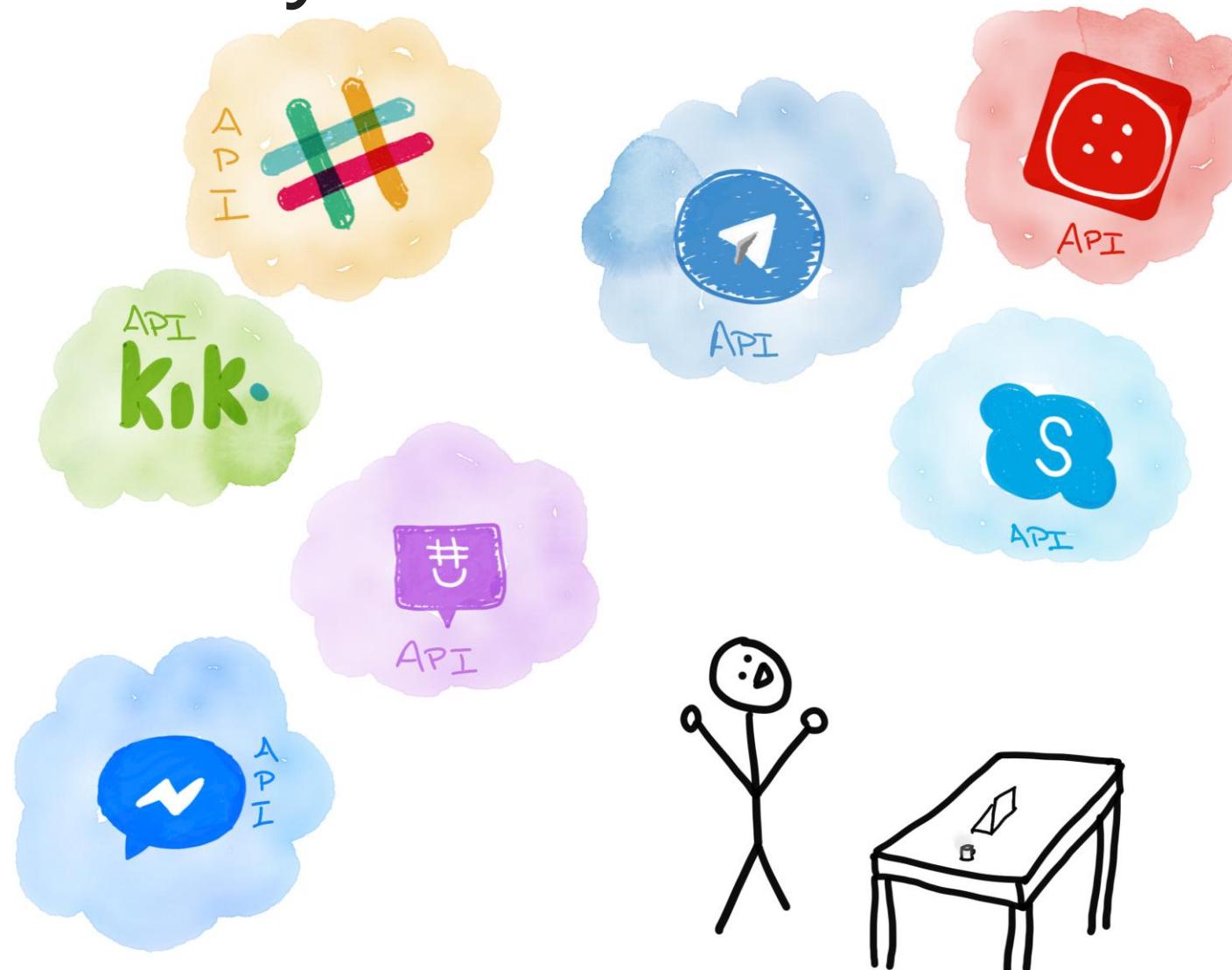
... but what is a bot?



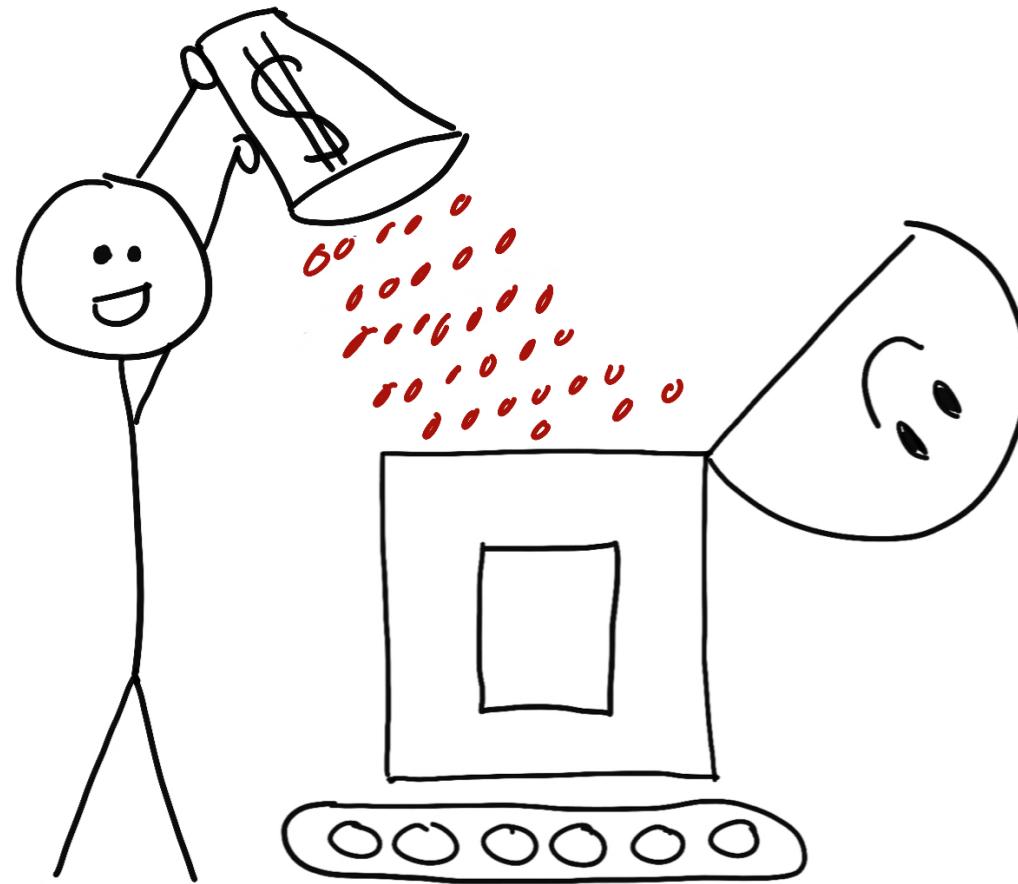
A conversational UI



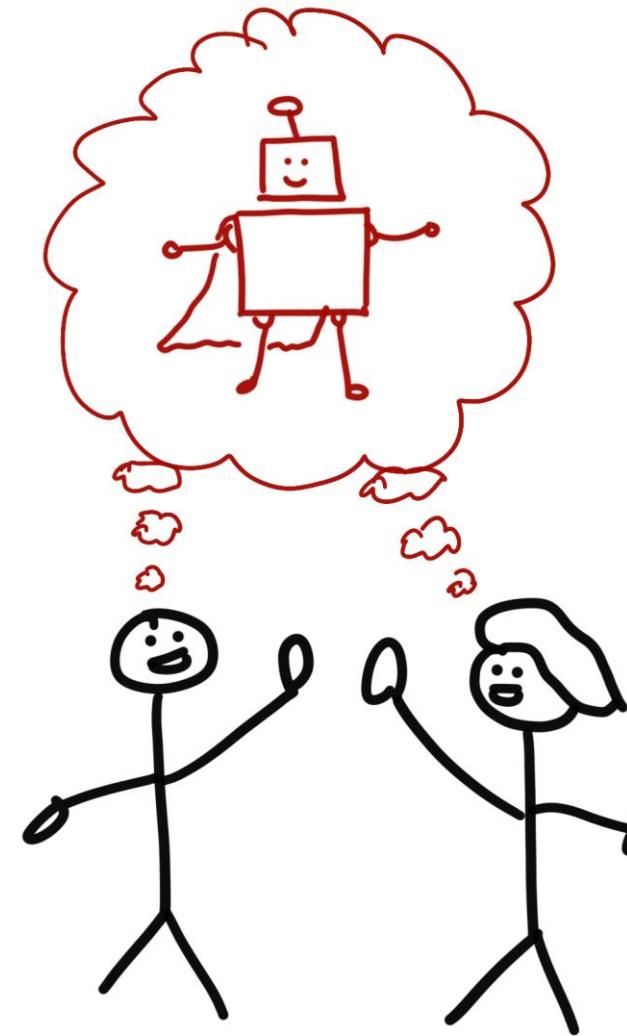
APIs are everywhere!



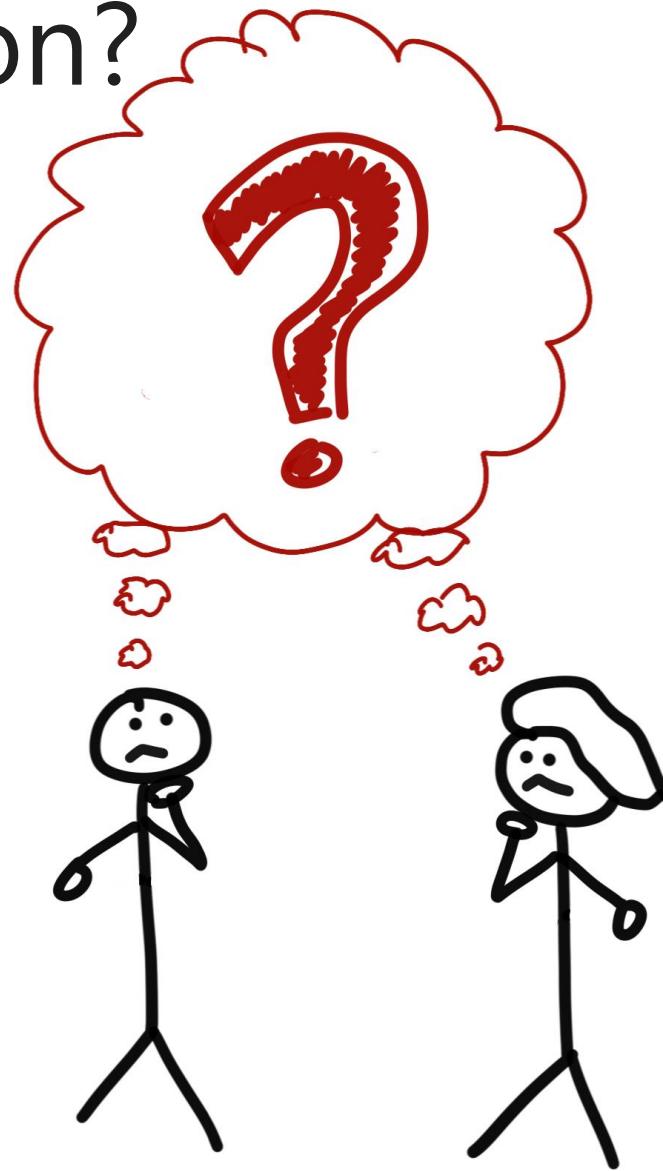
Investors! Investors! Investors!



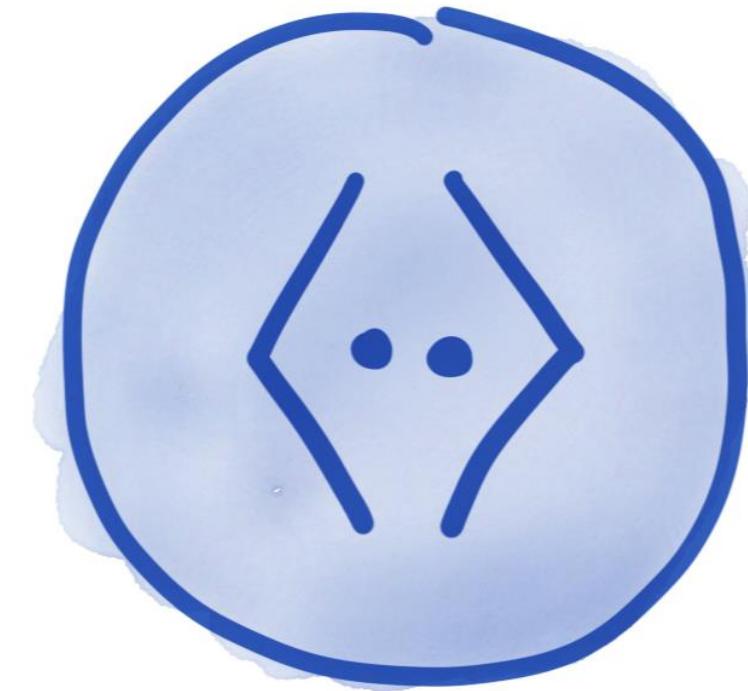
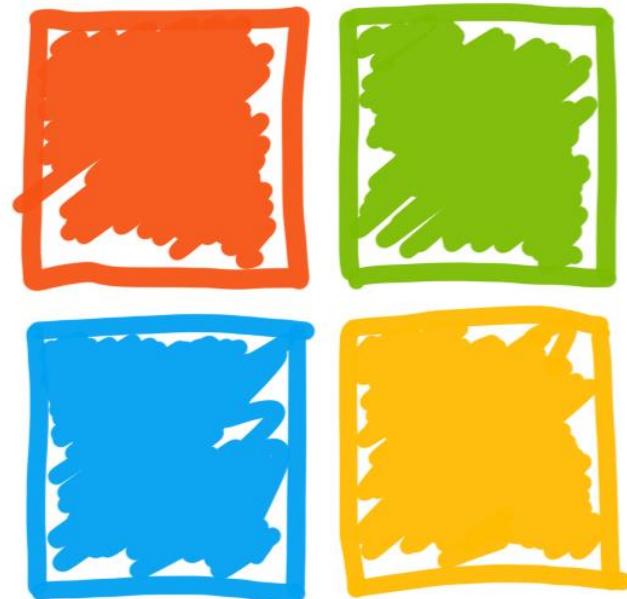
Opportunity!



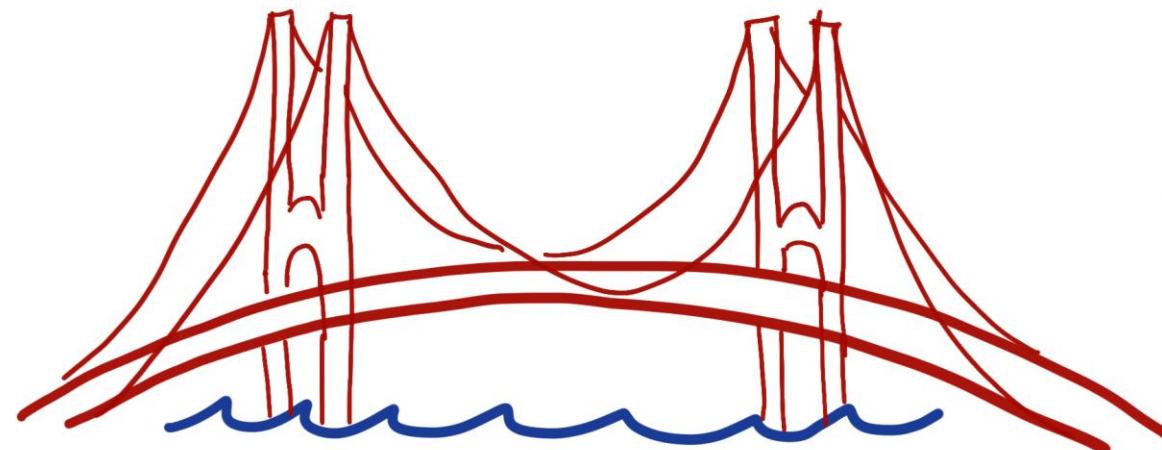
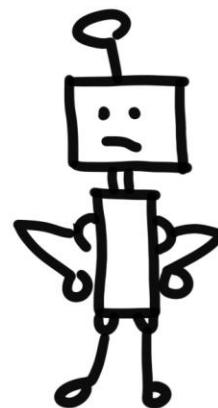
Implementation?



Microsoft Bot Framework



Bridges the gap

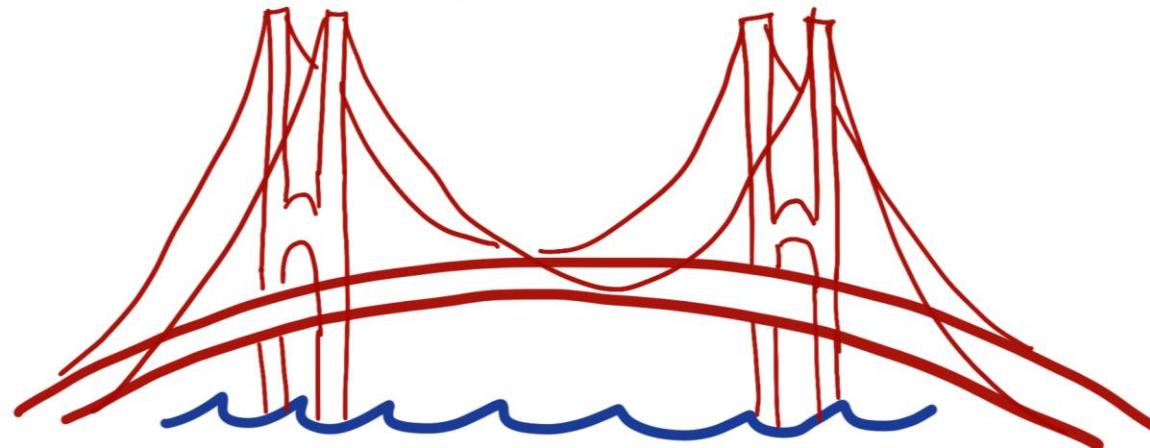
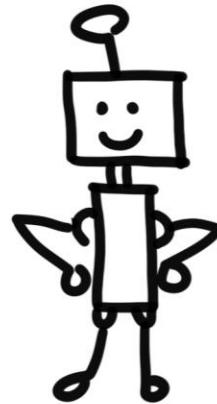


kik.



A single API!

1



API



kik.

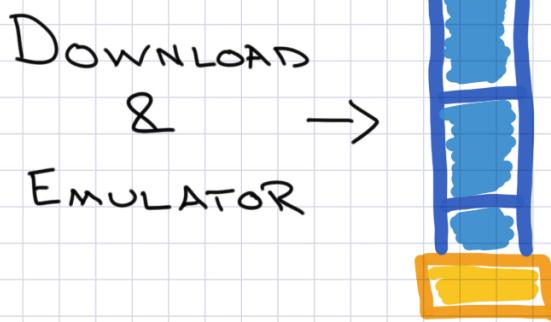


S



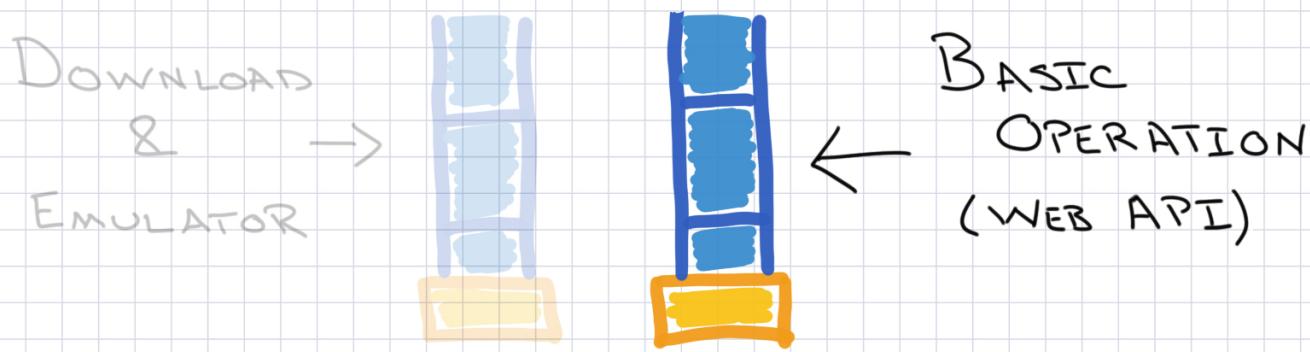
S C H E M A T I C

B U I L D I N G A B O T



S C H E M A T I C

B U I L D I N G A B O T



S C H E M A T I C

B U I L D I N G A B O T

LISTEN
(HEART &
SOUL)

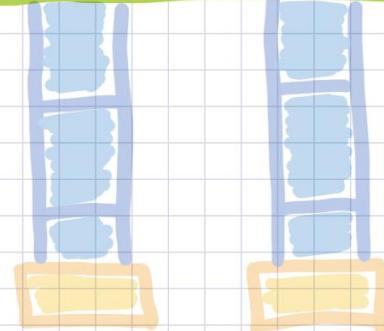


DOWNLOAD

&



EMULATOR

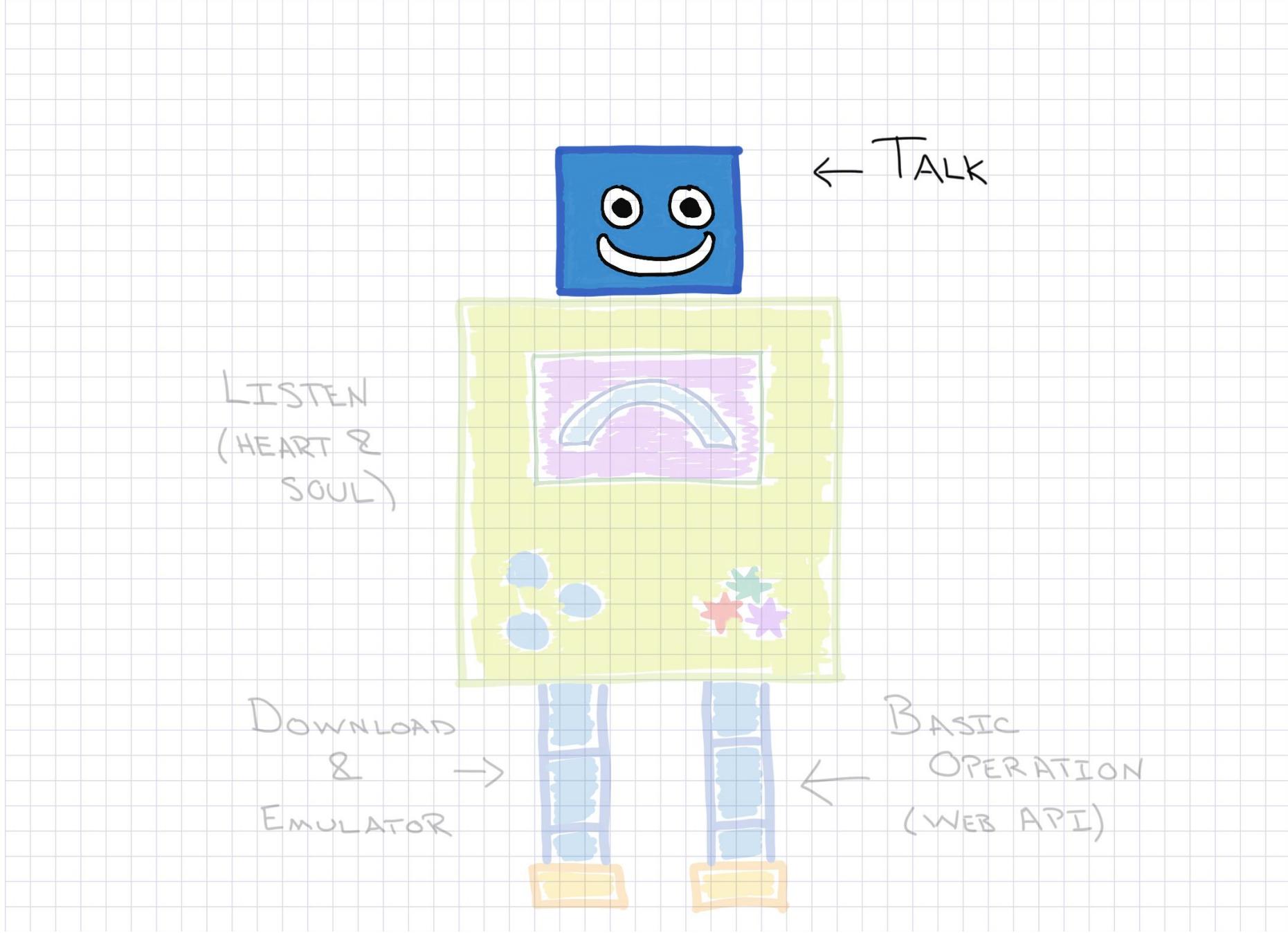


BASIC
OPERATION
(WEB API)



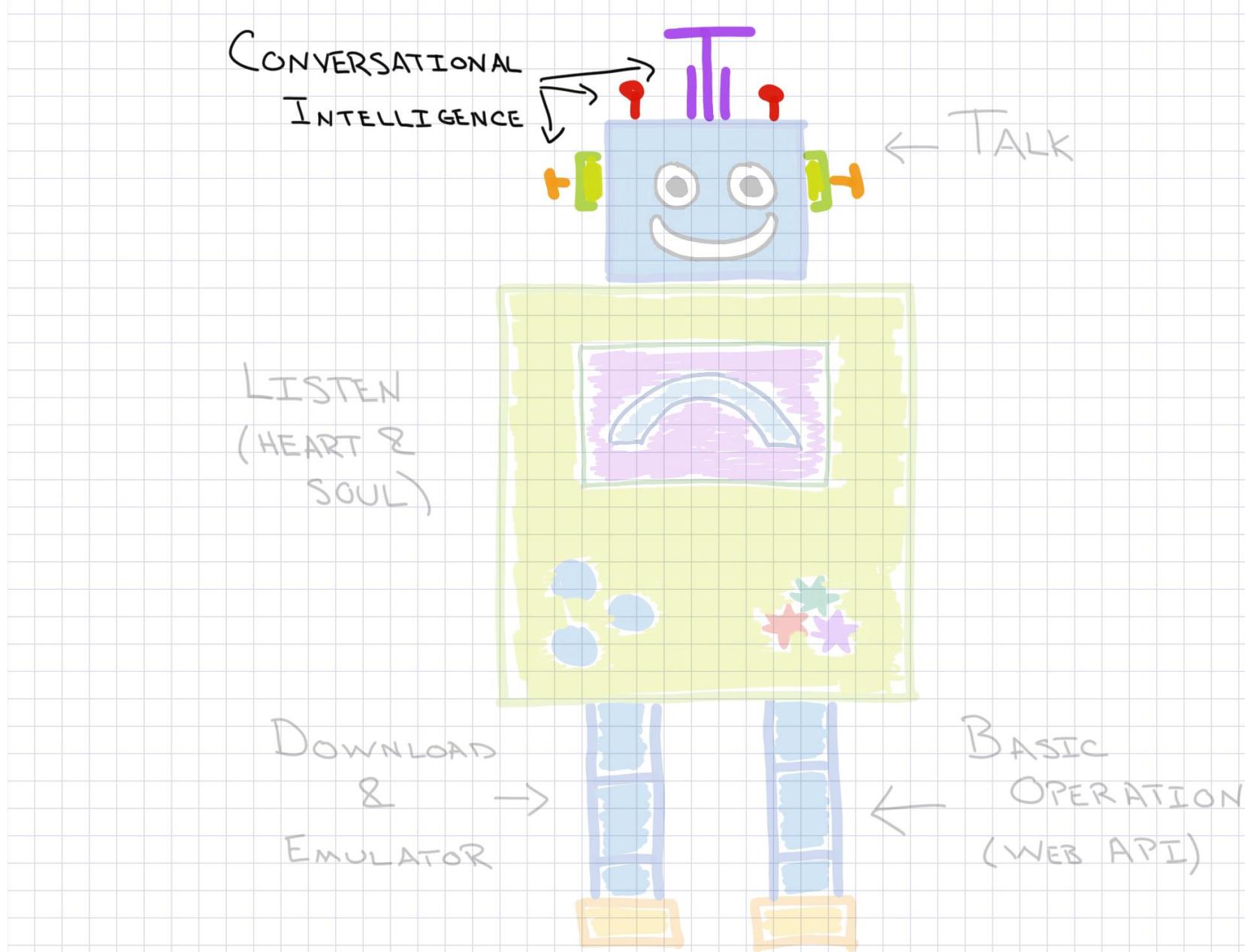
S C H E M A T I C

B U I L D I N G A B O T



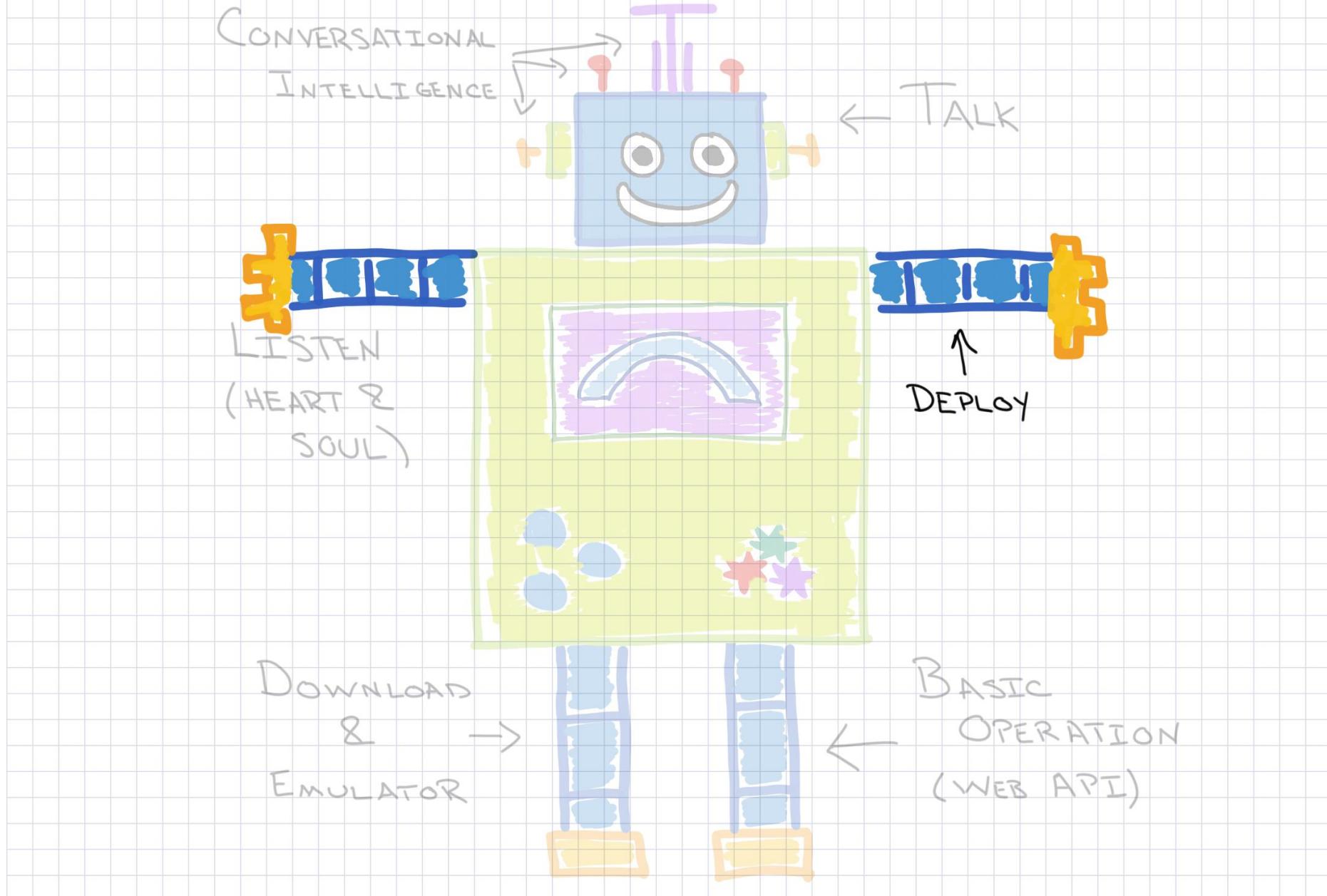
S C H E M A T I C

B U I L D I N G A B O T



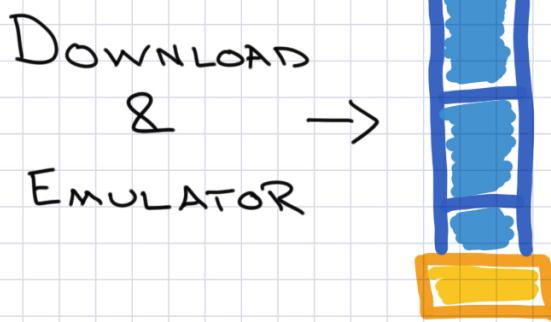
S C H E M A T I C

B U I L D I N G A B O T



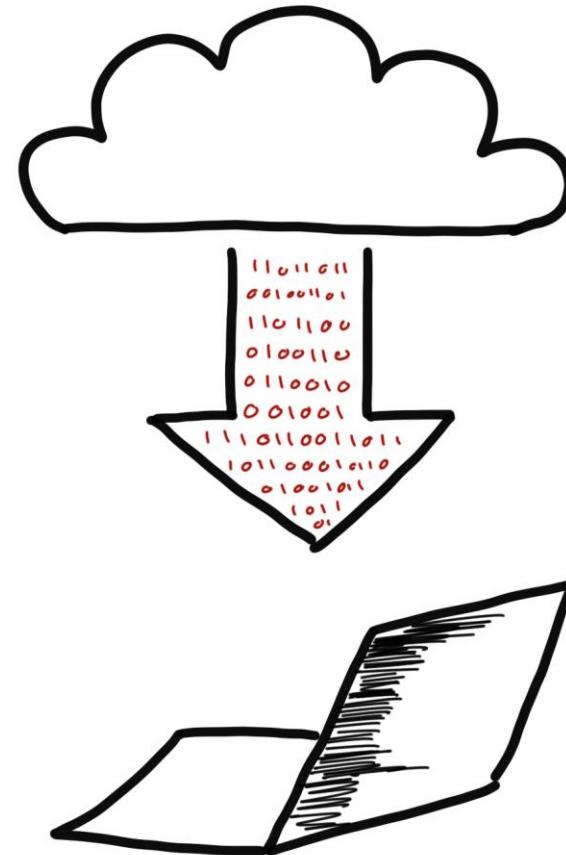
S C H E M A T I C

B U I L D I N G A B O T



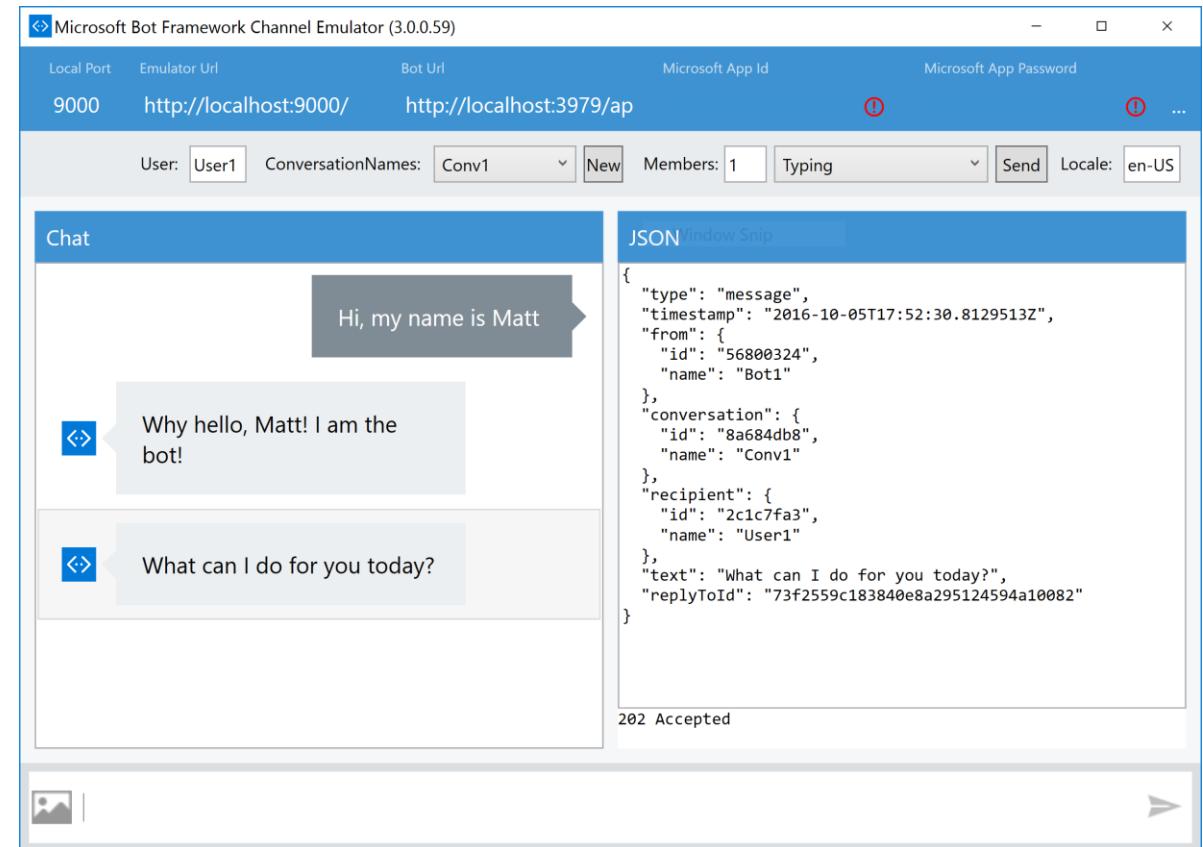
Downloading

- dev.botframework.com
- node.js or .Net
 - npm: botbuilder
 - NuGet: Microsoft.Bot.Builder
- Emulator
- VS2015 Template



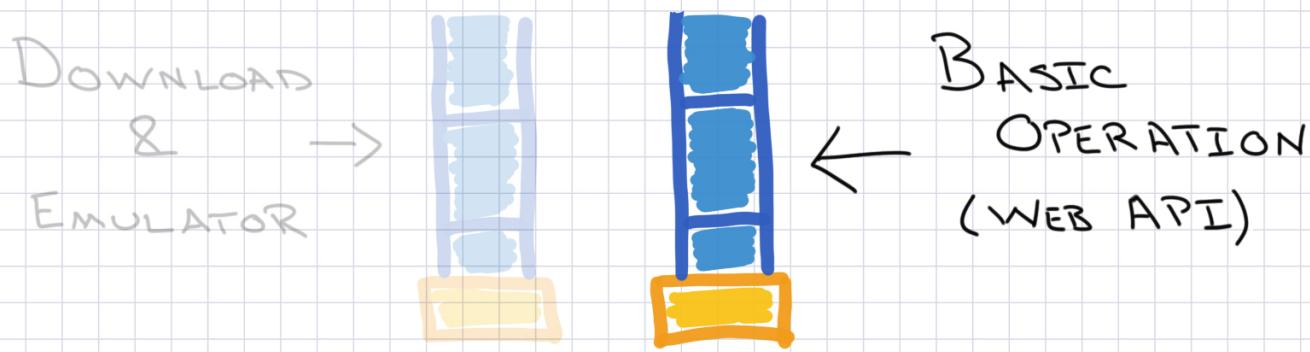
Bot Emulator

- Windows GUI
- MacOS GUI
- Linux
- Downloads section



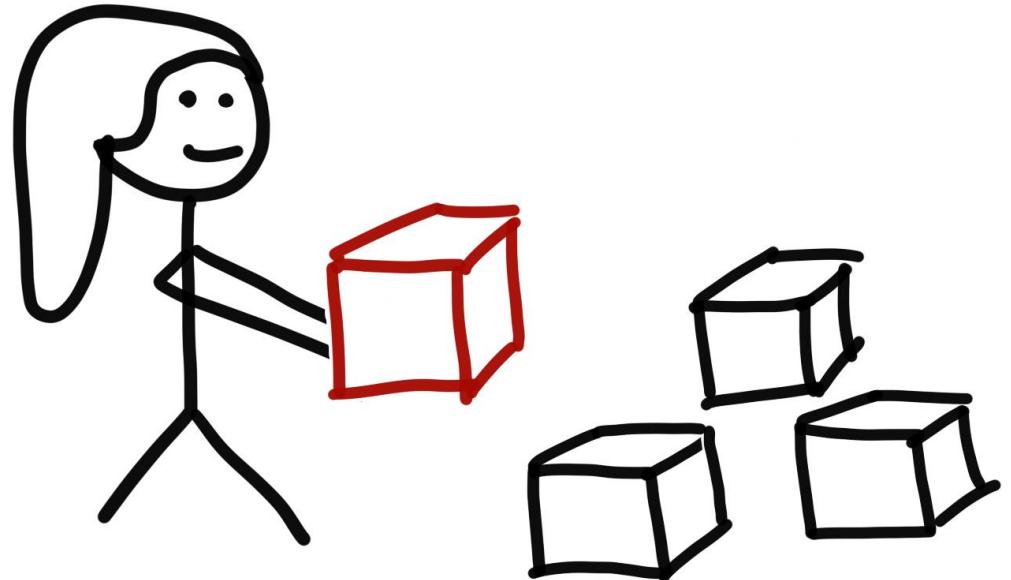
S C H E M A T I C

B U I L D I N G A B O T



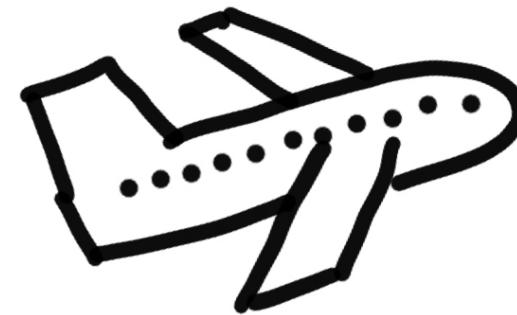
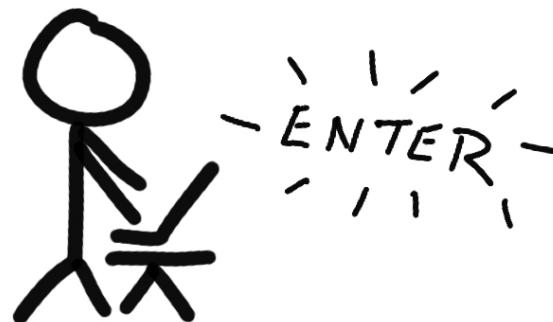
Basic Operation – VS2015 Template

- WebAPI template
- NuGet packages
- “Activity” setup



Basic Operation – The Entry

CHANNELS



Basic Operation – The Entry

CHANNELS



CONNECTOR
SERVICE

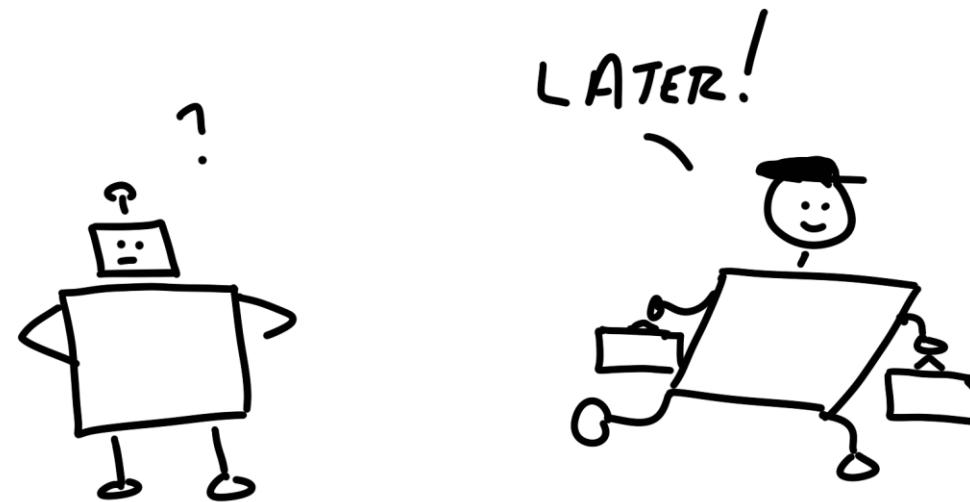


Basic Operation – The Activity



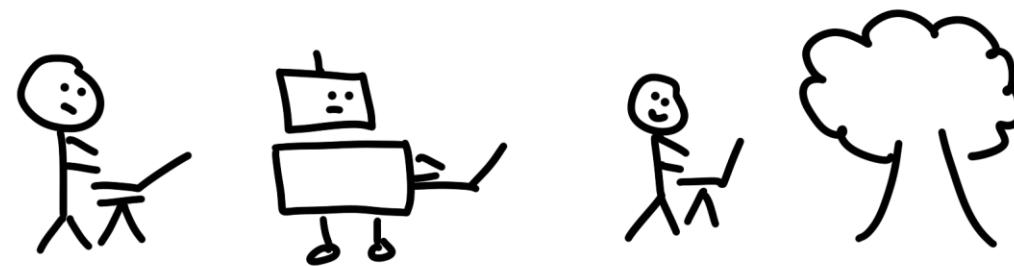
Basic Operation – The Activity

ACTIVITY - LAND



CONVERSATION
UPDATE

Basic Operation – The Activity



TYPIING

Basic Operation – The Activity



DELETE USER DATA

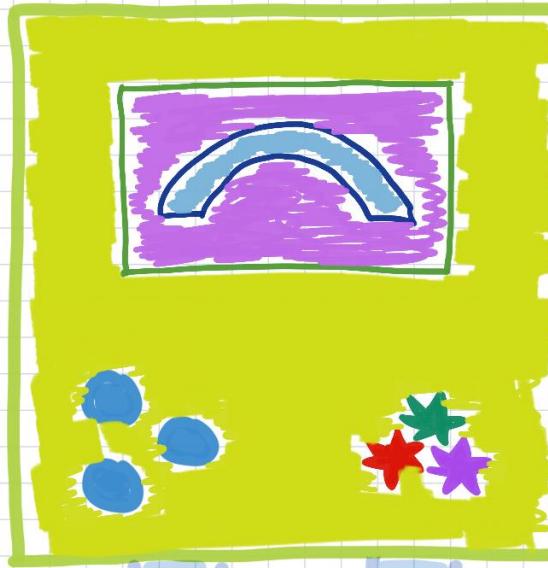
DEMO



S C H E M A T I C

B U I L D I N G A B O T

LISTEN
(HEART &
SOUL)

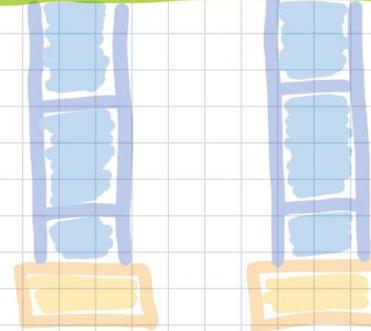


DOWNLOAD

&



EMULATOR



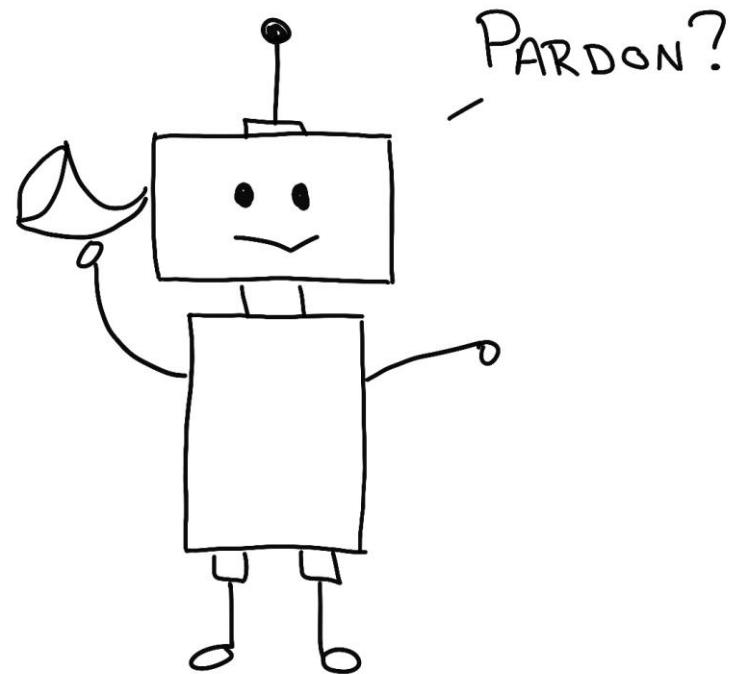
BASIC
OPERATION
(WEB API)



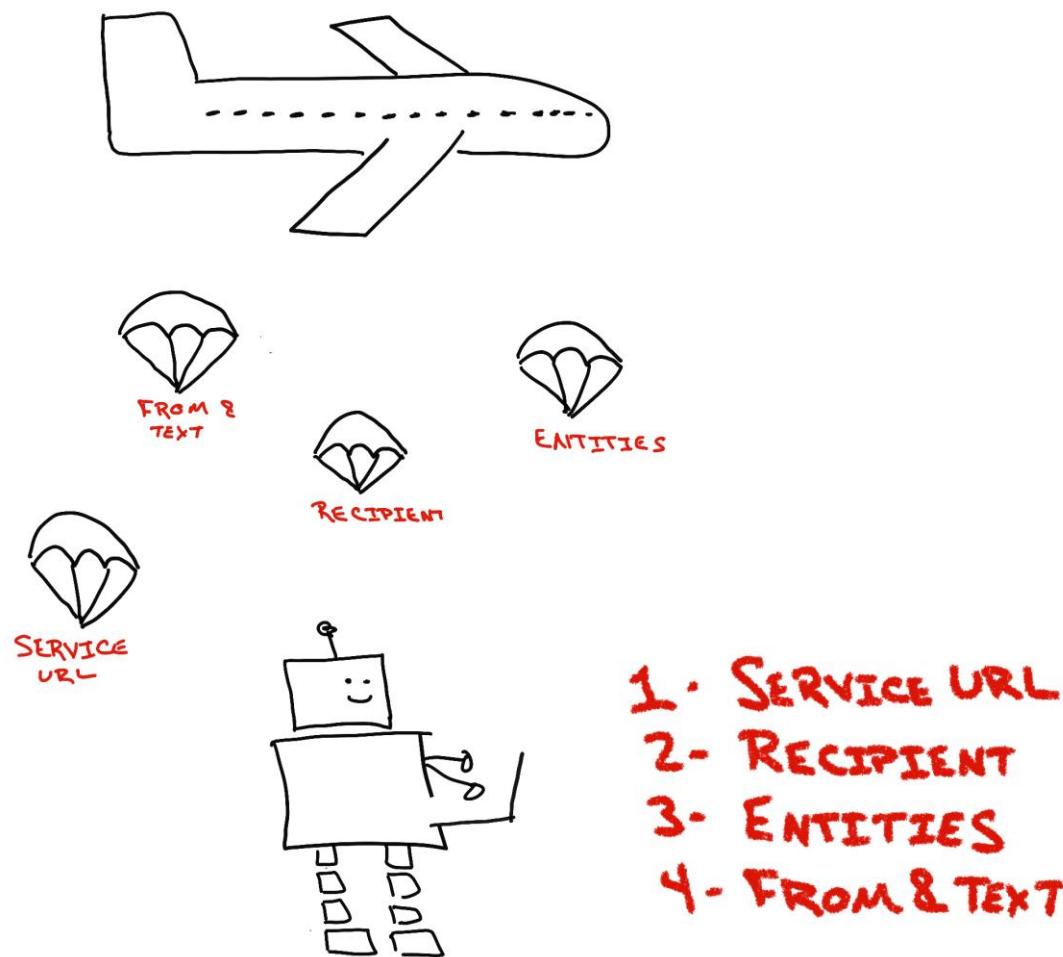
Listening – The Message Activity

Properties

- ServiceUrl
- Conversation
- From
- Recipient
 - Always the bot (ID can change)
- Entities
 - (aka Mentions)
- Text

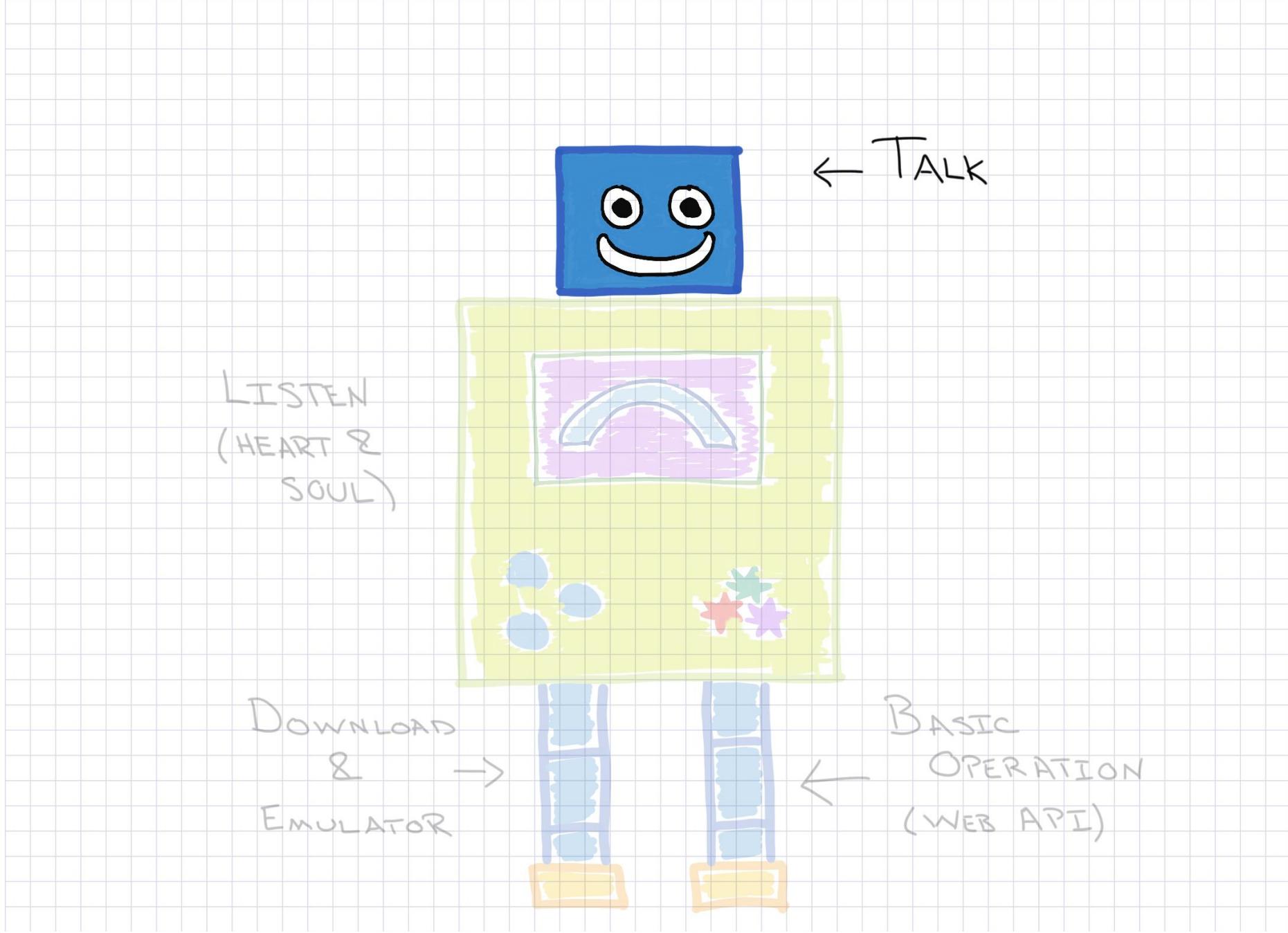


Listening – The Message Activity



S C H E M A T I C

B U I L D I N G A B O T



Talking – Activity Methods

Creating a Message

- `Activity.CreateReply`
 - Member function
- `Activity.CreateMessageActivity`
 - Static function

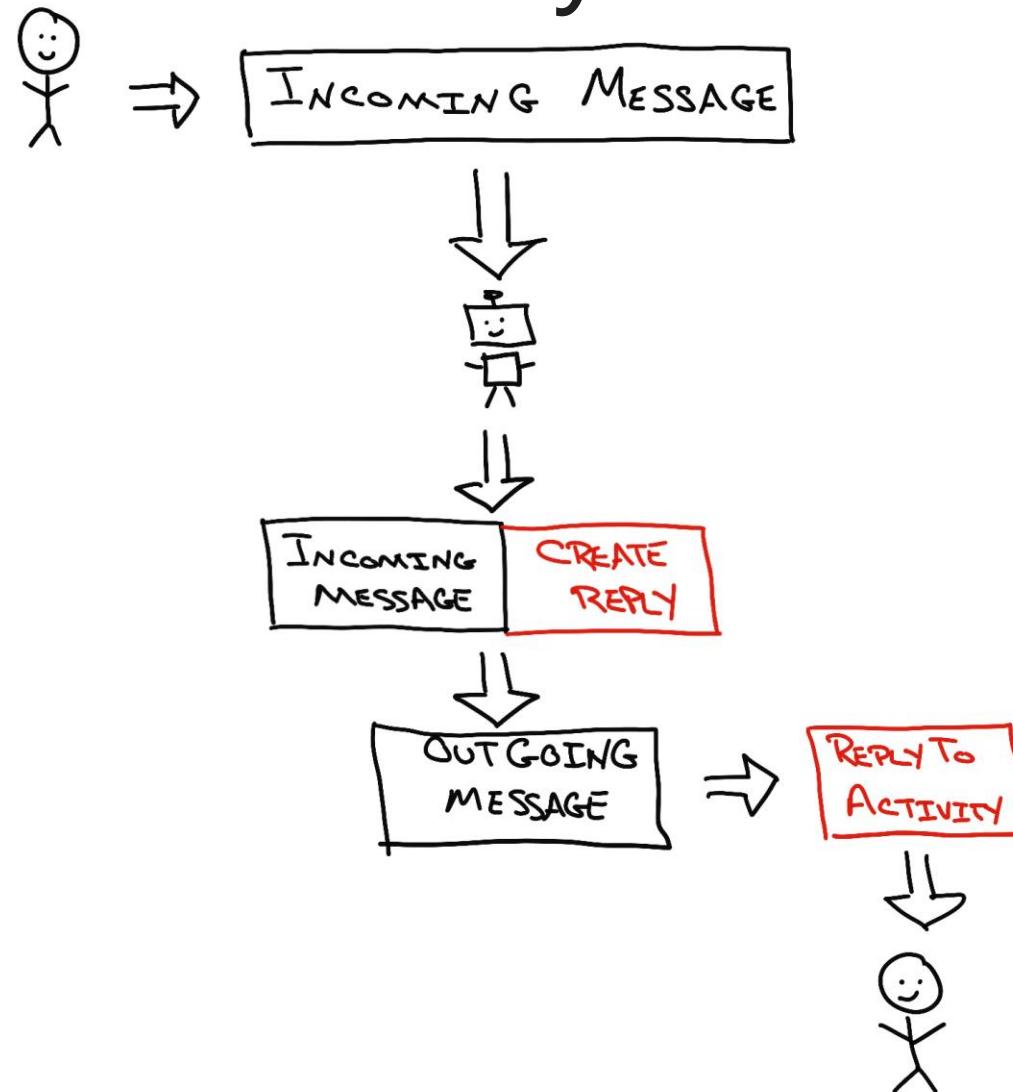
Talking – Activity Methods

Sending a Message

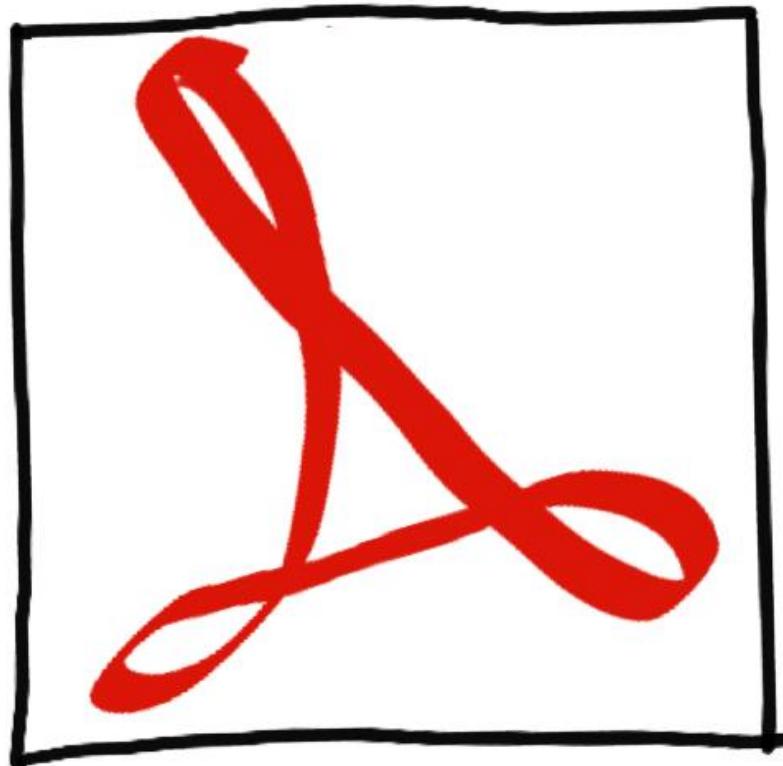
ConnectorClient.Conversations

- `ReplyToActivityAsync`
 - Keeps message thread
- `SendToConversationAsync`
 - Need to populate metadata
- `CreateConversationAsync`
 - Email only
 - Need to manually add all participants

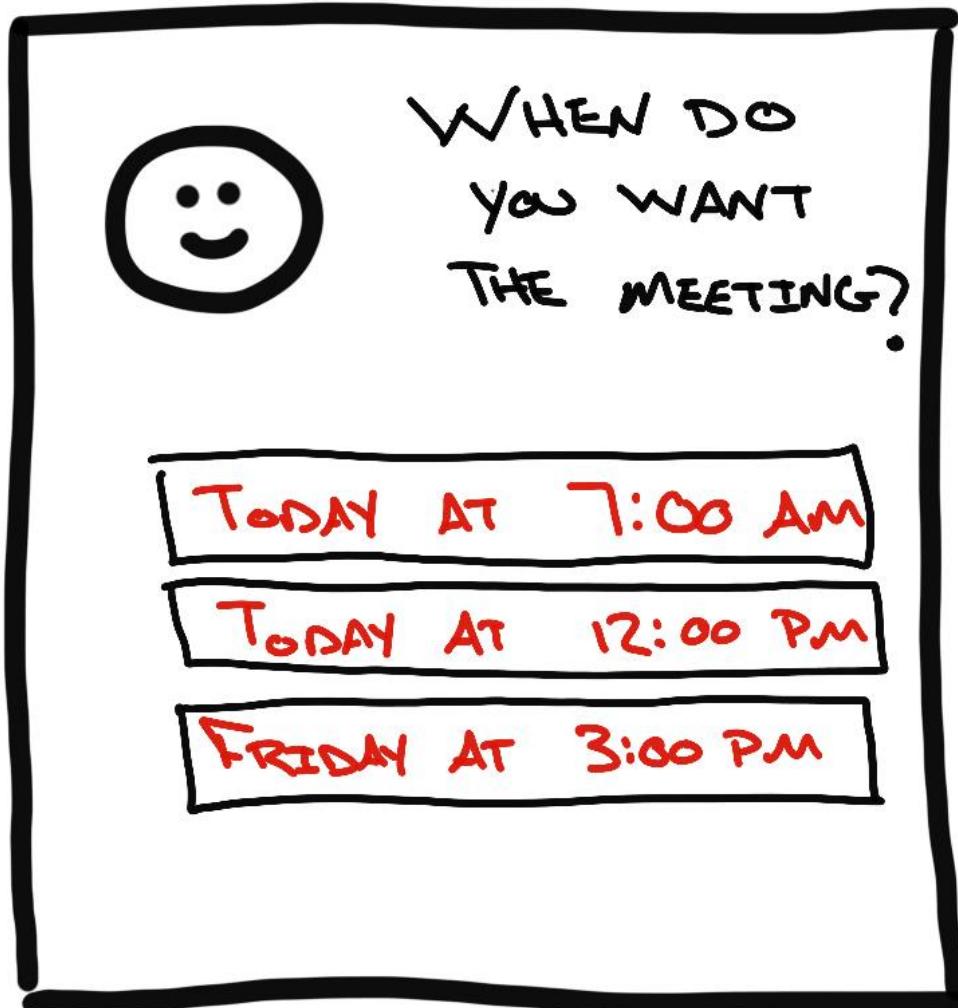
Talking – The Activity



Talking – Attachments



Talking – Cards

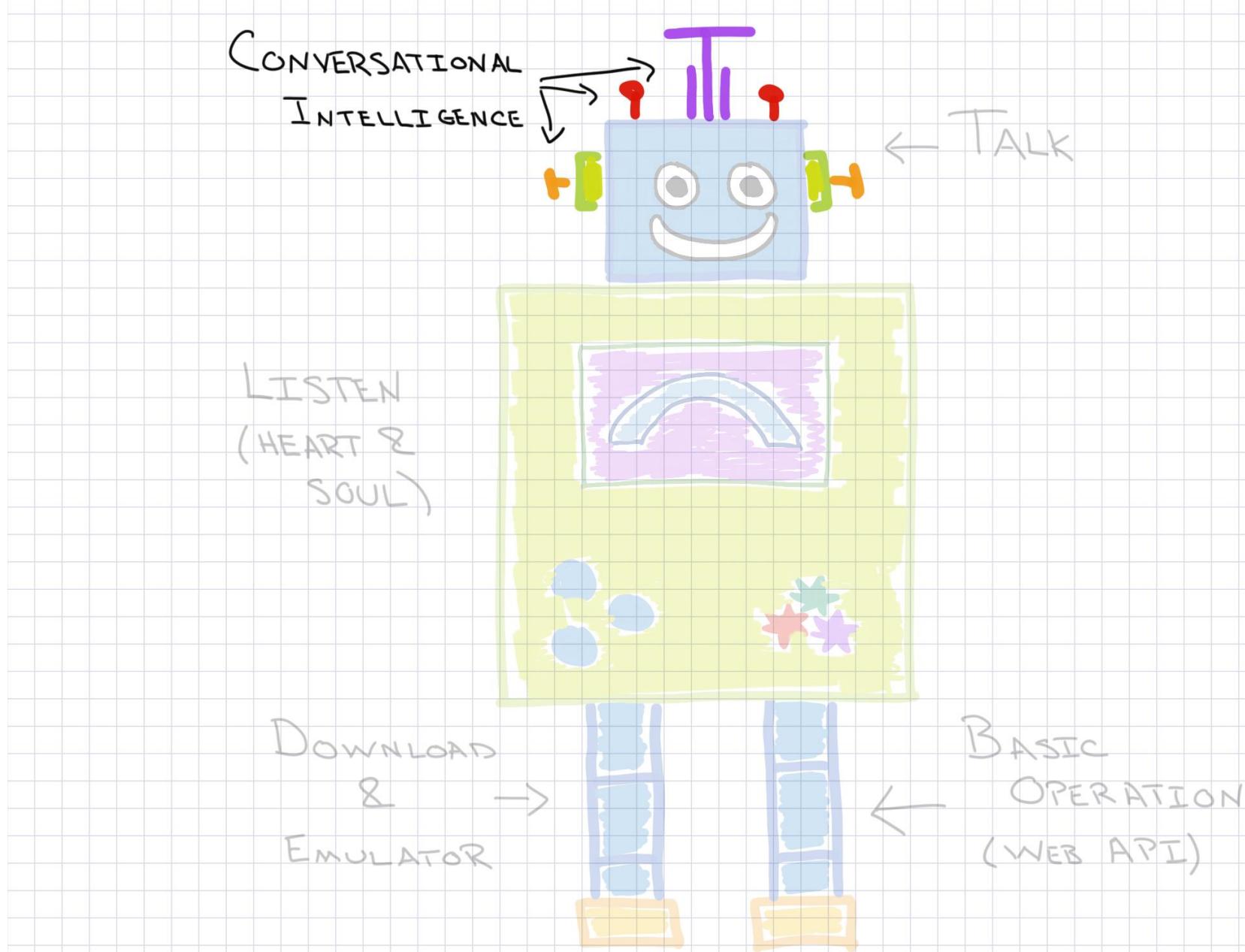


DEMO

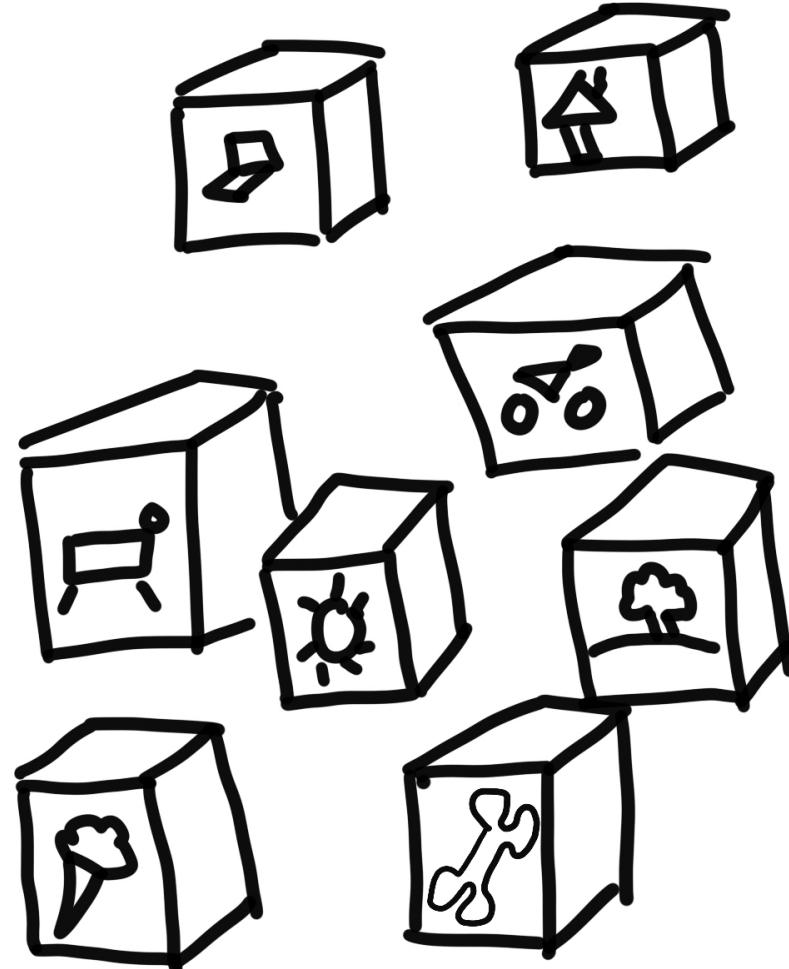
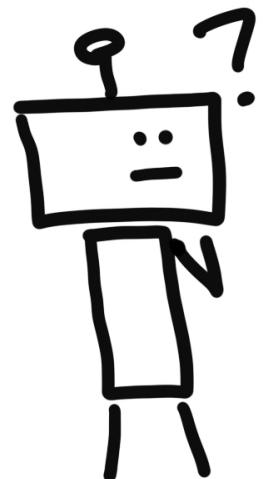
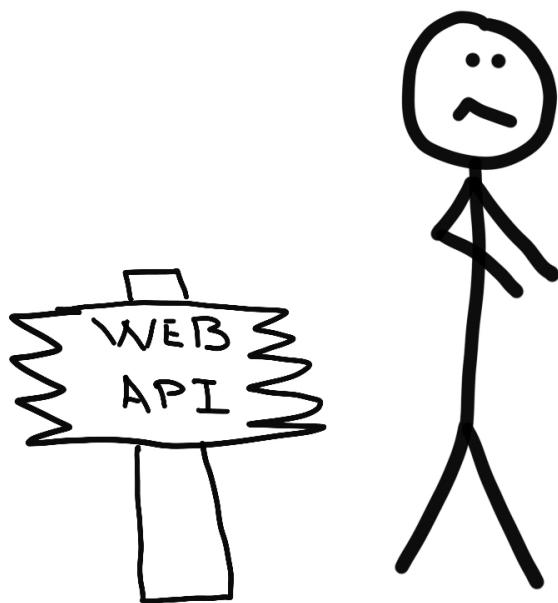


S C H E M A T I C

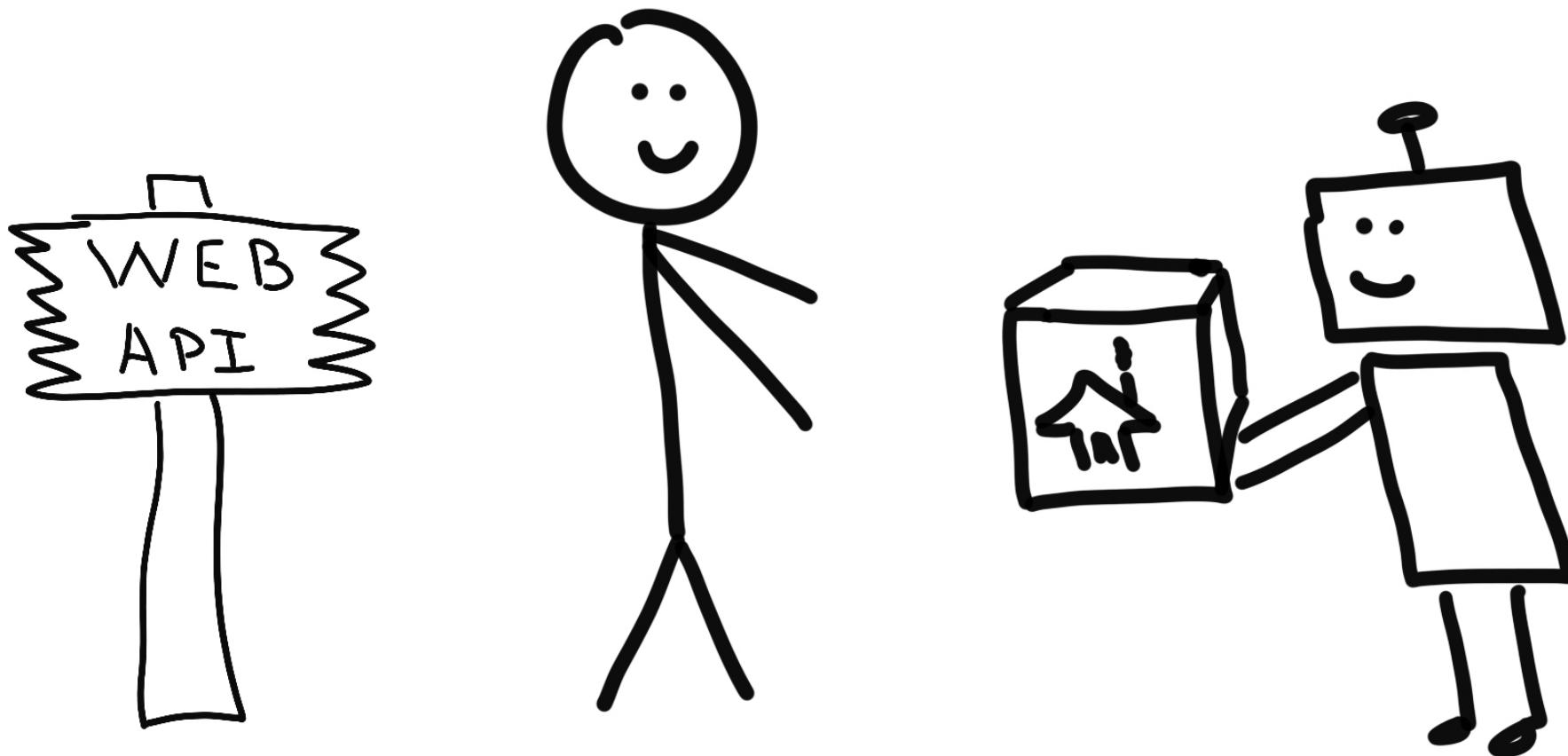
B U I L D I N G A B O T



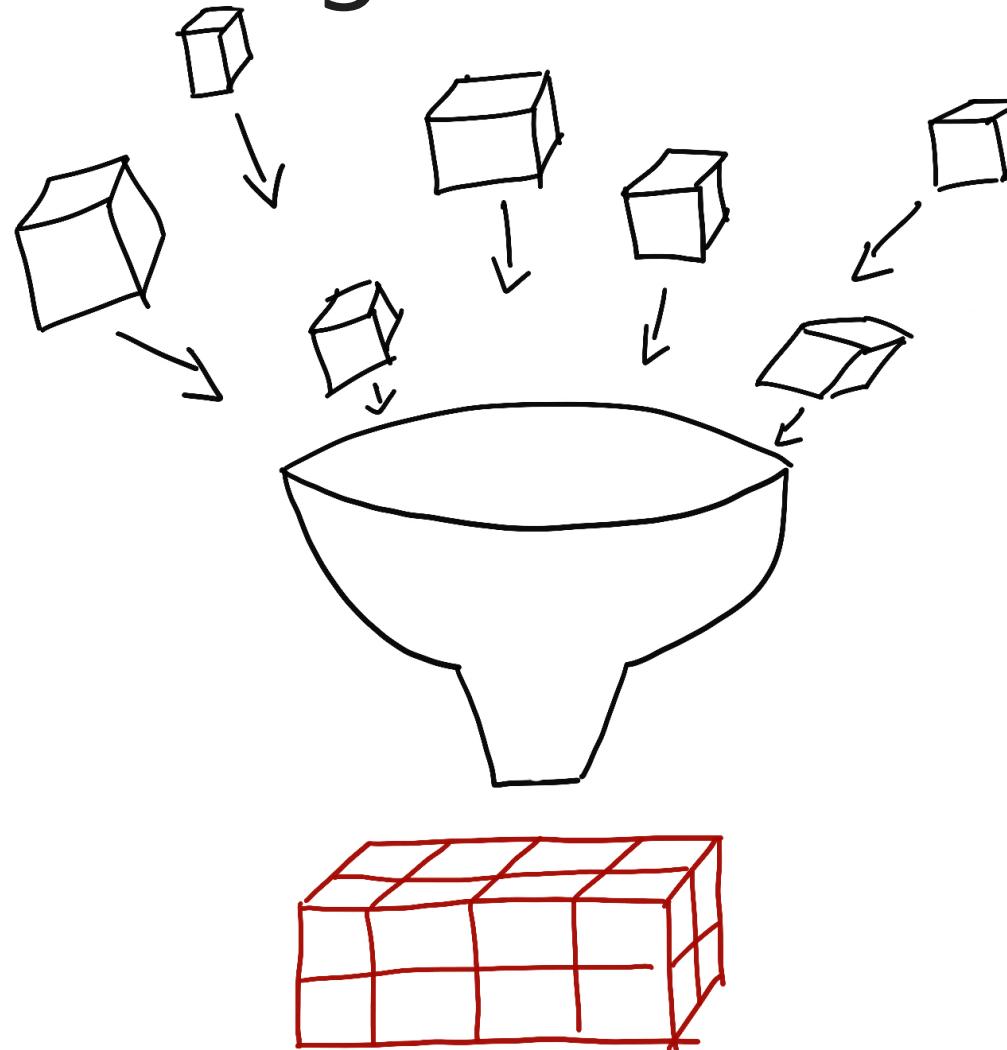
Build it all ... with the activity?



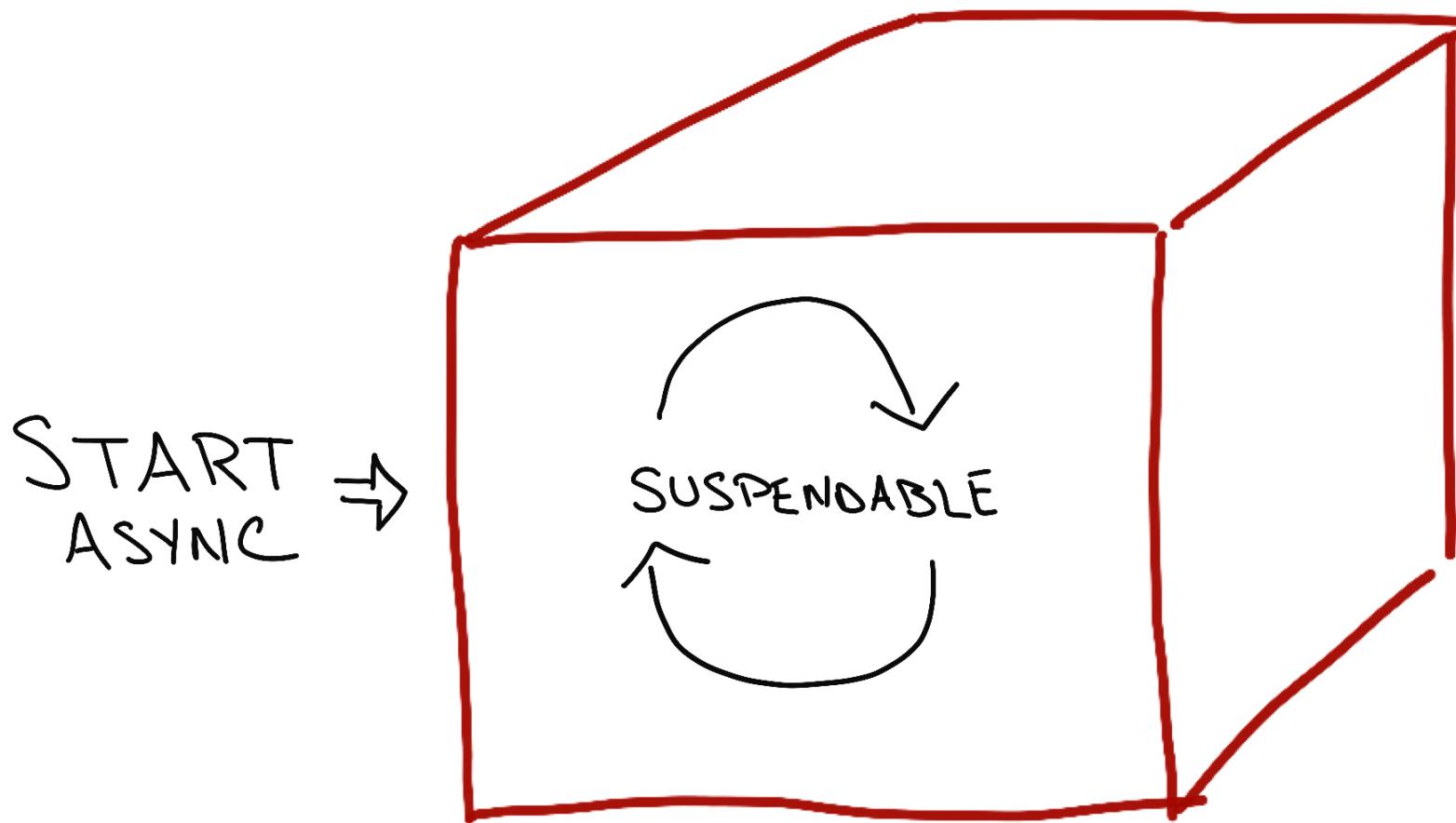
Build it all ... with the activity?



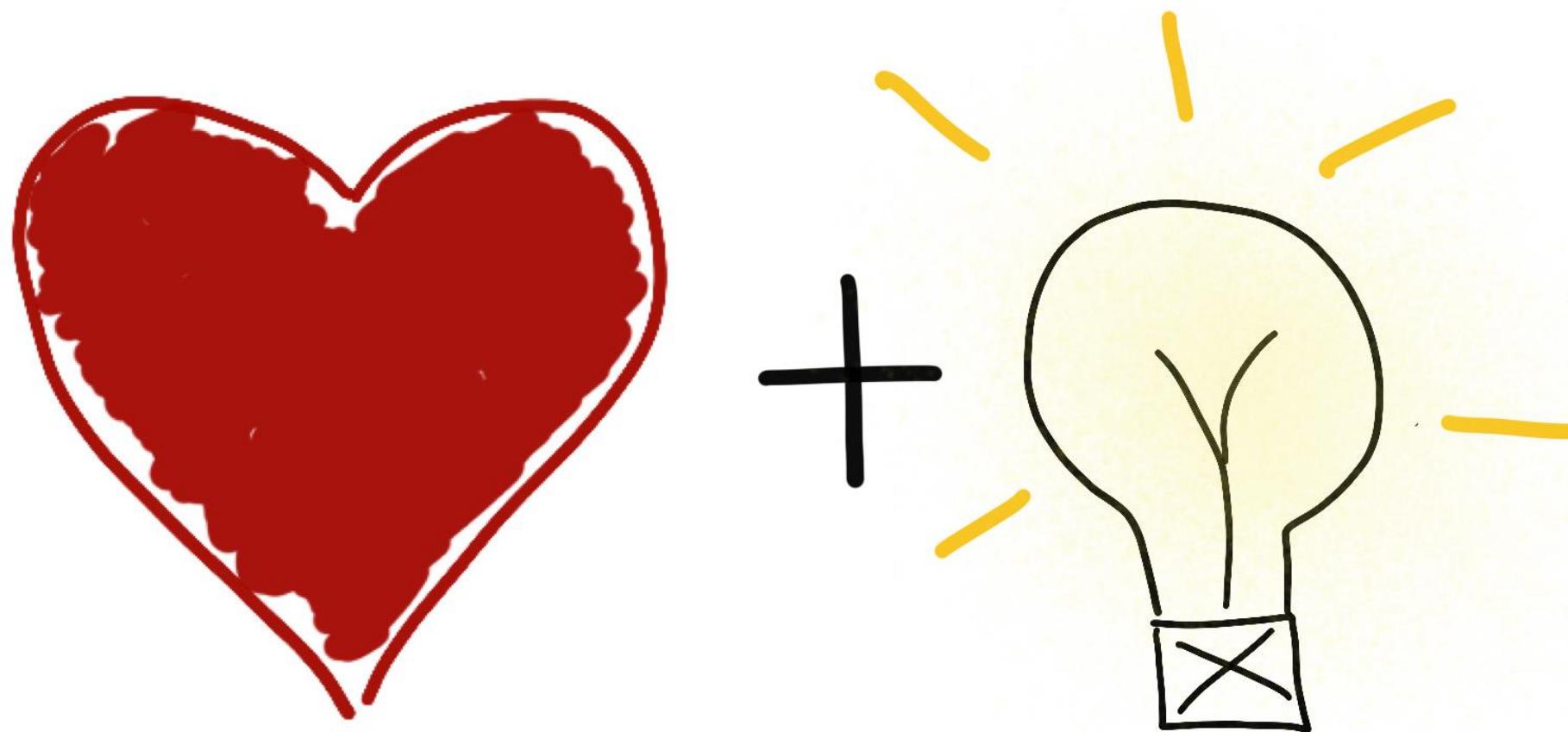
Dialogs – Building a Conversation



IDialog



IDialogContext



Conversing – IDialogContext Properties

- Frames
 - DialogStack
- PrivateConversationData
 - Private data for a user
- ConversationData
 - Private data for entire conversation
- UserData
 - Private data for user across all conversations

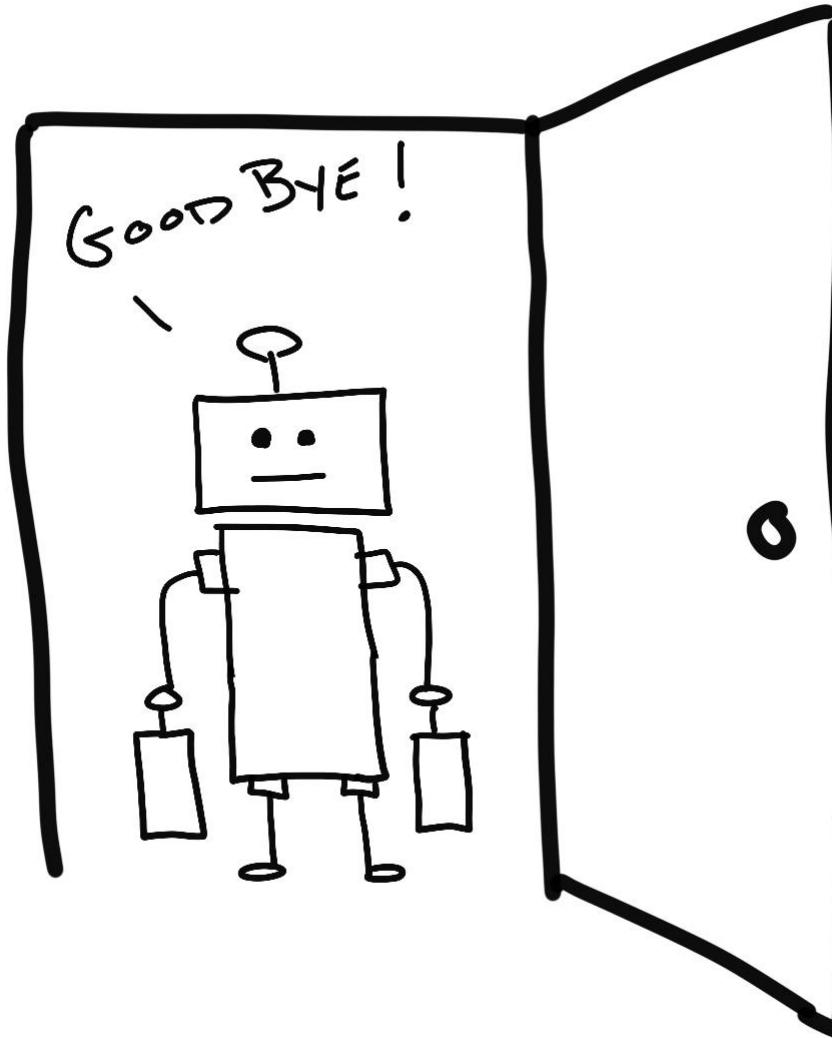
Conversing – IDialogContext Methods

- Call & Forward
 - Call a child dialog
- Done
 - Complete dialog & return control to parent
- Fail
 - Fail & return control to parent
- Wait
 - Wait for user input
- MakeMessage & PostAsync

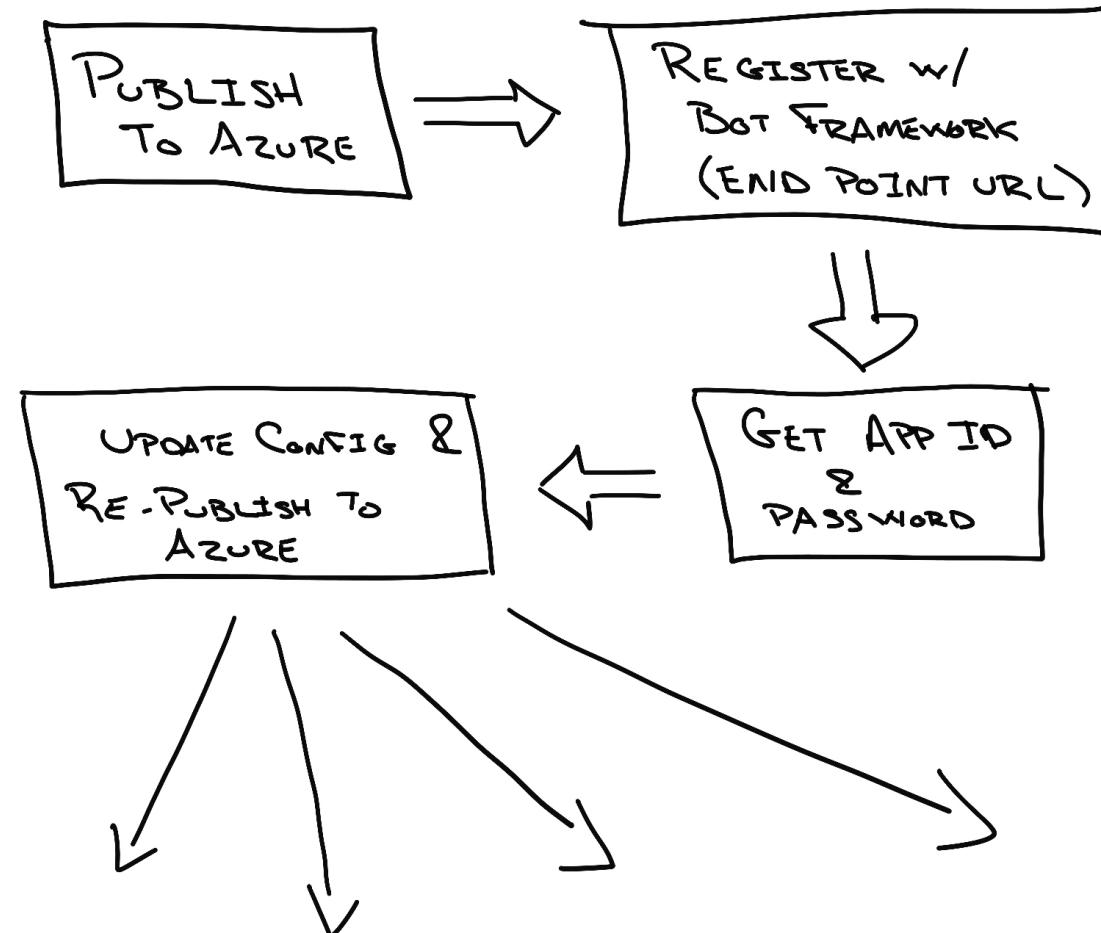
DEMO



Deployment



Deployment



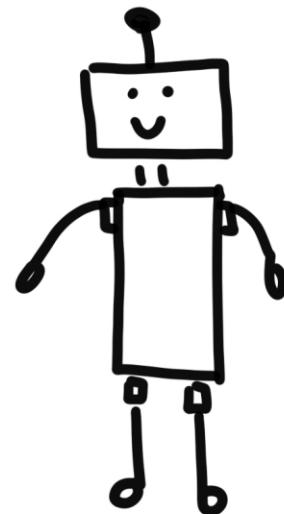
CHANNEL DEPENDENT STEPS

DEMO



How to build a bot...

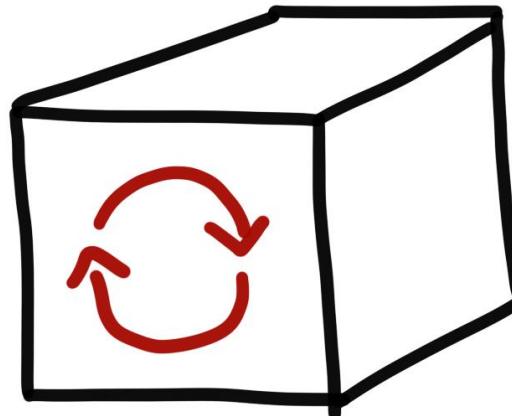
⚡ APE !



How to build a bot...

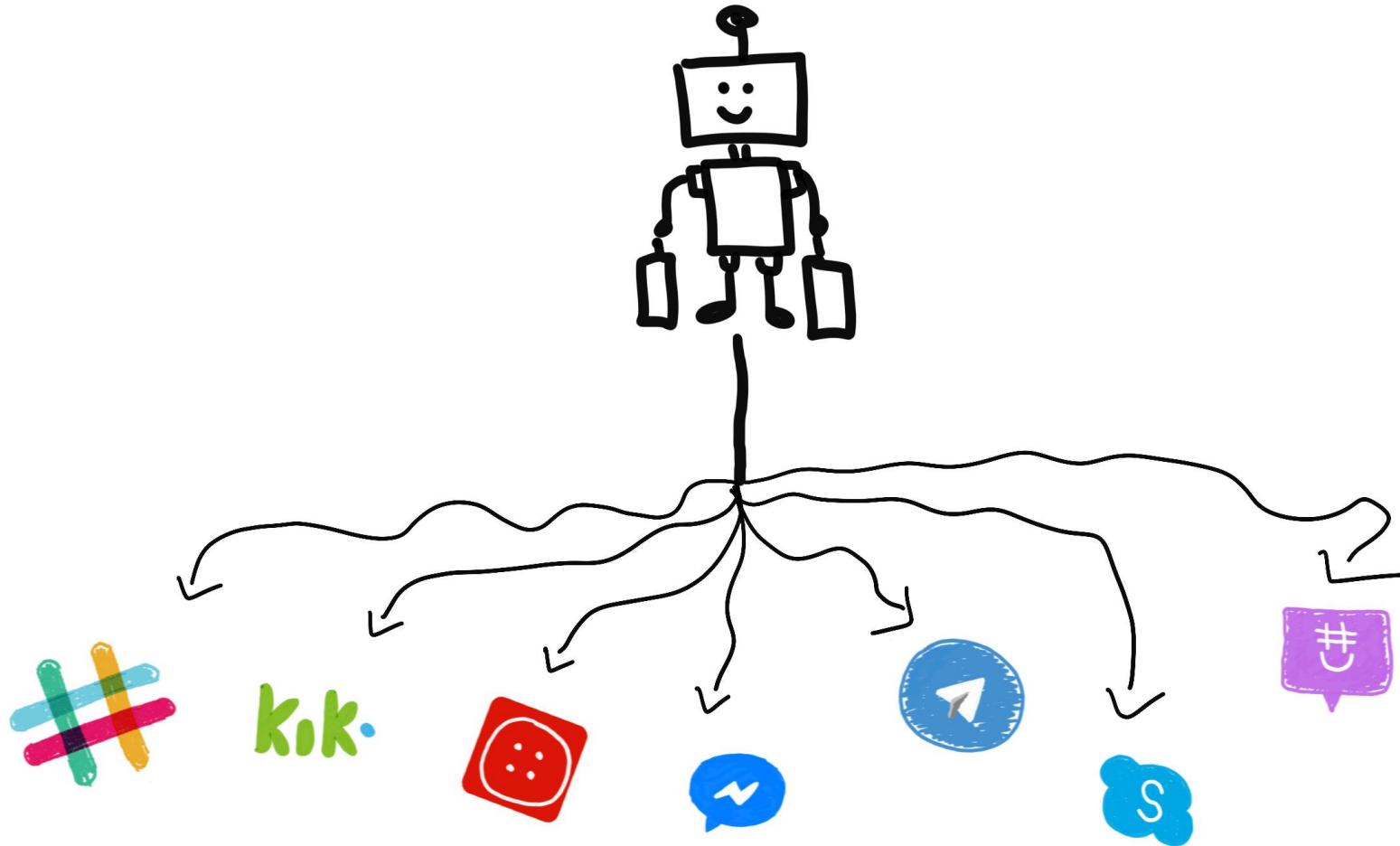


How to build a bot...



I DIALOG
I DIALOGCONTEXT

How to build a bot...



I, For One, Welcome, Our New Bot Overlords!

AN INTRO TO MICROSOFT'S
BOT FRAMEWORK



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