



AI-100T01A

**Module 02:
Creating Bots**



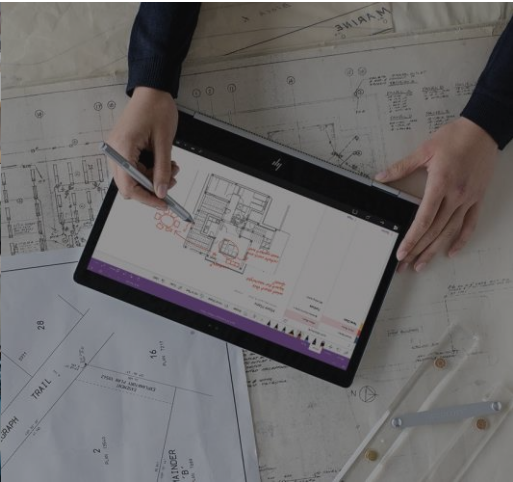
Agenda

- Overview of the Bot Service
- Creating a Basic Chat Bot
- Testing with the Bot Emulator
- Lab: Basic Filter Bot



Lesson 01

Introducing the Bot Service



Lesson Objectives

- L01 – Introduce the Bot Service
- L02 – Introduce the Bot Framework
- L03 – Introduce Bot Channels

Introduction to the Bot Service and Framework



Bot Dev Lifecycle

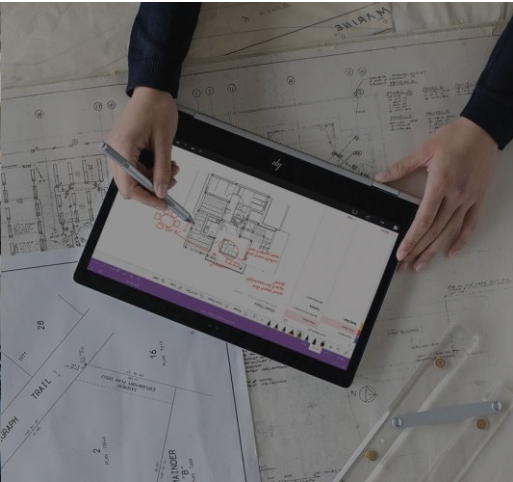
The Azure Bot Service

- Use Bot Builder SDK or Azure Bot Service to create your bot
- Publish it as a web service
- Connect channels
 - Email
 - Skype
 - Facebook
 - Messenger
 - Slack
 - Microsoft Teams
 - Cortana
 - Text/SMS



Lesson 02

Create a Basic Chat Bot



Lesson Objectives

- L01 – Understand Bot Design Principles
- L02- Understand the Development Environment
- L03 – Guided Walkthrough, Create a Basic Chat Bot

Bot Design Principles

- Factors that influence success:
 - Does the bot easily solve the user's problem with the minimum number of steps?
 - Does the bot solve the user's problem better/easier/faster than any of the alternative experiences?
 - Does the bot run on the devices and platforms the user cares about?
 - Is the bot discoverable? Do the users naturally know what to do when using it?
- Factors that do not guarantee success:
 - How 'smart' the bot is
 - Depth of natural language support
 - Voice enabled

Development Environment

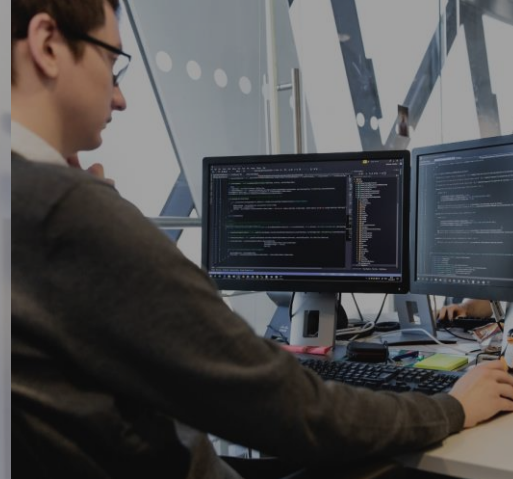
Using the SDK, you can build bots that take advantage of the following SDK features:

- Powerful dialog system with dialogs that are isolated and composable
- Built-in prompts for simple things such as Yes/No, strings, numbers, and enumerations
- Built-in dialogs that utilize powerful AI frameworks such as LUIS
- FormFlow for automatically generating a bot (from a C# class) that guides the user through the conversation, providing help, navigation, clarification, and confirmation as needed

Environments:

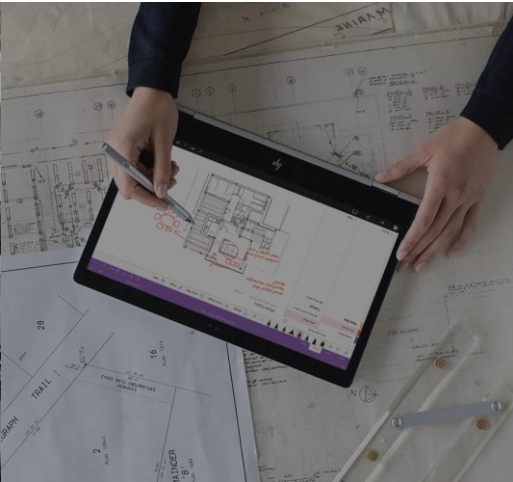
- Build using C# and the .NET Framework
- Build using JavaScript and Bot Framework SDK for Node.js

Walkthrough – Create a Chat Bot in the Azure Portal



Lesson 03

Testing with the Bot Emulator



Lesson Objectives

- L01 – Understand the Bot Emulator
- L02 – Explore Bot Emulator Connections

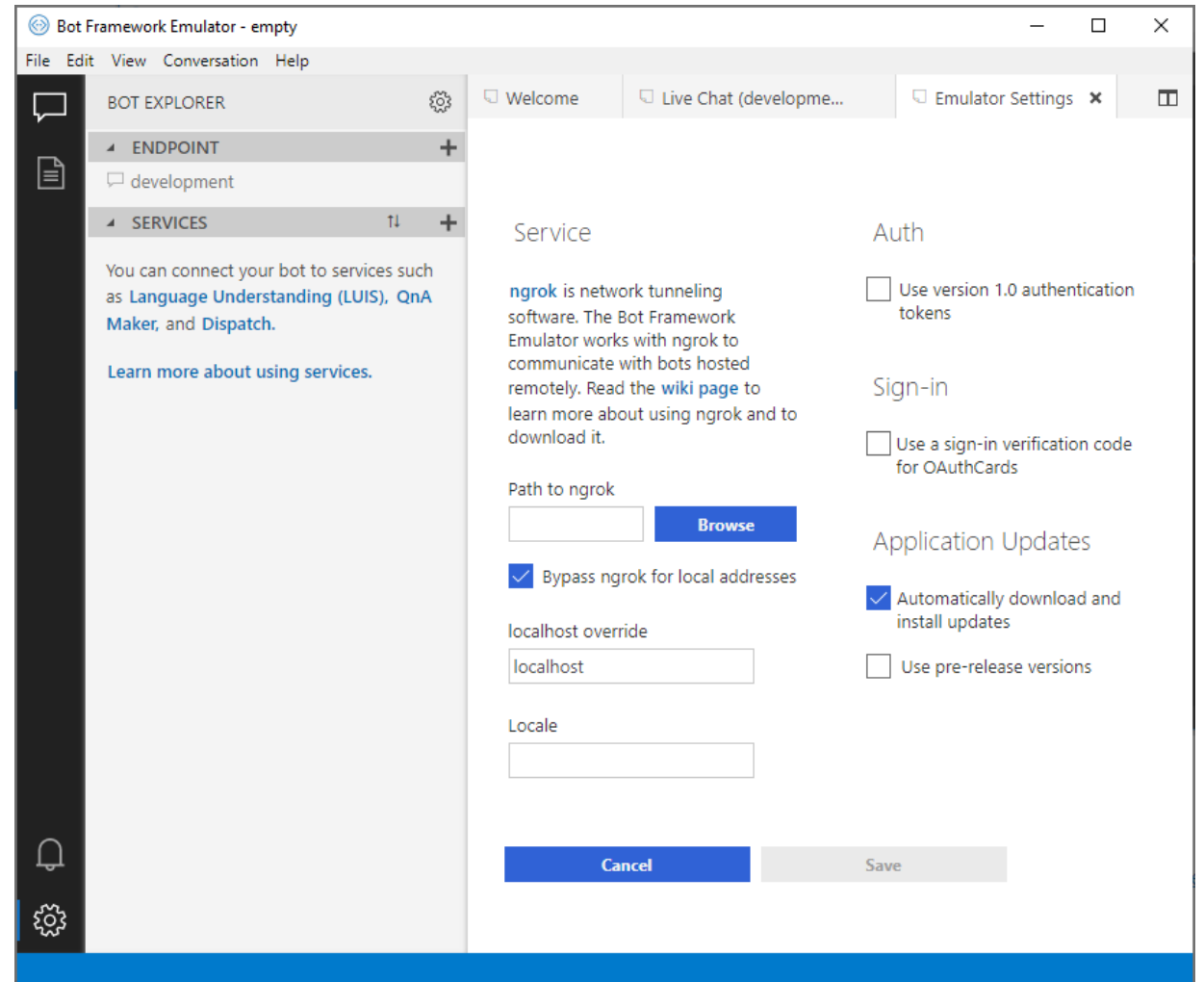
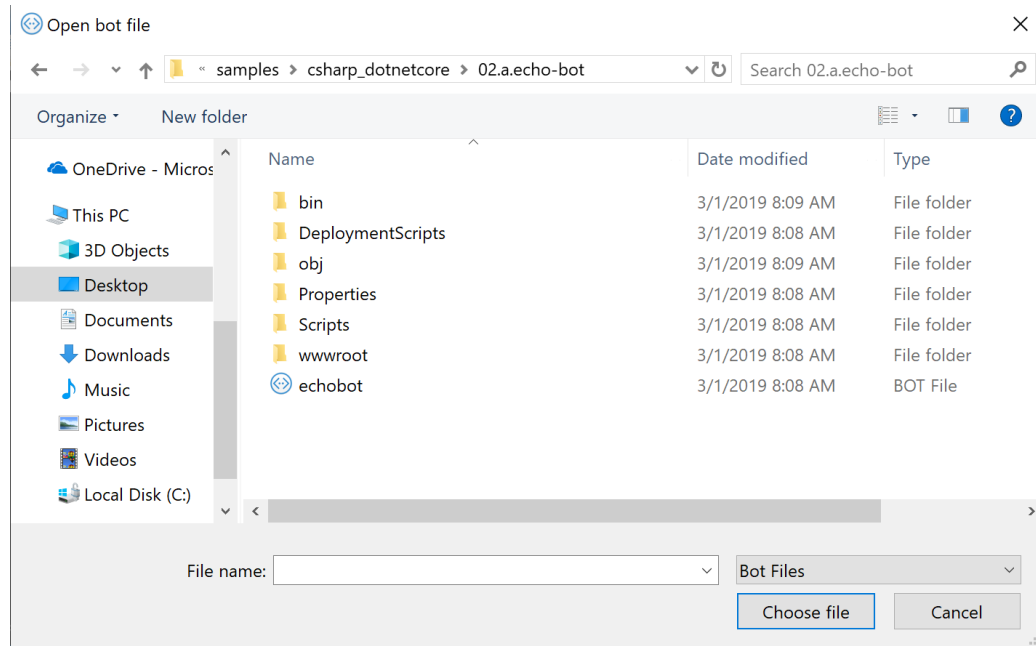
Introducing the Bot Emulator

The Bot Framework Emulator is a desktop application that allows bot developers to test and debug their bots, either locally or remotely.

The Bot Emulator is available for download for:

- Windows
- Linux
- Mac

Emulator Connections



Lab 3: Basic Filter Bot



Lab Objectives

- Create a Basic Bot in the Azure Portal
- Download the Bot Source Code
- Modify the Bot Code
- Test with the Bot Emulator
- Manage State by Logging Conversations

Lab Scenario

- In this lab, we will be setting up an intelligent bot from end-to-end that can respond to a user's chat window text prompt. We will be building on what we have already learned about building bots within Azure, but adding in a layer of custom logic to give our bot more bespoke functionality.
- This bot will be built in the Microsoft Bot Framework. We will evoke the architecture that enables the bot interface to receive and respond with textual messages, and we will build logic that enables our bot to respond to inquiries containing specific text.
- We will also be testing our bot in the Bot Emulator, and addressing the middleware that enables us to perform specialized tasks on the message that the bot receives from the user.
- We will evoke some concepts pertaining to Azure Search, and Microsoft's Language Understanding Intelligent Service (LUIS), but will not implement them in this lab.

Lab 4: Log Chat



Lab Objectives

- Understand how to intercept and log message activities between bots and users
- Log utterances to file storage

Lab Scenario

Now, we wish to log bot chats to enable our customer service team to follow up to inquiries, determine if the bot is performing in the expected manner, and to analyze customer data. This hands-on lab guides you through enabling various logging scenarios for your bot solutions.

In the advanced analytics space, there are plenty of uses for storing log conversations. Having a corpus of chat conversations can allow developers to:

- Build question and answer engines specific to a domain.
- Determine if a bot is responding in the expected manner.
- Perform analysis on specific topics or products to identify trends.

Module Summary >

In this module, you have learned about:

- Microsoft Bot Services
- Using the Bot Emulator
- How to create a simple Bot
- How to Modify the Bot sample code

Next steps >

After the course, consider researching the Bot Framework documentation around the different channels that are supported for communication with the user.

