



From Clicks to Commands: AI for Editors, Developers and Everyone else

By Matt Wise & Phil Whittaker





What you're about to see
may look like science fiction.
It may feel like a special
effect.

But there is no illusion here...

But things may be a little sped up

This is real.

This works.





This is the future.





It all started 9 months ago...

Our company had imploded
And we had nothing to do

Everyone was talking about MCP
So we decided to build it for Umbraco



Built with Cursor in <2 weeks

Tech



umbraco

Management
API



Orval



Model Context
Protocol



Zod

What

- Create 180+ tools, covering > 60% of the management API
- Over 600 integration test suite

How



- Defined clear rules to guide AI agents
- Ran automated test driven development





Late one Tuesday night...

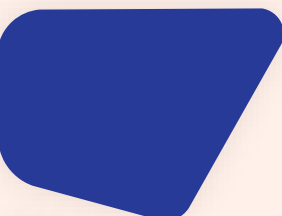
We turned it on...

For simple tasks...

It worked surprisingly well

But, still, not really believing,
we gave it a challenge...





Please move all **unused** data types into an **unused data type** folder

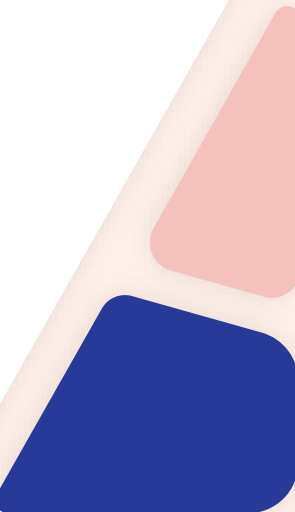




What... How... Why...



What is Model Context Protocol





MCP Client

(1:1 with LLM)

Cursor, VS Code,
Claude Destop



Model Context Protocol

Defines how the LLM talks to services



Umbraco MCP



Create
document



Get
data
types

and
many more





What is an MCP client

- A runtime interface paired 1:1 with an LLM instance
- Connects to multiple MCP Servers to access tools, data, and prompts
- Routes the LLM's calls—like tool use or resource—to the right server
- Handles formatting, execution, and responses, so the LLM can focus solely on reasoning



Feature support matrix

Client	Resources	Prompts	Tools	Discovery	Sampling	Roots	
5ire	✗	✗	✓	?	✗	✗	Supports to
AgentAI	✗	✗	✓	?	✗	✗	Agent Libra with tools si
AgenticFlow	✓	✓	✓	✓	✗	✗	Supports to resources fi agents and workflows.
Amazon Q CLI	✗	✓	✓	?	✗	✗	Supports pr
Apify MCP Tester	✗	✗	✓	✓	✗	✗	Supports re and tool dis
BeeAI Framework	✗	✗	✓	✗	✗	✗	Supports to workflows.
BoltAI	✗	✗	✓	?	✗	✗	Supports to
Claude.ai	✓	✓	✓	✗	✗	✗	Supports to resources fi servers.
Claude Code	✗	✓	✓	✗	✗	✗	Supports pr
Claude Desktop App	✓	✓	✓	✗	✗	✗	Supports to resources fi MCP server





What is an MCP server

- A logical wrapper around shared logic or data — like an API
- A single access point for LLMs to connect
- Exposes services to the AI
- AI-readable descriptions & parameter schema





Current reference servers

- **Filesystem** - Secure file operations with configurable access controls
- **Fetch** - Web content fetching and conversion optimized for LLM usage
- **Memory** - Knowledge graph-based persistent memory system
- **Sequential Thinking** - Dynamic problem-solving through thought sequences

Data and file systems

- **PostgreSQL** - Read-only database access with schema inspection capabilities
- **SQLite** - Database interaction and business intelligence features
- **Google Drive** - File access and search capabilities for Google Drive

Development tools

- **Git** - Tools to read, search, and manipulate Git repositories
- **GitHub** - Repository management, file operations, and GitHub API integration
- **GitLab** - GitLab API integration enabling project management
- **Sentry** - Retrieving and analyzing issues from Sentry.io





MCP Client

(1.1 with LLM)

Cursor, VS Code
Claude Desktop



Model Context Protocol

Defines how the LLM talks to services



Local MCP Servers

Umbraco MCP
File System



umbraco

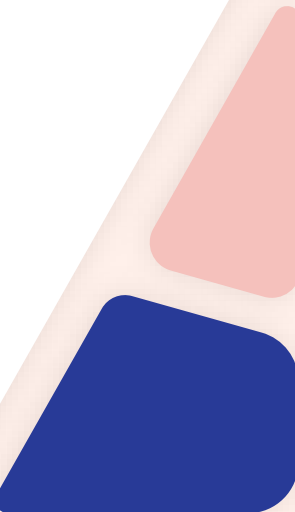


Remote MCP Servers

Atlassian
Cloudflare



What do we mean by
context and MCP?





Importance of Context

- LLM's are stateless entities
- Have a limited context window
- You can not control a LLM only influence it
- Context engineering



/context

```
L  @ @ @ @ @ @ @ @ @ @ @ @
  @ @ @ @ @ @ @ @ @ @ @ @
  @ @ @ @ @ @ @ @ @ @ @ @
  @ @ @ @ @ @ @ @ @ @ @ @
  @ @ @ @ @ @ @ @ @ @ @ @
  @ @ @ @ @ @ @ @ @ @ @ @
  @ @ @ @ @ @ @ @ @ @ @ @
  @ @ @ @ @ @ @ @ @ @ @ @
```

Context Usage

claude-sonnet-4-20250514 • 27k/200k tokens (14%)

```
@ System prompt: 3.0k tokens (1.5%)
@ System tools: 11.6k tokens (5.8%)
@ MCP tools: 927 tokens (0.5%)
@ Memory files: 11.8k tokens (5.9%)
@ Messages: 8 tokens (0.0%)
@ Free space: 172.7k (86.3%)
```

MCP tools • /mcp

```
L mcp__ide__getDiagnostics (ide): 428 tokens
L mcp__ide__executeCode (ide): 499 tokens
```

Memory files • /memory

```
L Project (/Users/philw/Projects/umbraco-mcp/CLAUDE.md): 141 tokens
L Project (/Users/philw/Projects/umbraco-mcp/.claude/memories/cursor-1.9k
cp-testing.md): tokens
L Project
(/Users/philw/Projects/umbraco-mcp/.claude/memories/cursor-mcp.md): tokens
L Project (/Users/philw/Projects/umbraco-mcp/.claude/memories/cursor-6.7k
odel-context-provider-typescript.md): tokens
L Project (/Users/philw/Projects/umbraco-mcp/.claude/memories/cursor-p490
object-context.md): tokens
```

/memory

```
L Opened project memory at ./CLAUDE.md
```

> To use a different editor, set the \$EDITOR or \$VISUAL environment variable.





Tools

- Extend the AI's capabilities beyond native functions.
- Enable external actions (e.g., run code, browse web, use plugins).
- Called explicitly by the model as needed.
- Designed to be model-controlled
- Document the what and how





Resources

- Provide persistent, background knowledge the model can refer.
- Feed the model structured, referenceable information.
- Persist in memory during a session or across sessions.
- Resources are designed to be application-controlled





Prompts

- Act as the immediate, active instruction that guides the model's.
- Directly shape how the model behaves in the moment.
- Can be a question, task, or instruction.
- Prompts are designed to be user-controlled



Umbraco MCP





What is the Umbraco Management API

- Available for > Umbraco 14
- Restful API that underpins the new back office
- Documented via Swagger in non-production environments
- Setup for headless use, with authentications policies
- OAuth2, authorizationCode with PKCE
- User permissions for regular and API users all manageable.



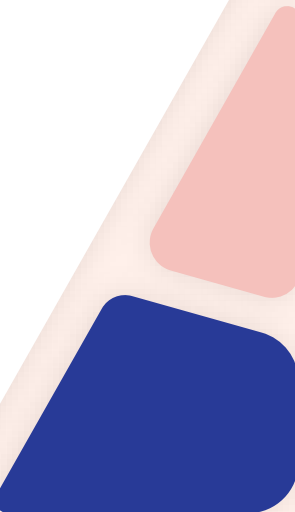


Why use the Umbraco Management API

- It's easy to understand
- Catalogues everything that the back office can do
- No additional package / code required in Umbraco
- Auto generation of all clients /models
- We can easily test upgrades using our integration tests



Bringing it
all together





What happens when we combine them?

Magic !!!

You can query and act
on your Umbraco site
like never before

The freedom of **less clicks**
for repetitive tasks





The AI has full awareness of the tools at its disposal.
When given a task, it autonomously reasons through
the steps needed, selecting and sequencing the
appropriate tools to achieve the goal.





What this means for the back office UI

- Not redundant
- Many uses cases, visual is best
- Focus on content authoring
- Removes pressure





The future of the Management API

- Not only a provider for the Backoffice UI
- Public-Facing Control Layer
- New features
- Additional documentation



Let's get to the
Demos!





Agents always follow the same process

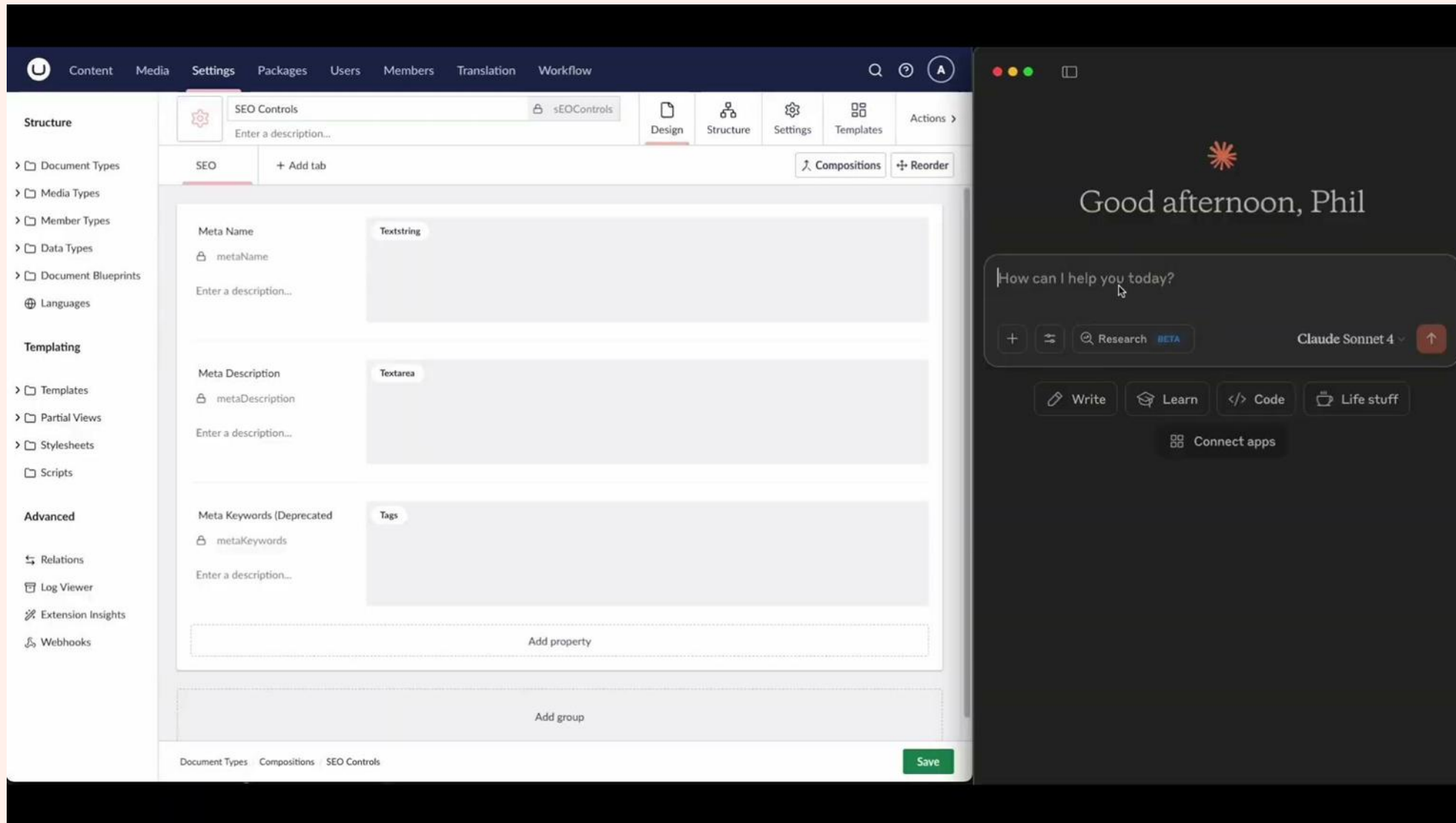
- Think
- Gather
- Plan
- Complete
- Validate



Property Descriptions



Can you update the SEO composition property descriptions in umbraco to contain the latest recommendations for each property

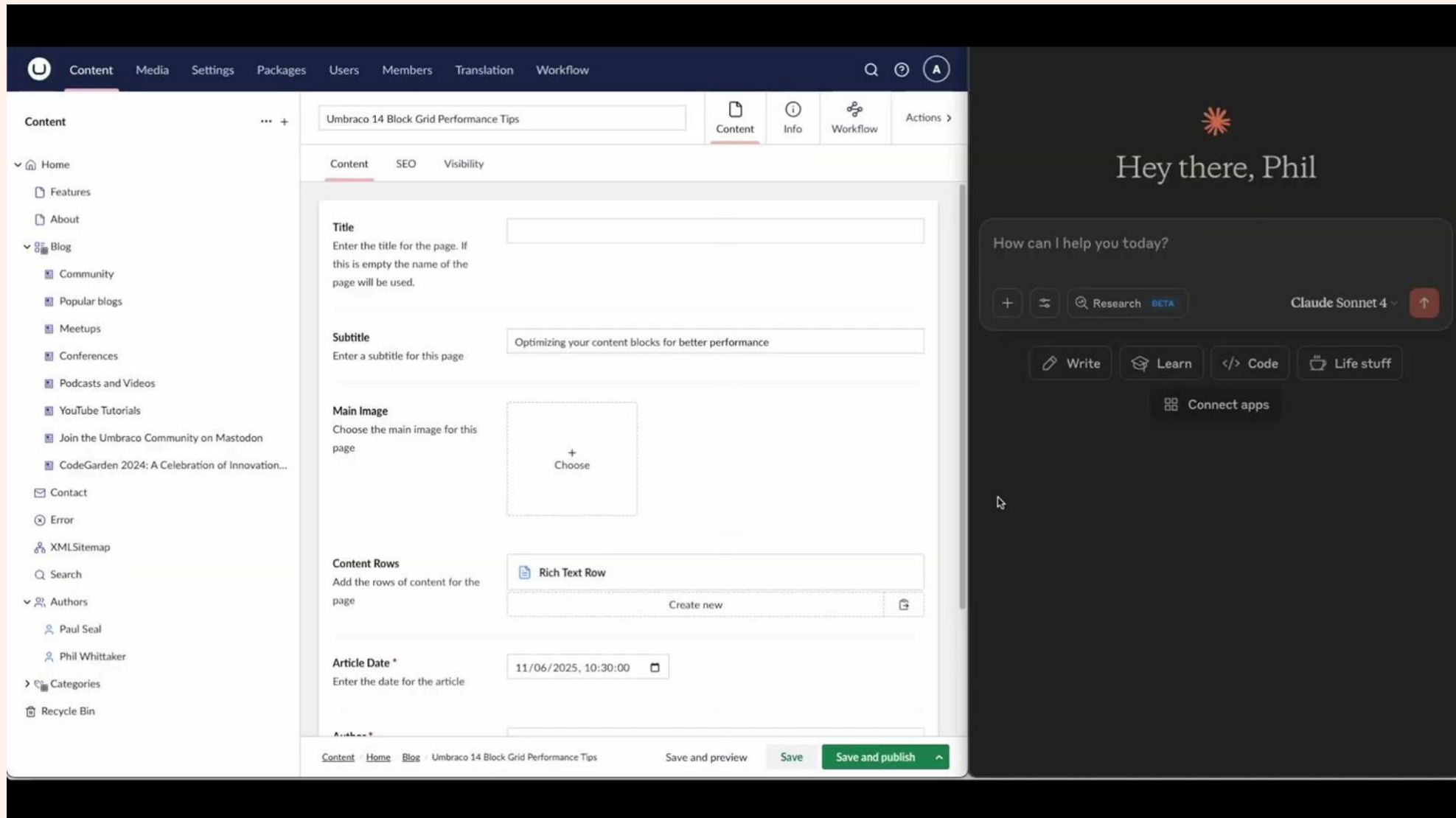


The image is a composite of two screenshots. The left screenshot shows the Umbraco CMS 'Settings' page, specifically the 'SEO Controls' section. The left sidebar contains a 'Structure' menu with items like Document Types, Media Types, Member Types, Data Types, Document Blueprints, Languages, and a 'Templating' section with Templates, Partial Views, Stylesheets, and Scripts. Below these are 'Advanced' settings like Relations, Log Viewer, Extension Insights, and Webhooks. The main content area is titled 'SEO Controls' and has a sub-tab 'SEO'. It contains three properties: 'Meta Name' (Textstring, metaName), 'Meta Description' (Textarea, metaDescription), and 'Meta Keywords (Deprecated)' (Tags, metaKeywords). Each property has an 'Enter a description...' field. At the bottom, there are 'Add property' and 'Add group' buttons, and a 'Save' button. The right screenshot shows a chat interface with a dark background. It features a greeting 'Good afternoon, Phil' with a star icon. Below is a text input field with the placeholder 'How can I help you today?'. To the right of the input is a dropdown menu showing 'Claude Sonnet 4' and an upward arrow. Below the input are four buttons: 'Write', 'Learn', 'Code', and 'Life stuff'. At the bottom is a 'Connect apps' button.

Exporting



Can you export the existing blogs in Umbraco into the available filesystem directory. Use the same structure as the existing text files



The image shows a screenshot of the Umbraco CMS interface. The left sidebar contains a navigation menu with sections like Home, Features, About, Blog, Community, Popular blogs, Meetups, Conferences, Podcasts and Videos, YouTube Tutorials, Join the Umbraco Community on Mastodon, CodeGarden 2024: A Celebration of Innovation..., Contact, Error, XMLSitemap, Search, Authors (Paul Seal, Phil Whittaker), Categories, and Recycle Bin. The main content area displays the editor for a blog post titled "Umbraco 14 Block Grid Performance Tips". The editor includes fields for Title, Subtitle, Main Image, Content Rows (with a Rich Text Row selected), and Article Date. The right sidebar shows a chat overlay with the text "Hey there, Phil" and a search bar. The chat interface includes buttons for "Write", "Learn", "Code", "Life stuff", and "Connect apps". The bottom of the screen shows a navigation bar with "Content", "Home", "Blog", and "Umbraco 14 Block Grid Performance Tips", along with "Save and preview", "Save", and "Save and publish" buttons.

Reporting





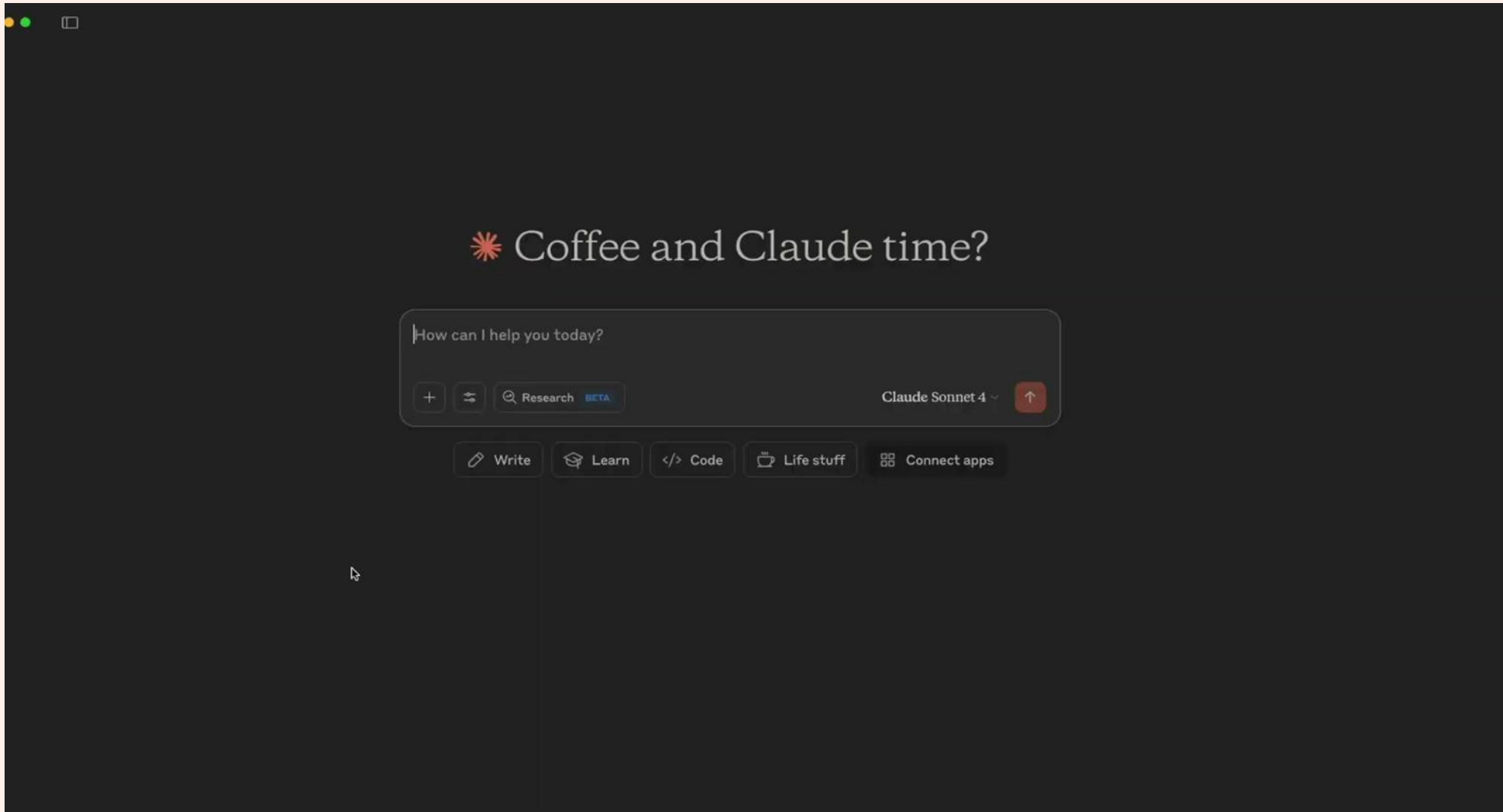
Create a **Mermaid ERD diagram** showing the Header Controls composition in Umbraco with the following specific requirements:

1. **Header Controls composition:** Include all properties with their names, aliases, and data types
2. **Document types that use it:** Show only the document type names (no other details like icons, IDs, or additional properties)
3. **Focus:** Keep the diagram clean and focused - exclude other compositions and unnecessary metadata
4. **Relationships:** Show only the composition relationships between Header Controls and the document types that inherit from it

The goal is a concise diagram that clearly shows what properties the Header Controls composition provides and which document types benefit from these properties.



Create a Mermaid ERD diagram showing the Header Controls composition in Umbraco



Code





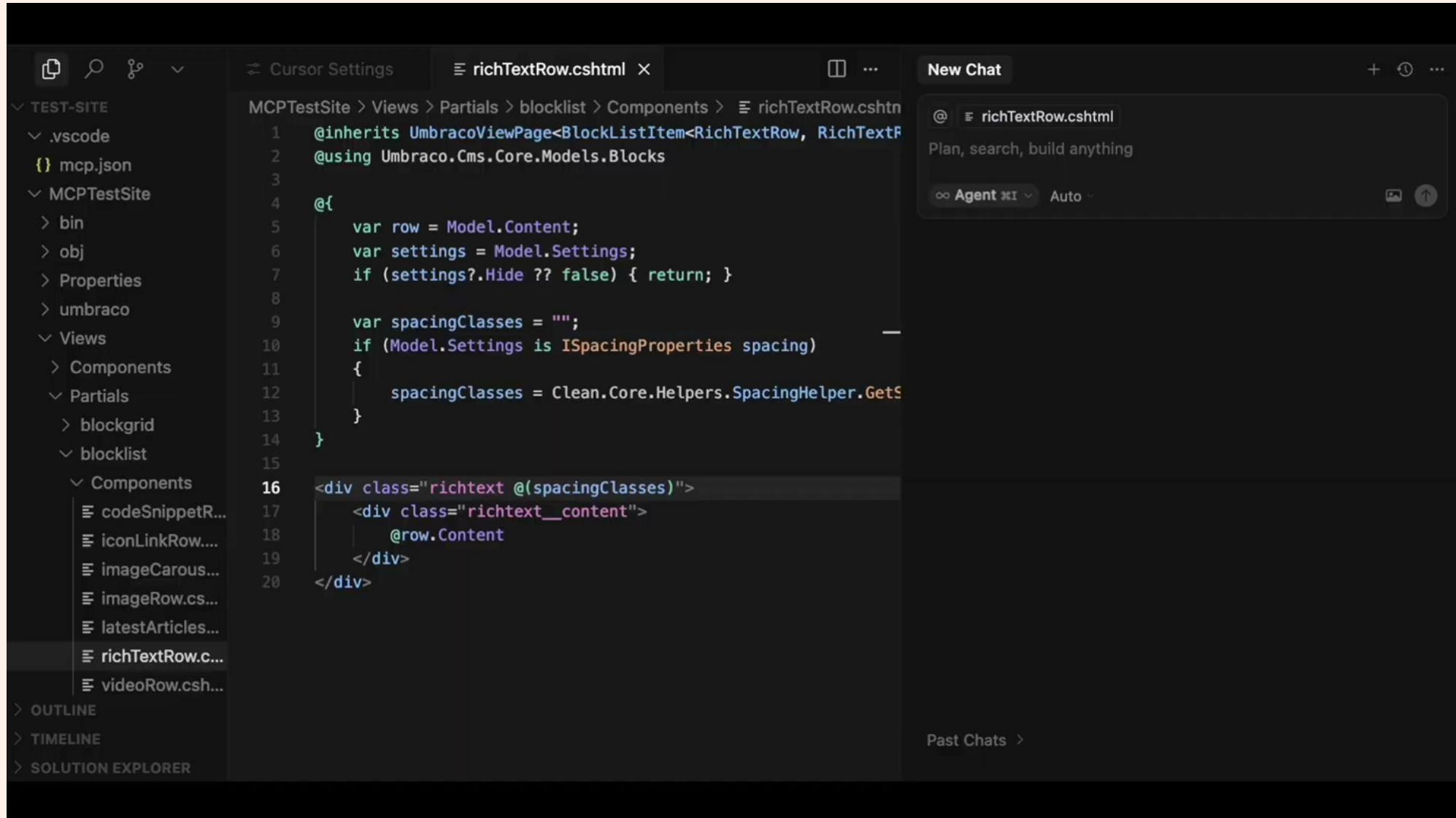
Can you add a new property Title (textstring) to the Rich Text Row component.

Can you update the component template to add the new property .

When creating new properties always create randomised uuids.



Add Title property to Umbraco and Code with Cursor



The screenshot displays the Visual Studio Code editor with the Cursor AI chat interface. The left sidebar shows the project structure for 'TEST-SITE', including folders like '.vscode', 'mcp.json', 'MCPTestSite', and 'Views'. The main editor area shows the file 'richTextRow.cshtml' with the following code:

```
1 @inherits UmbracoViewPage<BlockListItem<RichTextRow, RichTextF
2 @using Umbraco.Cms.Core.Models.Blocks
3
4 @{
5     var row = Model.Content;
6     var settings = Model.Settings;
7     if (settings?.Hide ?? false) { return; }
8
9     var spacingClasses = "";
10    if (Model.Settings is ISpacingProperties spacing)
11    {
12        spacingClasses = Clean.Core.Helpers.SpacingHelper.GetS
13    }
14 }
15
16 <div class="richtext @(spacingClasses)">
17     <div class="richtext__content">
18         @row.Content
19     </div>
20 </div>
```

The right sidebar shows the 'New Chat' interface with the file 'richTextRow.cshtml' selected. The chat area contains the prompt 'Plan, search, build anything' and the 'Agent' dropdown set to 'Agent #I'. The 'Past Chats' section is visible at the bottom right.



Content





Can you create a **new blog post** talking about what happened at CodeGarden 2024.

Assign this to a **new author called Phil Whittaker**.

I've **already uploaded an image** in the media library for him

Make sure you always follow all the rules specified in the tools, especially in the create-document tool when creating the author and the blog post

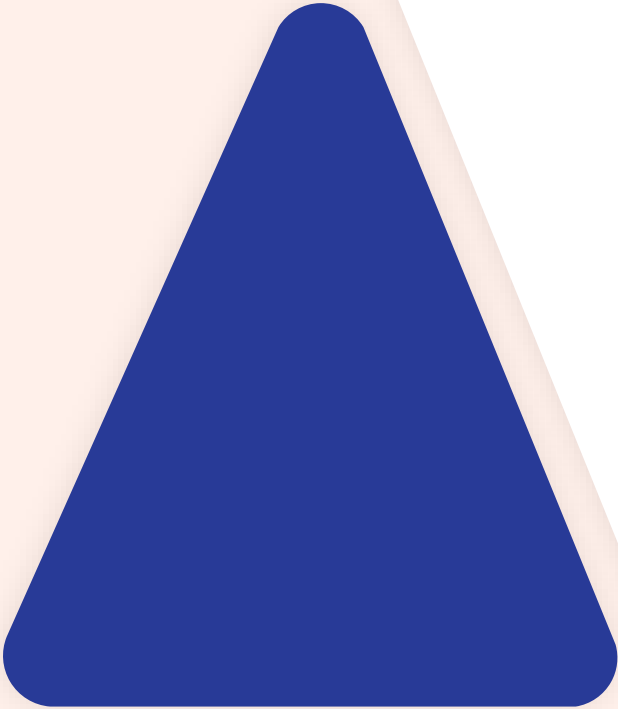
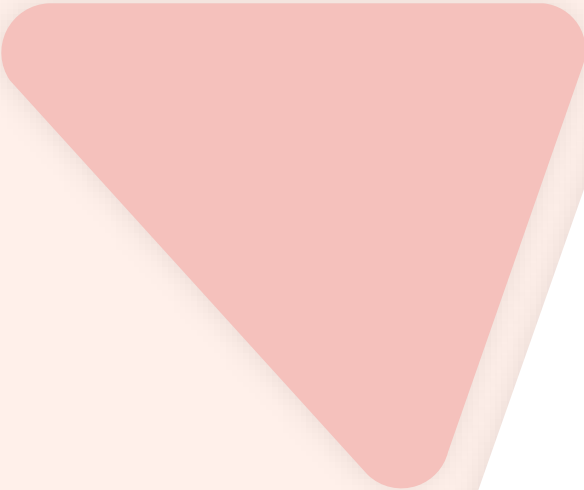


Can you create a new blog post talking about what happened at CodeGarden 2024.

The image displays two side-by-side screenshots. The left screenshot shows the Umbraco CMS 'Content' editor for a new page. The left sidebar lists navigation options: Home, Features, About, Blog (expanded), Community, Popular blogs, Meetups, Conferences, Podcasts and Videos, YouTube Tutorials, Join the Umbraco community, Contact, Error, XML Sitemap, Search, Authors (Paul Seal), Categories, and Recycle Bin. The main editor area has tabs for Content, Footer, and SEO. The 'Content' tab is active, showing fields for Title (Clean Starter Kit), Subtitle (For Umbraco), and Main Image (a photo of a Bluetooth white keyboard). Below these is a 'Content Rows' section with a 'Latest Articles Row' and a 'Create new' button. At the bottom are 'Save and preview', 'Save', and 'Save and publish' buttons.

The right screenshot shows a Claude AI chat interface. At the top, it says 'Phil returns!' with a red starburst icon. Below is a search bar with the text 'How can I help you today?'. To the right of the search bar is 'Claude Sonnet 4' with an upward arrow. Below the search bar are buttons for '+', 'Research BETA', 'Write', 'Learn', 'Code', and 'Life stuff'. At the bottom is a 'Connect apps' button.





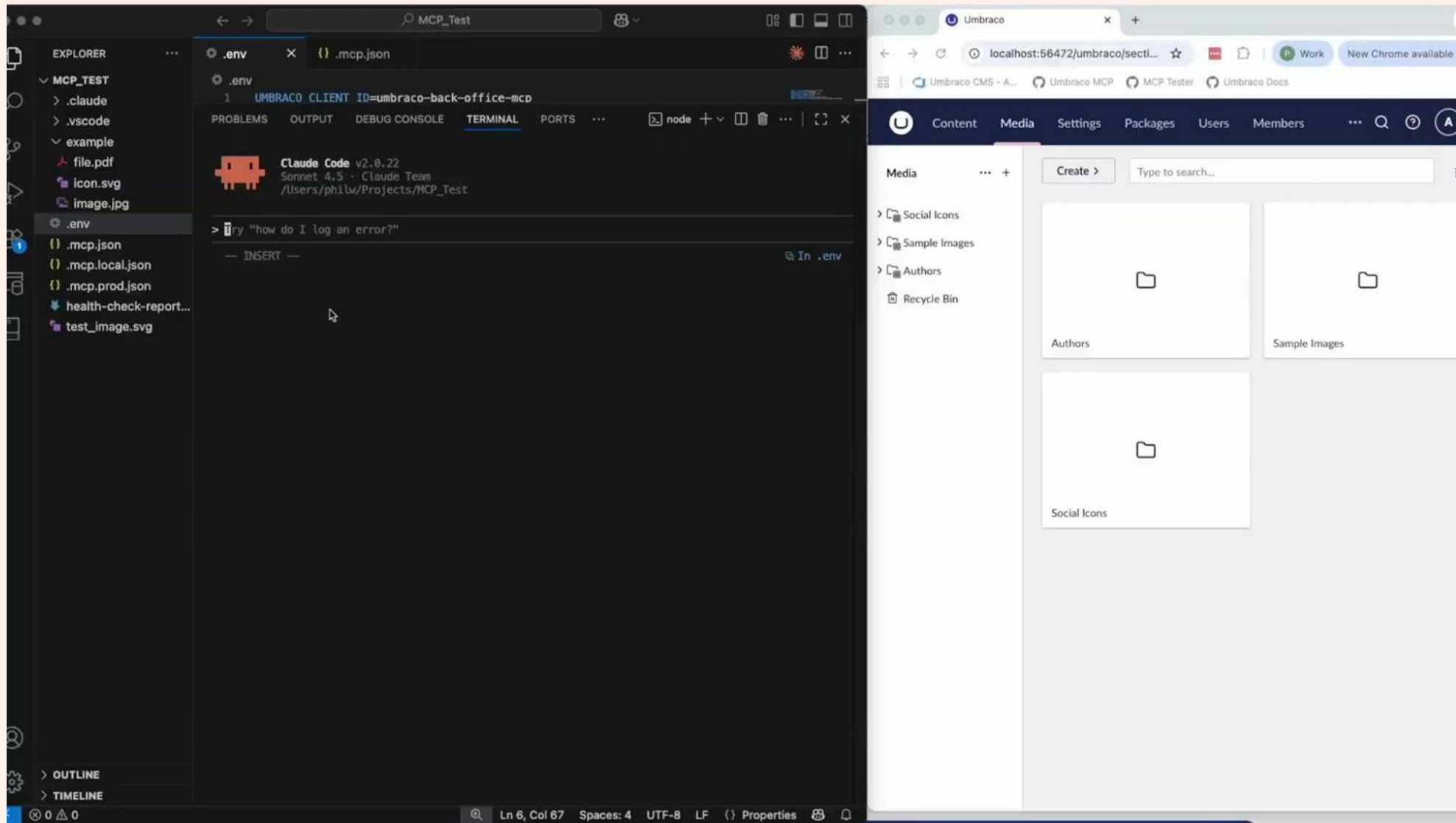
Media

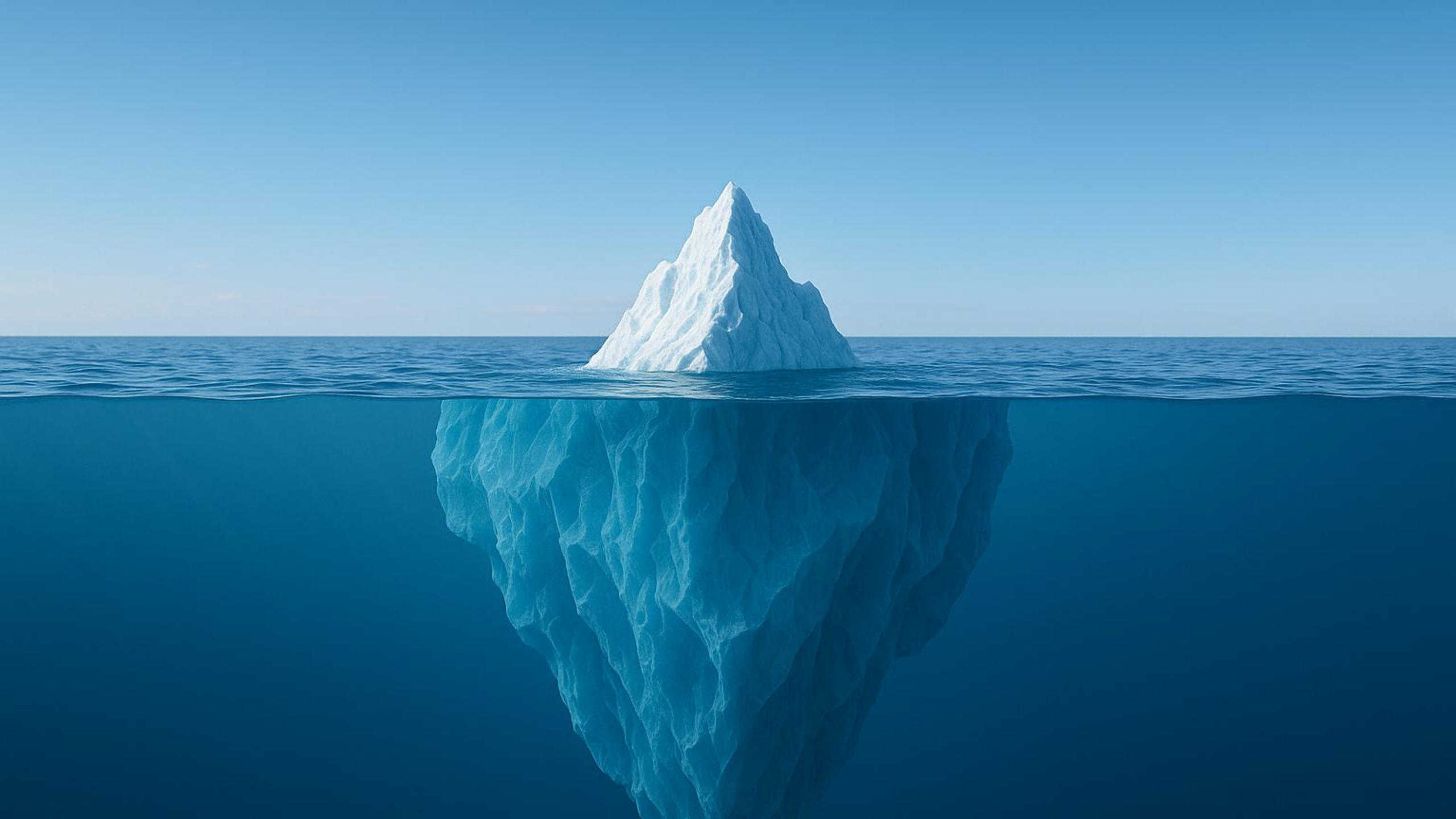


- 
- can you upload the pdf from the example directory to Umbraco
 - can you upload all files from the examples directory at once to Umbraco
 - can you create an svg image of a unicorn and upload it to Umbraco
 - can you import the image from https://umbraco.com/media/54xnncgt/umbraco_logo_blue05.webp into umbraco



Create media in Umbraco.







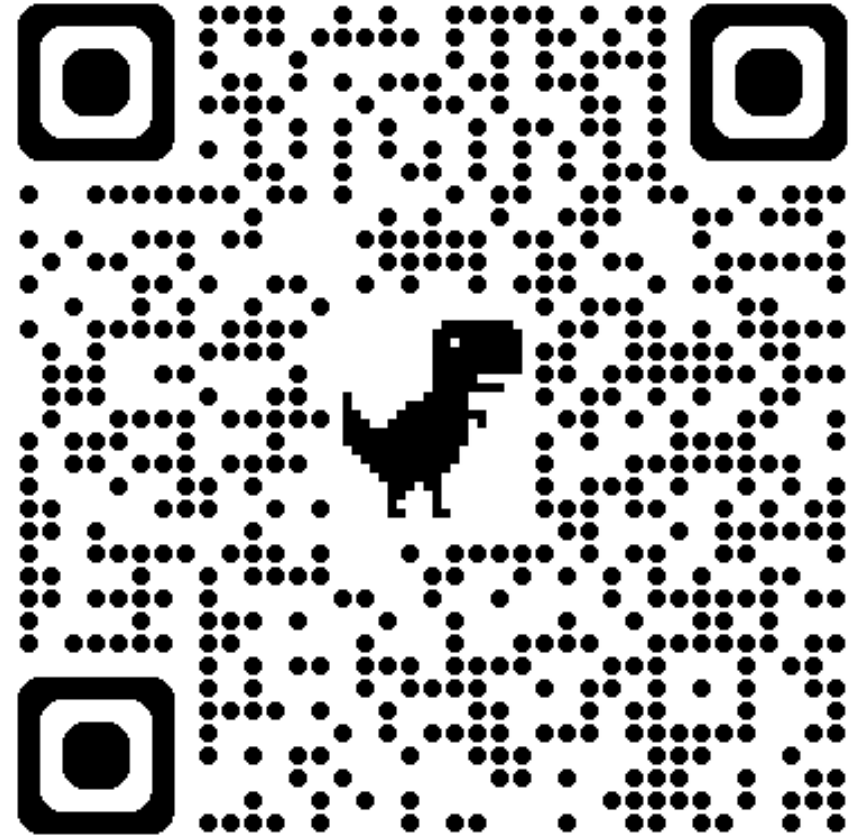
MCP Developer toolkit



```
{
  "mcpServers": {
    "umbraco-mcp": {
      "command": "npx",
      "args": ["@umbraco-cms/mcp-dev@beta"],
      "env": {
        "UMBRACO_CLIENT_ID": "umbraco-back-office-mcp",
        "UMBRACO_CLIENT_SECRET": "1234567890",
        "UMBRACO_BASE_URL": "http://localhost:56472",
        "UMBRACO_INCLUDE_TOOL_COLLECTIONS": "document",
        "NODE_TLS_REJECT_UNAUTHORIZED": "0"
      }
    }
  }
}
```

Installation

Install Server [VS Code](#)



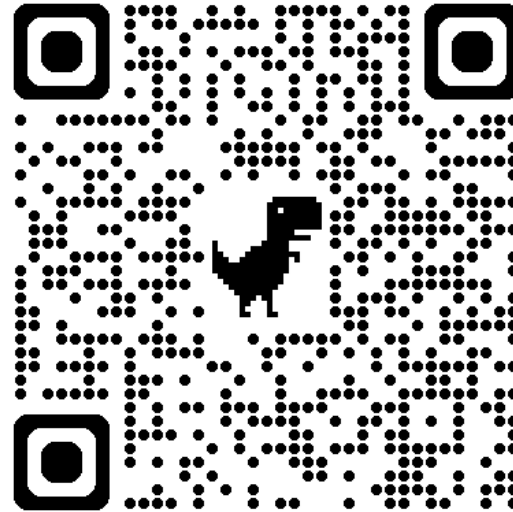
<https://github.com/umbraco/Umbraco-CMS-MCP-Dev>



We look forward to see how you all use it!



Thank you



Github Repo



Matt Wise
linktr.ee/mattwis
Moriyama



Phil Whittaker
linktr.ee/philwhittaker1
 **umbraco**

