

TYPO3 Fundamentals

Core Concepts

<b>Page Tree:</b> The hierarchical structure that organizes website content. Each page in the tree represents a page on the website.
<b>Content Elements (CEs):</b> Individual pieces of content (text, images, etc.) that are added to pages. Also known as 'Elements'.
<b>TypoScript:</b> The configuration language used to control how content is rendered. Allows for dynamic generation of HTML, CSS, and JavaScript.
<b>Fluid:</b> The templating engine used in TYPO3. It separates the presentation layer from the logic.
<b>Extensions:</b> Reusable components that extend TYPO3's functionality. Can be installed and configured to add features like blogs, forms, or e-commerce capabilities.
<b>Backend Layouts:</b> Define the structure of the content area in the TYPO3 backend, dictating where content elements can be placed.

Key Directories

<code>/typo3conf/</code>	Contains configuration files, including <code>LocalConfiguration.php</code> and <code>AdditionalConfiguration.php</code> .
<code>/typo3temp/</code>	Temporary files and cache. Clear this directory to resolve many common issues.
<code>/fileadmin/</code>	Default location for uploaded files (images, documents, etc.). Can be configured.
<code>/packages/</code>	Location for extensions installed via composer.
<code>/public/</code>	Default web root. Where <code>index.php</code> and other public files are located. (May vary depending on server setup)

Backend Navigation

<b>Page Module:</b> Used to manage the page tree and content elements on a specific page.
<b>List Module:</b> Provides a detailed view of all records in a table, allowing for filtering and editing.
<b>Filelist Module:</b> Manages files and folders in the file system.
<b>Template Module:</b> Edit TypoScript templates.
<b>Extension Manager:</b> Install, configure, and manage extensions.
<b>Admin Tools:</b> Various admin tools like clearing cache, system information, install tool etc.

TypoScript Essentials

Basic Syntax

<code>page = PAGE</code>	Assigns a new PAGE object. <code>PAGE</code> is a TypoScript object type.
<code>page.10 = TEXT</code>	Assigns a TEXT object to the property <code>10</code> of the <code>page</code> object.
<code>page.10.value = Hello World</code>	Sets the <code>value</code> property of the TEXT object to 'Hello World'.
<code>&lt;INCLUDE_TYPOSCRIPT: source="FILE:fileadmin/template/setup.typoscript"&gt;</code>	Includes TypoScript from an external file.
<code>[globalVar = TSFE.id = 1]</code>	Conditional statement: Checks if the current page ID is 1.
<code>lib.myMenu = HMENU</code>	Creates a menu object called 'myMenu'.

Common Objects

<b>PAGE:</b> Defines the overall structure of the HTML page.
<b>TEXT:</b> Outputs plain text.
<b>IMAGE:</b> Renders an image. Can be configured to resize, crop, etc.
<b>CONTENT:</b> Renders content elements from the database.
<b>HMENU:</b> Generates a navigation menu.
<b>USER_INT:</b> Allows calling a user-defined function within TypoScript (cached). <code>USER</code> is similar but uncached.

Example Configuration

<pre>page = PAGE page.10 = TEXT page.10.value = Hello World page.10.wrap = &lt;h1&gt; &lt;/h1&gt;  page.includeCSS {     main = fileadmin/css/style.css }</pre>
This TypoScript configuration creates a basic HTML page with a heading 'Hello World' and includes a CSS file.

## Fluid Templating

## Basic Syntax

<code>&lt;f:if condition="{variable}"&gt;...&lt;/f:if&gt;</code>	<b>f:if:</b> Conditional rendering. Conditional statement.	
	<b>f:for:</b> Looping through data. Renders	
	<b>f:link.page:</b> Creating internal links. only if the condition is true.	
	<b>f:link.external:</b> Creating external links.	
	<b>f:translate:</b> Localizing text. looping	
<code>&lt;f:for each="{items}" as="item"&gt;...&lt;/f:for&gt;</code>	<b>f:format.*:</b> Various formatting View Helpers (date, number, html, etc.). construct.	
	<b>Example Template</b>	
<code>&lt;f:link.page pageUid="123"&gt;Link to Page&lt;/f:link.page&gt;</code>	Iterates over an array or	
<code>&lt;f:translate key="LLL:EXT:my_extension/Resources/Private/Language/locallang_ext_myext/typo3conf/ext/my_ext/locallang_ext_myext.ttl"&gt;</code>	<pre>&lt;f:layout name="Default" /&gt;  &lt;f:section name="Main"&gt;   &lt;h1&gt;{page.title}&lt;/h1&gt;   &lt;f:for each="{contentElements}" as="contentElement"&gt;     &lt;f:cObject typoScriptObjectPath="lib.contentElement" data="{contentElement}" /&gt;   &lt;/f:for&gt; &lt;/f:section&gt;</pre>	
<code>&lt;f:format.date format="%d.%m.%Y"&gt;{date}&lt;/f:format.date&gt;</code>	This example demonstrates a basic Fluid template with a layout, a section for the main content, and a loop that renders content elements using <code>f:cObject</code> .	
<code>{variable -&gt; f:format.html()}</code>	HTML, escaping potentially dangerous characters.	

## Common Tasks

## Clearing Cache

TYPO3 caches content and configuration for performance. Clearing the cache is often necessary after making changes.

**Backend:**

Use the 'clear cache' menu in the top bar of the backend.

**Install Tool:**

Navigate to the Install Tool and use the 'Clear all caches' functionality.

**TypoScript:**

```
config.disableAll = 1
```

(for development, disables caching)

**Command-line:**

Use the `typo3 cache:flush` command.

## Working with Content Elements

Adding a CE	In the Page module, click the '+' icon in the content area to add a new content element.
Editing a CE	Click on a content element in the Page module to edit its properties.
Moving a CE	Drag and drop content elements within the content area to change their order. Alternatively use the up/down arrows.
Deleting a CE	Click the delete icon (trash can) on a content element to remove it.
Hiding/Disabling a CE	Use the enable/disable icon(eye icon) to hide a CE.

## Extension Management

<p><b>Installing an extension:</b></p> <p>Use the Extension Manager module to search for and install extensions from the TYPO3 Extension Repository (TER) or via composer.</p>
<p><b>Configuring an extension:</b></p> <p>Many extensions have configuration options that can be set in the Extension Manager or via TypoScript.</p>
<p><b>Updating an extension:</b></p> <p>The Extension Manager can be used to update extensions to the latest versions.</p>
<p><b>Uninstalling an extension:</b></p> <p>Use the Extension Manager to uninstall extensions that are no longer needed.</p>