



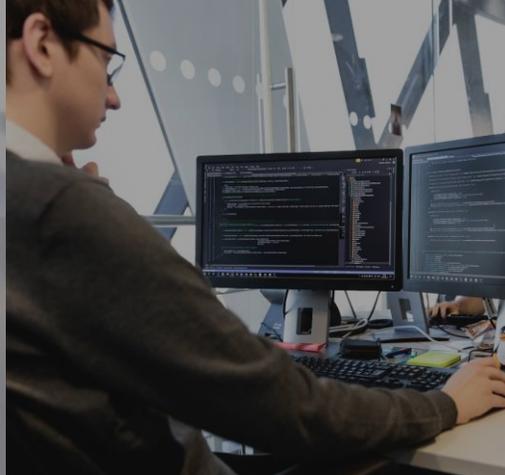
# AI-100T01A

## Module 03: Enhancing Bots with QnA Maker



# Agenda

- Introducing the QnA Maker Service
- Implement a Knowledge Base for QnA Maker
- Integrate QnA Maker with a Bot
- Lab: Integrating Bots and QnA Maker



# Lesson 01

## Introducing QnA Maker



# Lesson Objectives

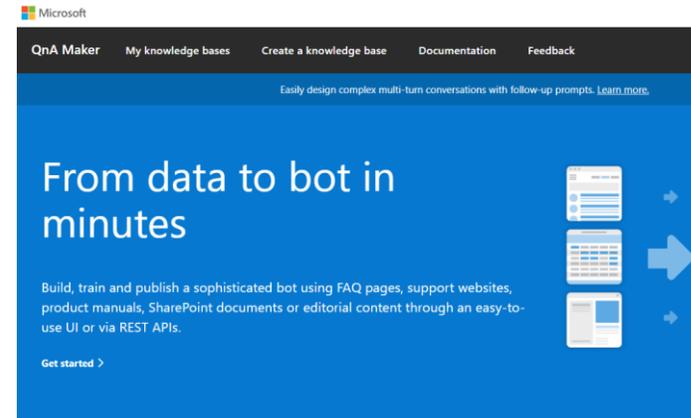
- L01 – Introduce QnA Maker
- L02 – Guided walkthrough, Creating a QnA Maker Service

# Overview

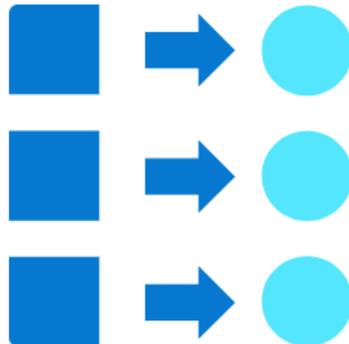
  
1. Create a QnAMaker resource in Azure



## 2. Sign into QnA Maker Portal <https://qnamaker.ai>



## 3. Create a knowledge base of QnA pairs

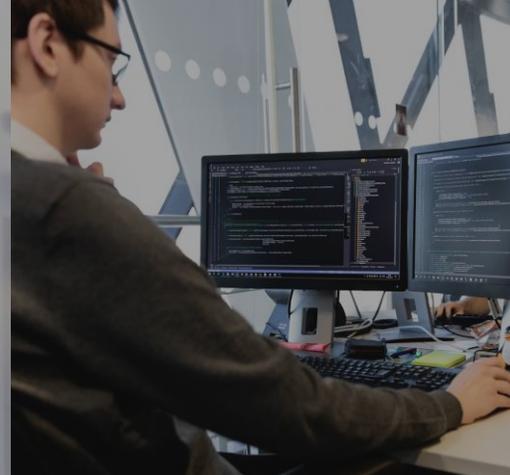


## 4. Integrate with a Chat Bot for automated response capabilities



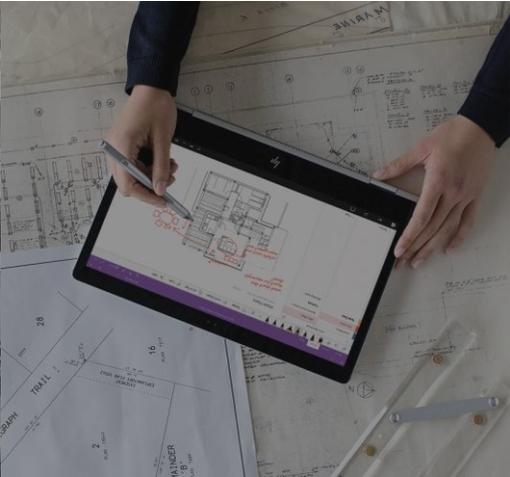
# QnA Maker Service

# Walkthrough – Create a QnA Service



# Lesson 02

## Implementing a Knowledge Base with QnA Maker



# Lesson Objectives

- L01 – Understand Knowledge Base Concepts
- L02- Explore Data Sources for a Knowledge Base
- L03 – Create a Knowledge Base
- L04 – Integrate the Knowledge Base with QnA Maker
- L05 – Publish and Test a Knowledge Base

# Creating a Knowledge Base

Three base-level concepts are:

- Questions - these are what you expect a user to ask. Questions will be paired with answers
- Answers - the response that will be returned when a user asks a question. The answer is paired to a question in the knowledge base
- Metadata - these are tags associated with the question and answer pair. Internally they are represented as key-value pairs and filter the QnA pairs for matching a user query.

# Knowledge Base Potential Data Sources

- URLs - can contain the following types of information
  - FAQs - (Flat, with sections or with a topics homepage)
  - Support pages - (Single page how-to articles, troubleshooting articles etc.)
- PDF
  - FAQs
  - Product Manual
  - Brochures
  - Paper
  - Flyer Policy
  - Support guide
  - Structured QnA
- DOC
  - FAQs
  - Product Manual
  - Brochures
  - Paper
  - Flyer Policy
  - Support guide
  - Structured QnA
  - Excel - Structured QnA file (including RTF, HTML support)
  - TXT/TSV Files - Structured QnA file

# Creating a Knowledge Base

- Add Question and Answer Pairs Manually

Knowledge base

Search the knowledge base  131 QnA pairs + Add QnA pair

View:  < Previous 1  3 4 5 ... 10 Next > |

Question	Answer	Metadata tags ?
<input type="button" value="Good night"/> <input type="button" value="Night"/>	Nighty night!	<input type="button" value="editorial : chitchat"/>
<input type="button" value="Have a good night"/>		
<input type="button" value="Good night to you"/> <input type="button" value="Nighty night"/>		

When creating your knowledge base for QnA Maker, be sure to follow the [best practices](<https://docs.microsoft.com/en-us/azure/cognitive-services/qnamaker/concepts/best-practices>) described by Microsoft.

# Adding a Knowledge Base to your QnA Service

## STEP 2

### Connect your QnA service to your KB.

After you create an Azure QnA service, [refresh this page](#) and then select your Azure service using the options below.

\* Microsoft Azure Directory ID

\* Azure subscription name

\* Azure QnA service

# Walkthrough - Add a KB to your QnA Service

# Publishing Knowledge Base

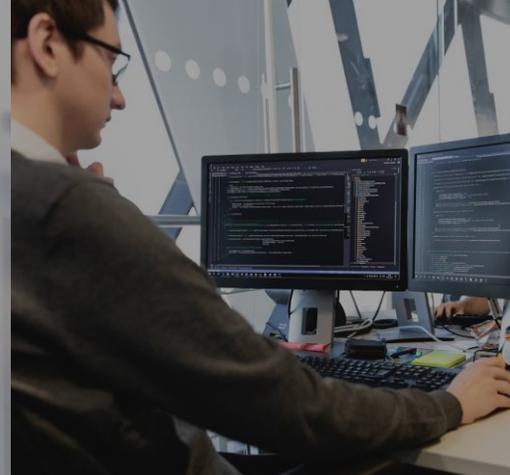
Review and edit this page prior to publishing your knowledge base. You can perform the following editing options:

- **Add questions related to an answer** - immediately to the right of each question is an X that you can use to delete a question but also a plus (+) symbol that you can use to add additional questions, related to the answer found in the answer column. Recall that you can have the same answer related to multiple questions in an effort to ensure coverage for anticipated questions that are similar
- **Delete an answer** - you can click the trash can icon next to an answer to delete a question/answer pair
- **Add QnA Pair** - clicking this button, found above the page navigation arrows, allows you to add a new question and answer pair to knowledge base. You would do this if your source document didn't contain all the QnA pairs you need, or to augment the existing list with some new data.
- **Show Metadata Tags** - initially your QnA pairs may not have any metadata associated with them, clicking the Show metadata tags icon, will display any metadata tags associated with each QnA pair

## Knowledge base

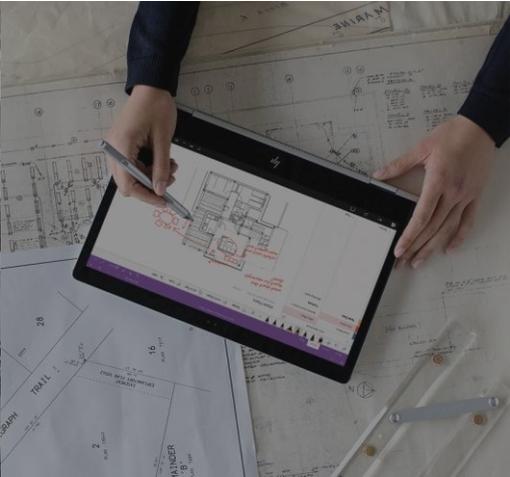
The screenshot displays the Knowledge Base interface. At the top, there is a search bar with the text "Search the knowledge base" and a close button (X). To the right of the search bar, it indicates "121 QnA pairs". Further right, there are navigation controls including a "+ Add QnA pair" button and a trash can icon. Below the search bar, there are pagination controls showing "View: 10" and a list of page numbers "1 2 3 4 5 ... 13 Next >". A "Collapse sources" button is also visible. The main content area is divided into two columns: "Question" and "Answer". The "Question" column contains two entries, each with a question and a plus sign (+) to add more questions. The "Answer" column contains two entries, each with a paragraph of text and a trash can icon to delete the pair. The first question is "Why did Microsoft develop the Bot Framework?" and the second is "What is the v4 SDK?". The first answer discusses the Conversation User Interface (CUI) and the Bot Framework. The second answer discusses the Bot Framework v4 SDK and its features.

# Walkthrough – Test and Publish Knowledge Base



# Lesson 03

## Integrate a Bot and QnA Maker



# Lesson Objectives

- L01 – Understand how to Integrate Bots and QnA Maker
- L02 – Guided Walkthrough, Integrate QnA Maker and a Bot

# Integrating Bots and QnA Maker

## Deployment details

### Sample HTTP request

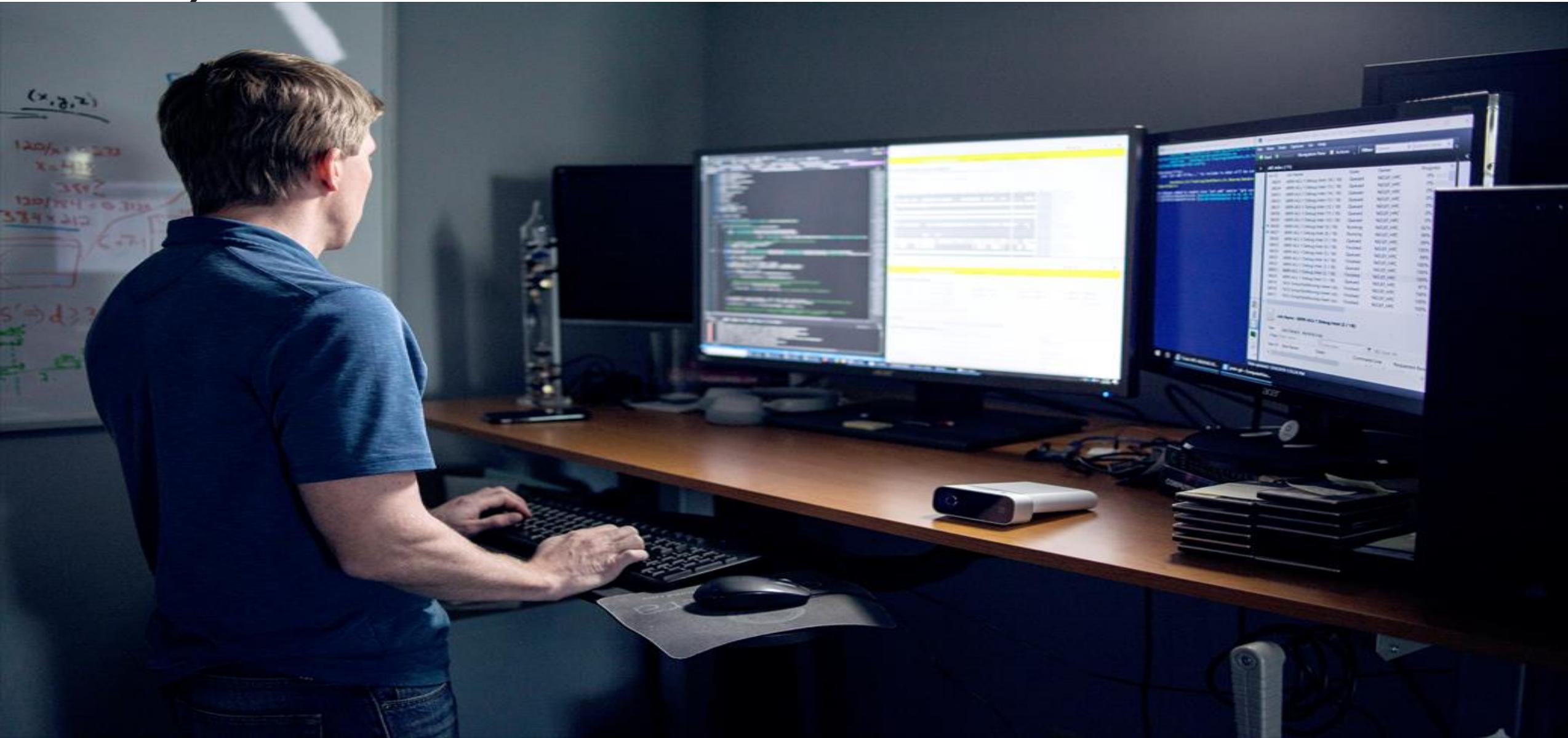
```
POST /knowledgebases/<Knowledge base ID>/generateAnswer
Host: <Endpoint HostName>
Authorization: EndpointKey <Auth Key>
Content-Type: application/json
{"question": "<Your question>"}
```

Search (Ctrl+) Save Discard

BotDevAppInsightsKey	Hidden value. Click to edit.	<input type="checkbox"/>	✕
BotDevAppInsightsName	Hidden value. Click to edit.	<input type="checkbox"/>	✕
BotEnv	Hidden value. Click to edit.	<input type="checkbox"/>	✕
BotId	Hidden value. Click to edit.	<input type="checkbox"/>	✕
BotOpenIdMetadata	Hidden value. Click to edit.	<input type="checkbox"/>	✕
BotStateEndpoint	Hidden value. Click to edit.	<input type="checkbox"/>	✕
MicrosoftAppld	Hidden value. Click to edit.	<input type="checkbox"/>	✕
MicrosoftAppPassword	Hidden value. Click to edit.	<input type="checkbox"/>	✕
QnAAuthKey	Hidden value. Click to edit.	<input type="checkbox"/>	✕
QnAEndpointHostName	Hidden value. Click to edit.	<input type="checkbox"/>	✕
QnAKnowledgebaseId	Hidden value. Click to edit.	<input type="checkbox"/>	✕
UseTableStorageForConversat...	Hidden value. Click to edit.	<input type="checkbox"/>	✕
WEBSITE_NODE_DEFAULT_VE...	Hidden value. Click to edit.	<input type="checkbox"/>	✕

# Walkthrough – Integrate your KB with a Web App Bot

# Lab 5: Integrate QnA Maker with a Bot (COMING SOON)



# Lab Objectives

- Create a QnA Service
- Generate a Knowledge Base using a PDF Document (FAQ)
- Connect and Publish the Knowledge Base
- Connect the QnA Service to a Bot

# Lab Scenario

- AdventureWorks wants to use a Bot to allow their customer support FAQ to drive conversations on a Customer Support Bot. A document already exists that contains some questions and answers taken from the FAQ engagements with customers. This will serve as a starting point but may need to be augmented with additional questions and answers.

# Module Summary >

## In this module, you have learned about:

- Microsoft QnA Maker
- Knowledge Bases for use with QnA Maker
- How to Publish and Test a Knowledge Base
- How to Integrate it with a Bot

## Next steps >

After the course, consider researching the QnA Maker documentation around the different data source formats that are supported in creating knowledge bases for QnA Maker.

