



# MS Botframework

e-Portfolio: Microsoft Botframework Composer

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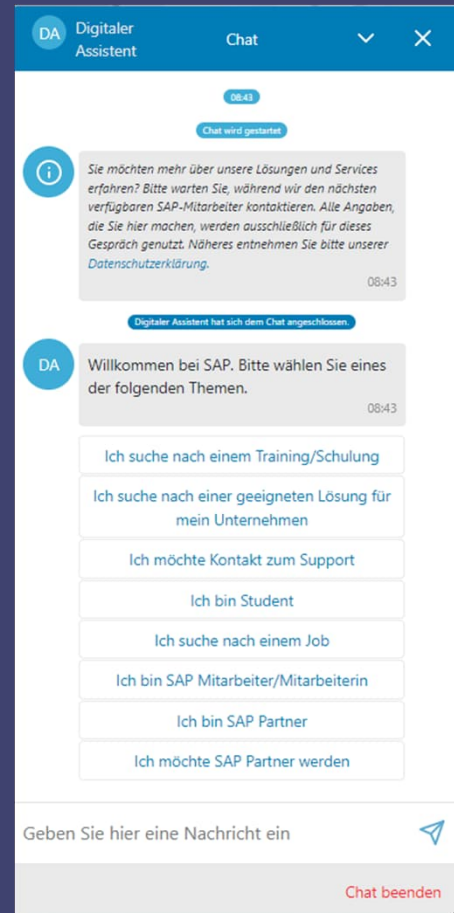
# Agenda

- Purpose of bots
- Structure
- Creation of a new bot/Functions
- Demo


# Purpose of a bot

What can you do with a bot and where are its appliances?

# Example on websites



# Example on websites: Linda




Ihre virtuelle Assistentin  
**Linda fragen**

Hallo! Ich bin Linda, Ihr Chatbot.

Ich kenne mich mit den Produkten und Services unserer Sparkasse aus. Kann ich Ihnen weiter helfen?

Linda antworten



**Linda**

Hallo, schön, Sie zu sehen! Ich bin Chatbot Linda, Ihre digitale Assistenz. Bitte stellen Sie mir einfach Ihre Frage. Am besten verstehe ich Sie, wenn Sie Ihre Frage kurz und präzise formulieren. Wie kann ich Ihnen helfen?

Hallo, bist Du ein Roboter?

Hallo! Dazu kann ich leider nichts sagen. Oben auf dieser Seite finden Sie einen Link "Online-Banking", der Sie direkt zur Website Ihrer Sparkasse führt. Dort finden Sie in der Kontaktlasche rechts bzw. auf Mobilgeräten oben rechts die dort angebotenen Kontaktmöglichkeiten.

# Purpose

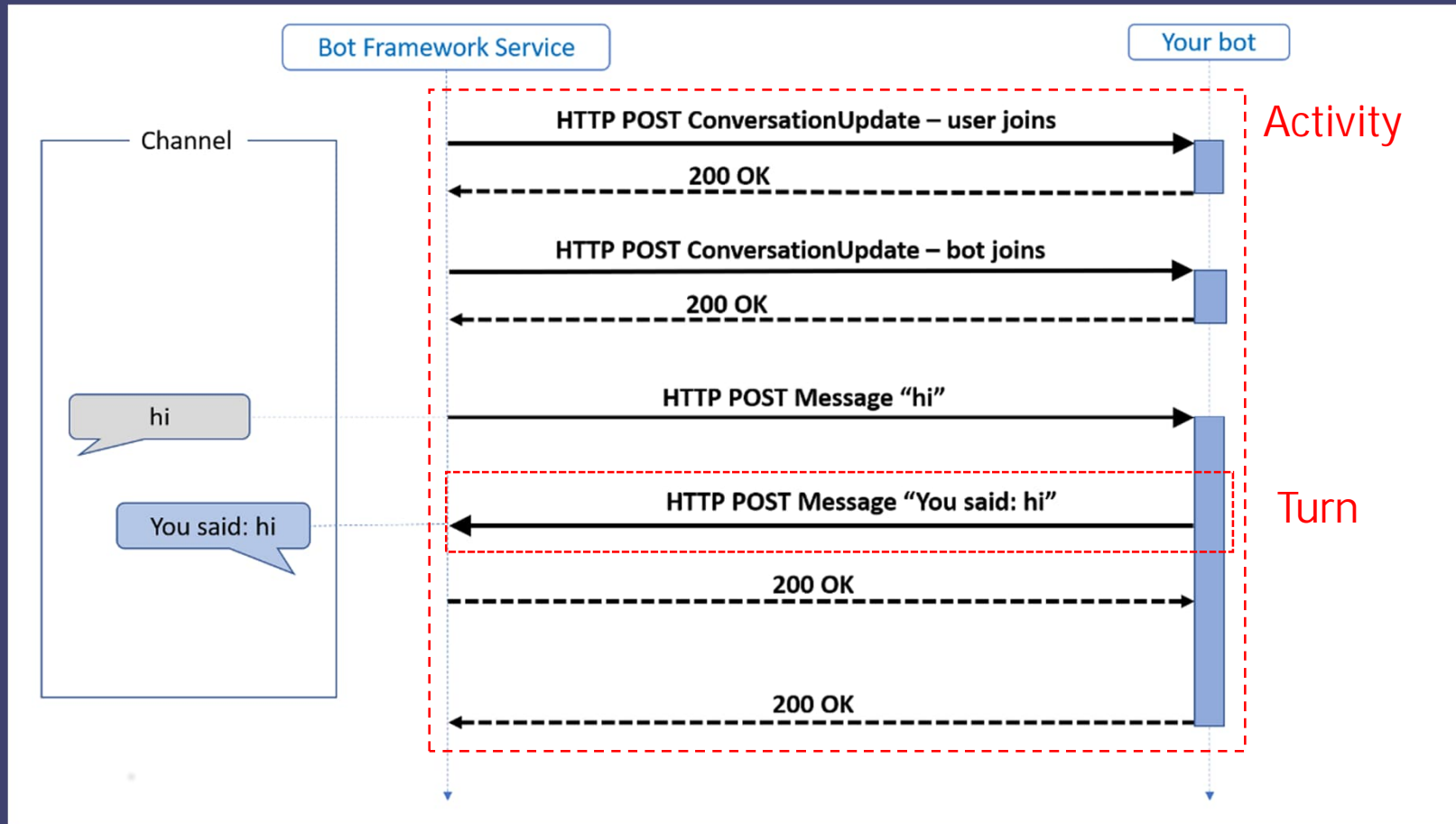
- answer questions to a particular topic
- give resources for further information
- request information to help support agents
- annoy people with pop-ups

# Structure

How is the botframework structured?



# Structure





# Structure

## Bot Object

bot logic & conversational reasoning

- Activity Handlers
- Dialog Library
- Custom Bot class

## Bot Adapter

Process Activity for starting a turn

- Processes the request
- Builds a context object containing information about current activity

## Turn Context

information about activity, sender/receiver & other data

- Contains information for the middleware
- Application logic
- Mechanism to send outbound activities

# Structure

## Middleware

linear data processing pipeline

- Activity Handlers
- Dialog Library
- Custom Bot class

## Bot State & Storage

data storage of the bot

- A bot is stateless

## Messaging endpoint and provisioning

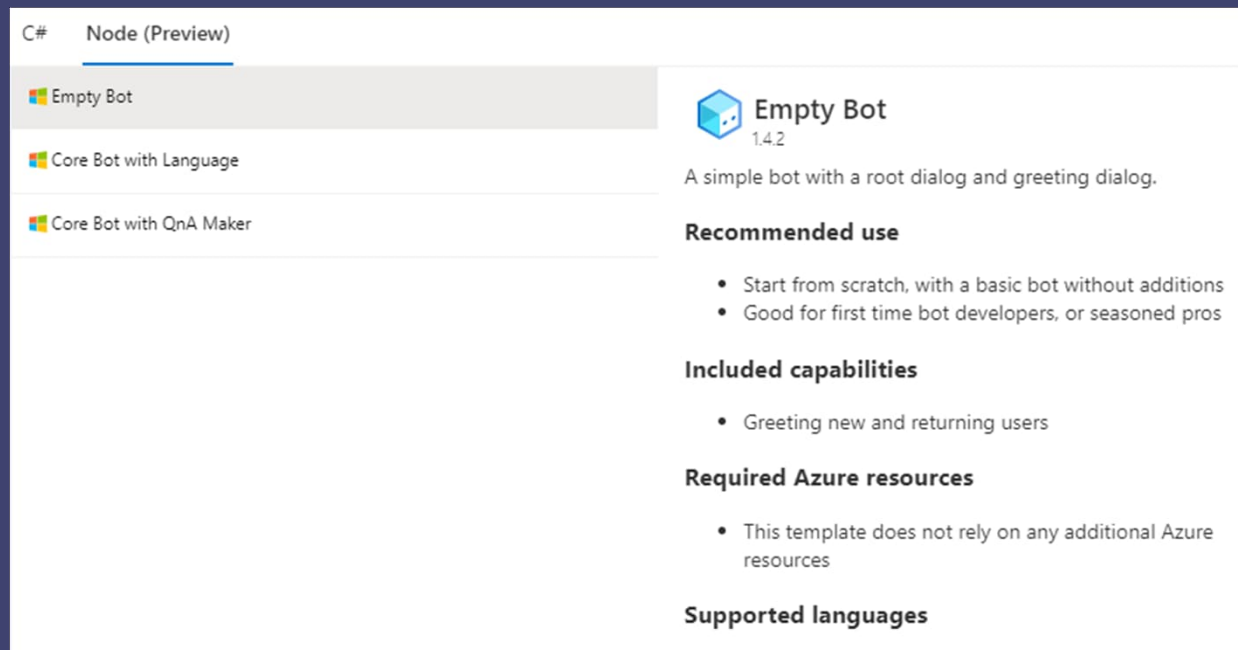
REST Endpoint for data exchange

# Creation of a new bot

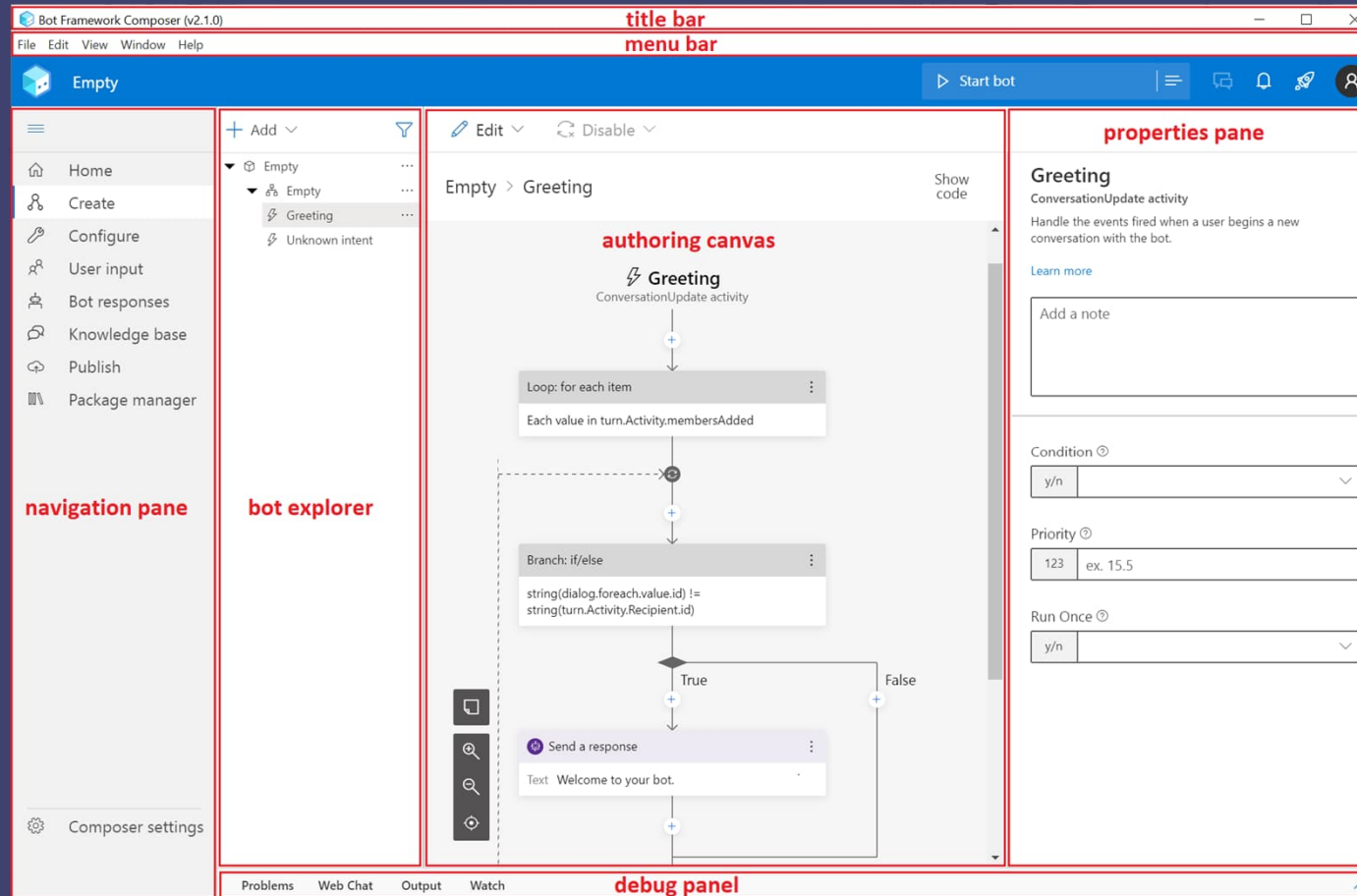
How to set up a new bot.

# First Steps

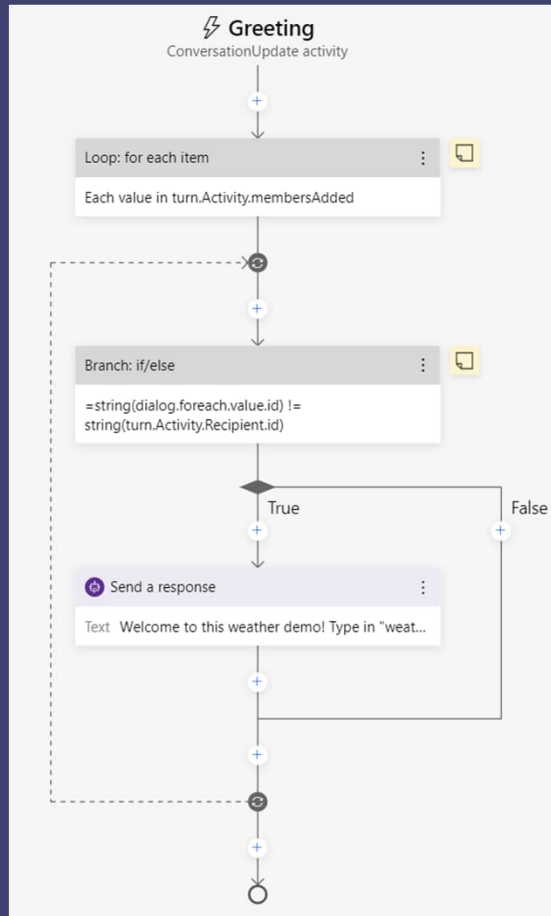
1. install *MS Botframework Composer*
2. choose *create new bot*



# Structure of the interface



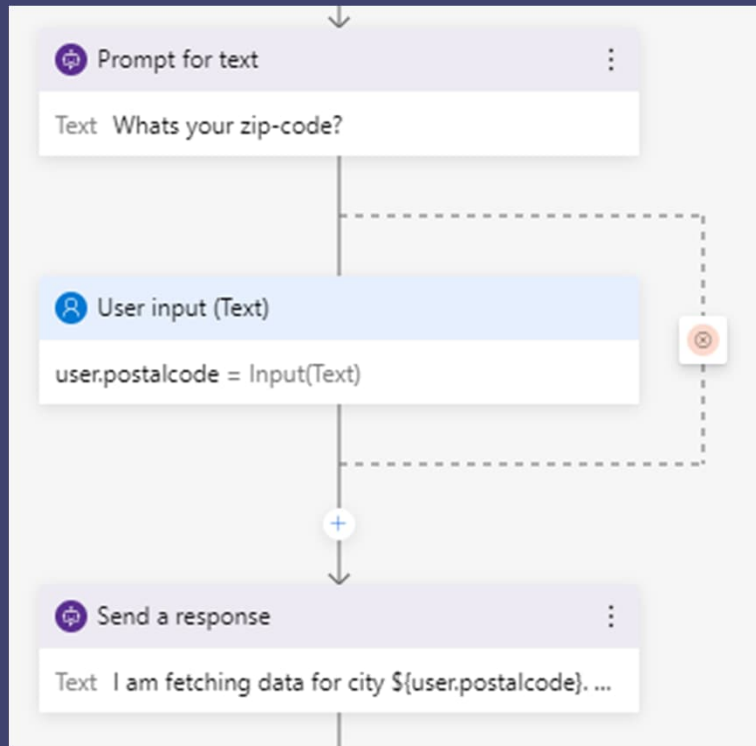
# Structure of a *trigger*



control structures like *loops* and *branches*

messages to communicate with the user

# Inputs and Validations

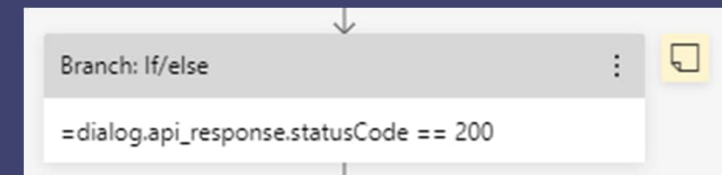
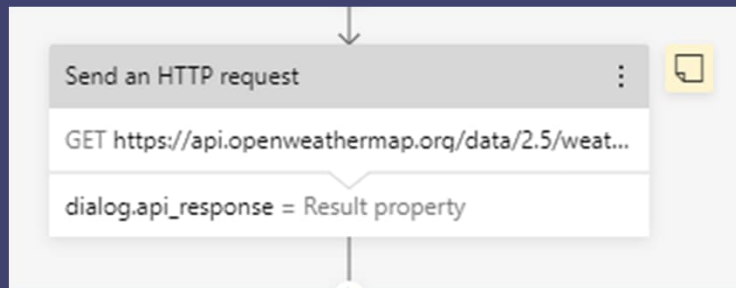


Input prompts to receive data from the user

Validations to check input data

# HTTP request to consume APIs

## HTTP request





# Properties

### Set properties

Set Properties

Set one or more property values.

[Learn more](#)

true branch: set properties

Assignments \* ⓘ

Property ⓘ

abc dialog.weather

Value ⓘ

abc ▾ =dialog.api\_response.content.weather[0].description

Property ⓘ

abc dialog.icon

Value ⓘ

abc ▾ =dialog.api\_response.content.weather[0].icon

Property ⓘ

abc dialog.city

Value ⓘ

abc ▾ =dialog.api\_response.content.name




# Advanced Responses

## Thumbnail Cards

dialog.city   dialog.country

Weather in Karlsruhe in DE



It is "few clouds" in Karlsruhe (76133) and the temperature is 23°C. Have a nice day.

dialog.icon  
(fetched from openweathermap.org)

dialog.weather

dialog.celsius

# Natural Language Understanding

- LUIS := Language Understanding
  - cloud based conversational AI service
  - provides natural language understanding ↔ regex
  - simple, secure & easily integrable into an existing bot
  - LUIS will be deprecated at end of 2025
- CLU := Conversational Language Understanding
  - Azure Cognitive Service for Language
  - used for: E2E conversational bots, human assistant bots, command and control applications
  - “next generation of LUIS”

# Deployment to Azure



# Demo



# Forget everything, Microsoft released yet another Product for Bot development...

## ⓘ Note

The Bot Framework JavaScript and C# SDKs will continue to be supported, however, the Python and Java SDKs are being retired with final long-term support ending in November 2023. Only critical security and bug fixes within this repository will be undertaken.

Existing bots built with these SDKs will continue to function.

For new bot building, consider using **Power Virtual Agents** and read about **choosing the right chatbot solution**.

For more information, see [The future of bot building](#).

## Power Virtual Agents

### Now available: Advanced bot-building studio

Empower professional developers and business users to collaboratively build bots with the next evolution of Power Virtual Agents. Combine the professional developer capabilities of Azure Bot Framework Composer with the simplicity of a low-code platform in a single, advanced authoring canvas—offering support for rich responses, code views, eventing and complex scenarios using Power Fx for logic and data manipulation.

[Read the blog >](#)

[Watch the video >](#)

# Thank you!

Resources:

- Code & Slides: [DE38/MSBotframeworkDemo: Demo Bot of the MS Botframework Composer. \(github.com\)](https://github.com/DE38/MSBotframeworkDemo)
- Learning: [Bot Framework Composer documentation | Microsoft Learn](#)
- [Microsoft Bot Framework](#)
- Power Virtual Agents: [Intelligent Virtual Agents and Bots | Microsoft Power Virtual Agents](#)

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