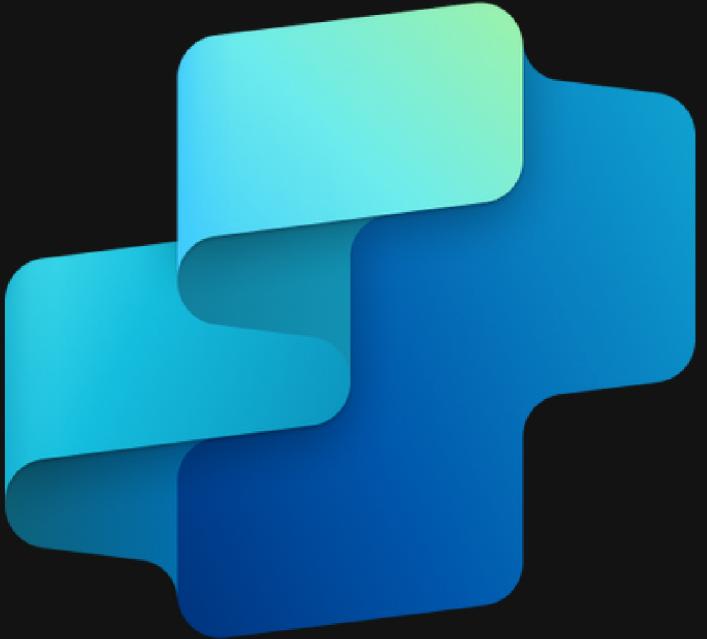


= 10 =

Understanding Variables
for Enhanced Conversations



MONTHLY MASTERY

FEATURE-A-DAY

with Copilot Studio



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Variables

Your Copilot's Memory Box

Think of them as little memory boxes your Copilot uses to remember and reuse bits of information throughout a conversation. In the simplest terms, a variable is like a sticky note where your Copilot jots down anything important – a user's name, their last order, or even their favorite joke!



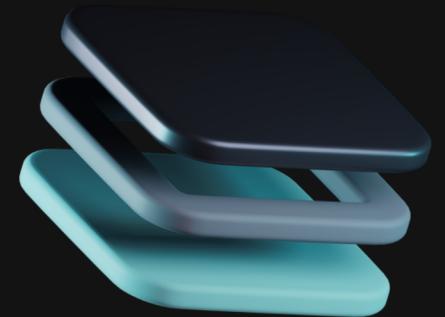
Variables hold onto this data, letting your Copilot bring it up again later, keeping the chat lively and personal. It's like giving your Copilot a little notebook to scribble down notes, making sure it never forgets the important stuff.



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Variables Levels



In Copilot Studio,
variables are of three types:
Topic, **Global** and **System**.

Each serving a distinct role
in conversation management.



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Variables Levels: Topic

These are the specialists, scoped within a single topic.
Think of them as short-term memory,
holding information relevant only
to the current topic of conversation.

Like a notepad for jotting down notes
specific to a single meeting.



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Variables

Levels: Global

The long-term memory of your Copilot, spanning across all topics.

Global variables retain information that can be referenced throughout the entire conversation, no matter the topic shift.

Imagine them as a diary, keeping track of details that might be needed at any point in the chat.



Global (any topic can access)



Allow to carry between sessions



External sources can set values



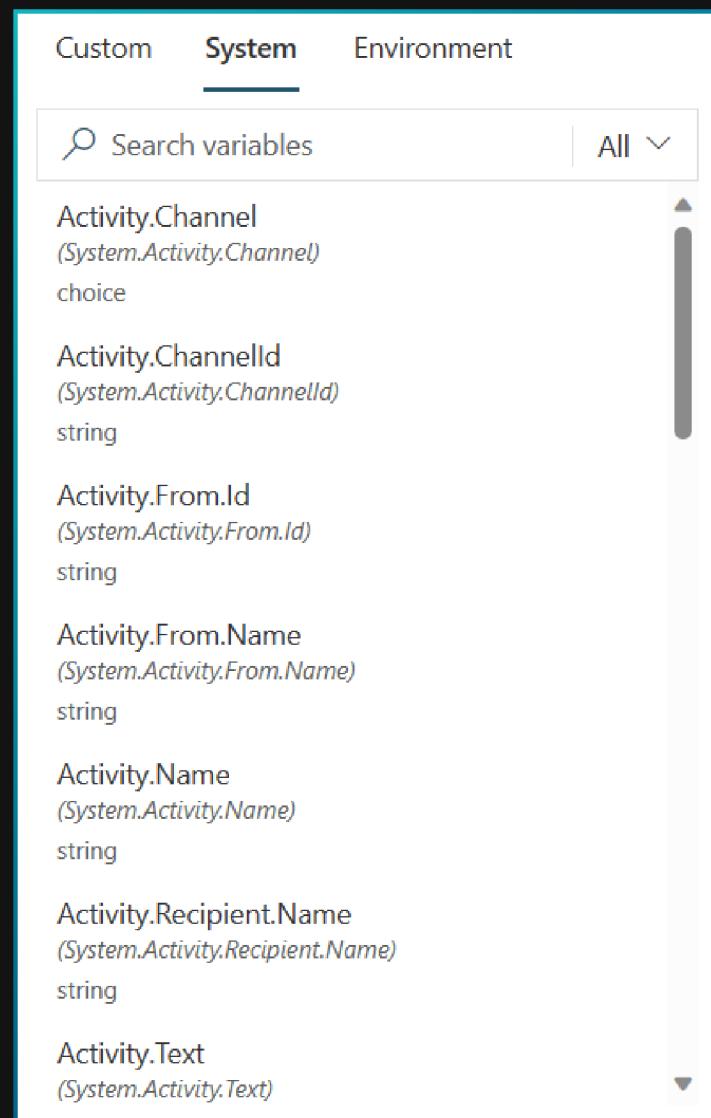
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Variables Levels: System

The built-in savants,
automatically created with
your bot.

They're like the wise elders,
providing contextual wisdom
about the conversation or
the user, accessible in any topic.



A screenshot of a software interface showing a list of system variables. The interface has a header with tabs: 'Custom' (orange), 'System' (blue, underlined), and 'Environment' (brown). Below the tabs is a search bar with a magnifying glass icon and the placeholder 'Search variables'. To the right of the search bar is a dropdown menu labeled 'All' with a downward arrow. The main area contains a list of variables:

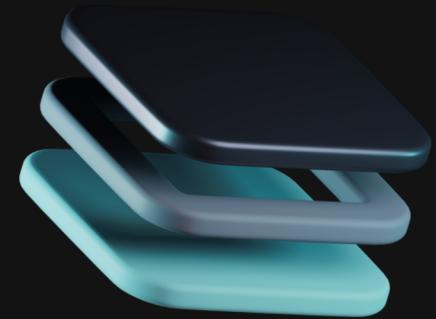
- Activity.Channel
(System.Activity.Channel)
choice
- Activity.ChannelId
(System.Activity.ChannelId)
string
- Activity.From.Id
(System.Activity.From.Id)
string
- Activity.From.Name
(System.Activity.From.Name)
string
- Activity.Name
(System.Activity.Name)
string
- Activity.Recipient.Name
(System.Activity.Recipient.Name)
string
- Activity.Text
(System.Activity.Text)



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Variables Levels



All levels are crucial:
Topic variables keep conversations focused and efficient,
Global variables ensure continuity and personalization across the entire interaction,
System variables are the experienced coaches, offering insights and context, guiding the conversation with wisdom

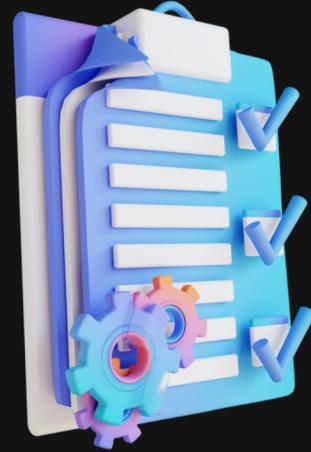
Each scope is essential, working together like a well-coordinated track team in the relay race of conversation!



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Variables Types



Variables in Copilot Studio
come in various types,
each with its own purpose.

Let's explore!



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Variables

Types

1. String

Stores text as a sequence of characters. Ideal for names, messages, or any textual data.

2. Boolean

Handles logical values, limited to true or false. Perfect for decision-making processes or toggling states.

3. Number

Contains real numbers. Use it for quantitative data like quantities, scores, or calculations.

4. Table

A list where all values must be of the same type. It's like a mini-database within your conversation.



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Variables Types

5. Record

A versatile collection of name-value pairs, where each value can be of a different type. Great for storing a mix of related data.

6. DateTime

Manages dates and times, helping your Copilot track or reference specific moments.

7. Choice

A list of string values, each with associated synonyms, offering a predefined set of options.

8. Blank

A placeholder representing no value or unknown value.



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Variables

Key Points

- Fixed Type on Assignment

Once assigned, a variable's type is permanent. Avoid type mismatches – assigning a string to a number variable leads to errors.

- Initial “Unknown” Status

During testing, variables may show as “unknown” until they receive their first value.

- Order Matters

The sequence of variables in the authoring canvas is crucial. It dictates the order in which your Copilot considers them in the conversation.

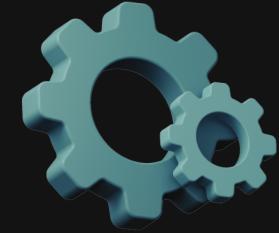


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Variables

Ways to Create



In Copilot Studio, variables can be created either automatically or manually,

each serving different purposes
in your conversation design.

These methods provide versatility
in how you capture and utilize information,
whether you prefer the bot to handle things automatically
or you like to take charge and do it yourself.



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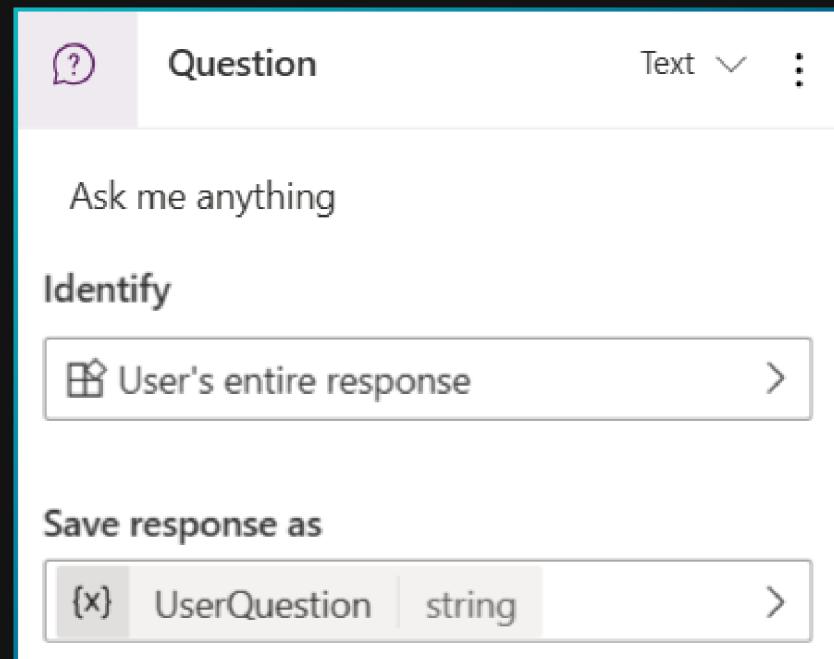


Variables

Ways to Create: automatically

Whenever you encounter a node that nudges you to pick a variable for **output**, like a Question node, it cleverly auto-generates an output variable in just the right type.

This method is intuitive and aligns seamlessly with your conversational flow, making variable creation a natural part of the dialogue building process.



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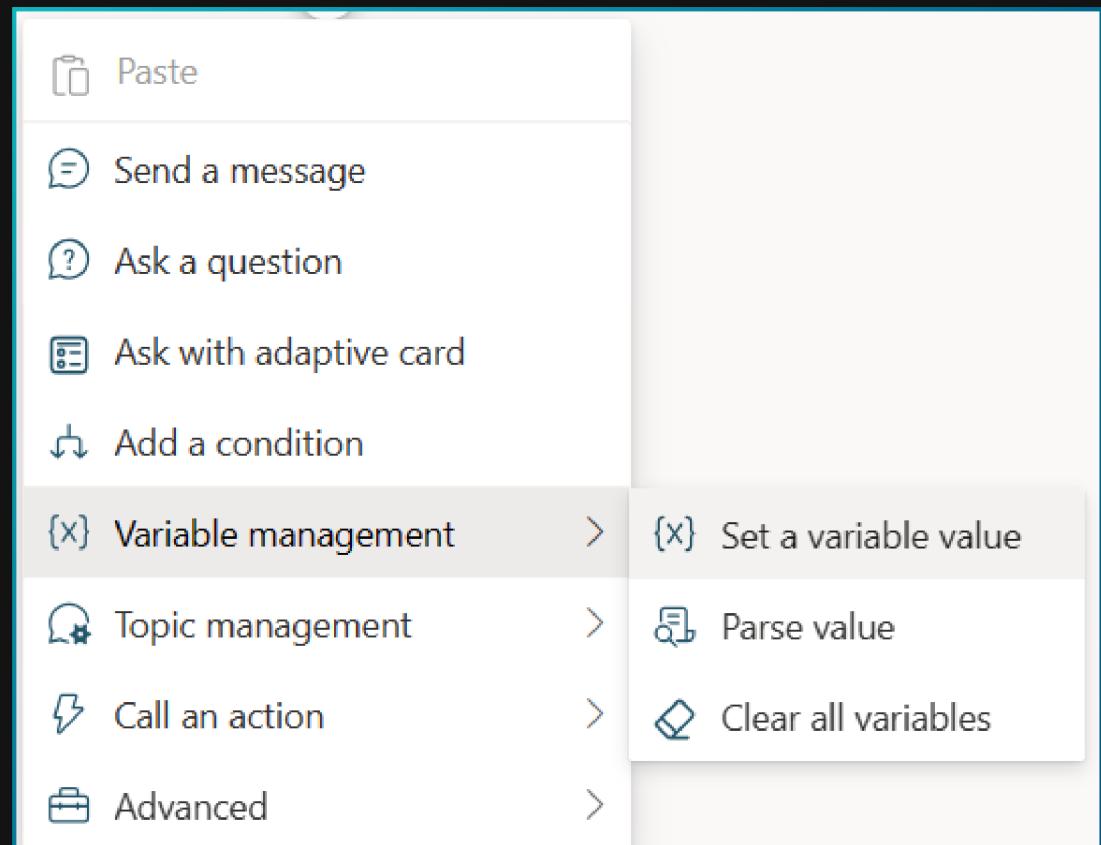


Variables

Ways to Create: manual

Sometimes you might want to roll up your sleeves and set things up yourself. For those moments, turn to the [Set Variable Value](#) node.

It's like grabbing the steering wheel to guide your Copilot exactly where you want it to go.



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Today's Task: Design Custom Topic from blank

1. Experiment with Auto-Creation

Use a Question node in your Copilot's dialogue flow. Watch how it automatically creates an output variable.

2. Take the Wheel

Try the **Set Variable Value** node. Manually assign a value to a variable and integrate it into your conversation.

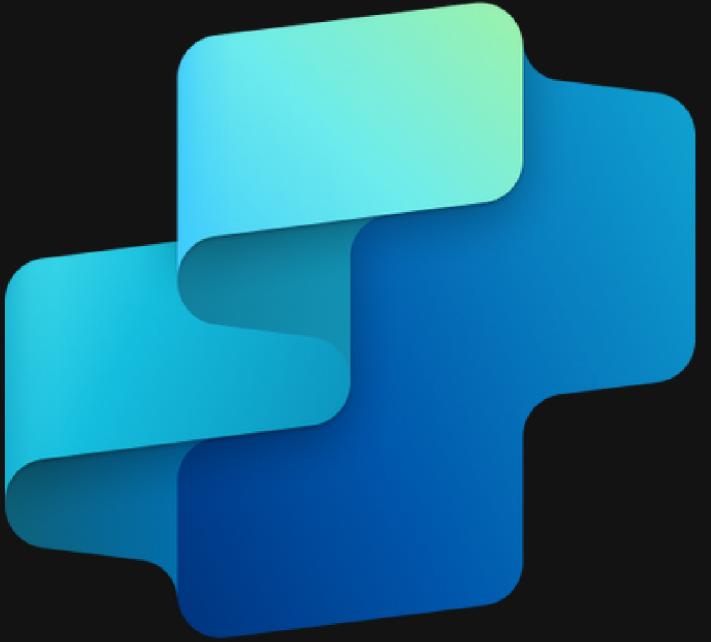
3. Observe the Impact

Engage with your Copilot and see how these variables influence the dialogue. Notice the differences between auto-created and manually set variables.



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