

CMS Certified Developer 14 LTS

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TYPO3 Concepts

Extension File and Folder Structure

This skill covers knowledge about the file structure of an extension and where to place files by convention and due to technical requirements.

Maintainer: TYPO3 (Andreas Wolf)

Coding Standards in TYPO3

This skill covers the knowhow to write code conforming to the coding standards used by the TYPO3 project.

Maintainer: TYPO3 (Andreas Wolf)

Table Configuration Array (TCA)

This skill covers the configuration of database tables for usage in the backend and frontend.

Maintainer: TYPO3 (Andreas Wolf)

FlexForm Concepts

This skill covers basics about the concept of FlexForms and how they relate to the TCA.

Maintainer: TYPO3 (Andreas Wolf)

Database Schema Definition

This skill covers the definition of own database tables and fields of an extension, which will be automatically managed by the TYPO3 Core.

Maintainer: TYPO3 (Andreas Wolf)

Implementing MVC in TYPO3

This skill introduces the concept of MVC in Extbase: base classes for models, controllers, repositories.

Maintainer: TYPO3 (Andreas Wolf)

User Input in DB Queries

Knowledge about securely processing user input for database queries.

Maintainer: TYPO3 (Andreas Wolf)

User Input in Views

This skill covers knowledge about securely outputting values gained through user input.

Maintainer: TYPO3 (Andreas Wolf)

User Input in PHP Code

This skill covers knowledge about securely processing user input in PHP code.

Maintainer: TYPO3 (Andreas Wolf)

Tracing Errors in Logs

This skill covers knowledge about log sources and how to utilize them in order to resolve errors.

Maintainer: TYPO3 (Andreas Wolf)

Extending/Replacing/Manipulating Existing Functionality

This skill covers knowledge about extending core and extension functionality.

Maintainer: TYPO3 (Andreas Wolf)

The Caching Framework

This skill covers the Core's caching framework. It shows how to use existing and register custom caches, and the types of cache frontends and backends. Additional topics are expiration and tagging of cache entries and flushing of caches.

Maintainer: TYPO3 (Andreas Wolf)

Flash Messages

This skill covers flash messages, a mechanism used to communicate e.g. results of an action to the user.

Maintainer: TYPO3 (Andreas Wolf)

TYPO3 Error handling/Exception handling

This skill is about TYPO3-specific ways of handling errors during program execution and finding information about any errors that occurred.

Maintainer: TYPO3 (Andreas Wolf)

Contexts & Aspects

This skill introduces usage of the request context and aspects that can be used to enrich this context, e.g. with localization information.

Maintainer: TYPO3 (Andreas Wolf)

Route Enhancers

This skill covers Route Enhancers which are used to amend the URL routing provided by the TYPO3 core.

Maintainer: TYPO3 (Andreas Wolf)

Debugging PSR-14 Event Handling

This skill covers debugging the registration, dispatching and handling of events in TYPO3.

Maintainer: TYPO3 (Andreas Wolf)

Making Extensions localizable

This skill covers knowledge of how to make extensions translatable and localizable.

Maintainer: TYPO3 (Andreas Wolf)

Database Record Translations

This skill covers the translation configuration of database records via TCA.

Maintainer: TYPO3 (Andreas Wolf)

Data structures in TYPO3 core

This skill covers classes for data structures, e.g. the BitSet and Map class, and their usage.

Maintainer: TYPO3 (Andreas Wolf)

The builder design pattern in TYPO3

This skill covers classes in TYPO3, which are following the Builder design pattern.

Maintainer: TYPO3 (Andreas Wolf)

Performance analysis for custom code

This skill covers the process of analysing performance of a TYPO3 system.

Maintainer: TYPO3 (Andreas Wolf)

Versioning & Workspaces

This skill covers the concept of Versioning & Workspaces in TYPO3 which allow to manage content changes and staging through version control and isolated workspaces. It allows for tracking revisions, previewing changes before publication, and coordinating collaborative work by separating development from live content.

Maintainer: TYPO3 (Andreas Wolf)

TYPO3 Scheduler Extension

This skill covers the TYPO3 Scheduler extension, which enables the scheduling and automation of tasks within TYPO3, such as executing background jobs, sending emails, or running custom scripts at specified intervals. This tool provides a flexible interface for managing and configuring scheduled tasks to enhance site functionality and automation.

Maintainer: TYPO3 (Andreas Wolf)

TYPO3 Ecosystem & Brand

This skill covers the TYPO3 Brand and the Ecosystem around the software. It encompasses the community, tools, and resources that support the TYPO3 CMS, as well as the values and identity of the TYPO3 brand. The ecosystem includes a wide range of extensions, documentation, events, and a global community that contribute to the development and promotion of TYPO3.

Maintainer: TYPO3 (Andreas Wolf)

TYPO3 Contribution, Issue Tracker

This skill covers TYPO3 Contribution. This involves participating in the development and enhancement of the TYPO3 CMS through various means such as code contributions, documentation, bug reports, and community support. Engaging with TYPO3 contributions helps improve the platform and supports the global TYPO3 community.

Maintainer: TYPO3 (Andreas Wolf)

Site Configuration

This skill covers the configuration of sites in TYPO3, which are organised in a page tree of one or multiple sites.

Maintainer: TYPO3 (Andreas Wolf)

Single Table Inheritance in TYPO3

This skill covers the usage of the Single Table Inheritance technique in TYPO3. It is used in TYPO3 to manage multiple object types within a single database table. This approach allows different classes to share the same table while maintaining distinct behaviors, simplifying database structure and improving performance in TYPO3 extensions.

Maintainer: TYPO3 (Andreas Wolf)

Frontend Plugins

This skill covers Frontend Plugins in TYPO3, which are a content type that adds custom functionalities to the frontend of a TYPO3 website. These plugins allow for the integration of custom features and interactive components, enhancing the user experience and extending the site's capabilities.

Maintainer: TYPO3 (Andreas Wolf)

Fluid Templating Engine

This skill covers the Templating Engine Fluid. It is used in TYPO3 for rendering dynamic content in a clean and maintainable way. It allows developers to create custom templates using a combination of HTML and Fluid-specific syntax, enabling the separation of content and presentation layers.

Maintainer: TYPO3 (Andreas Wolf)

Feature Toggles

This skill covers Feature Toggles which allows developers and integrators to enable or disable specific functionalities or features dynamically without altering the codebase. This technique is used in TYPO3 mainly to hide breaking changes for existing installations migrating from older versions.

Maintainer: TYPO3 (Andreas Wolf)

User Session Management

This skill covers session management in TYPO3. Session Management involves handling user sessions to maintain state and manage user interactions across multiple page requests. This includes creating, storing, and retrieving session data to provide a consistent user experience and manage user-specific settings or actions.

Maintainer: TYPO3 (Andreas Wolf)

Data Migration (Upgrade Wizards)

This skill covers the Upgrade Wizards in TYPO3, which assists the process of upgrading TYPO3 installations and extensions by automating data migrations needed to ensure compatibility with newer versions.

Maintainer: TYPO3 (Andreas Wolf)

TYPO3 Core Persistence

This skill covers TYPO3's persistence engine, which handles data management and storage within the system. This includes understanding how TYPO3 structures and maintains data integrity, as well as the mechanisms that support consistent data handling across the Backend and Frontend.

Maintainer: TYPO3 (Andreas Wolf)

Object Creation in TYPO3

This skill covers the different ways how objects can be created in TYPO3, and the infrastructure TYPO3 provides for this.

Maintainer: TYPO3 (Andreas Wolf)

Backend Modules

This skill covers knowledge about TYPO3 Backend Modules and how to extend them, allowing users to manage specific tasks or access additional tools within the CMS. These modules can be custom-built or are offered as part of extensions, providing enhanced functionality tailored to the needs of the website.

Maintainer: TYPO3 (Andreas Wolf)

cHash

This skill covers the cHash (cache hash) in TYPO3 which is used to prevent cache flooding and to ensure that cached content is correctly identified and served based on query parameters and URL changes. This mechanism helps in generating unique cache entries for different content variations, improving cache accuracy and preventing stale content from being served.

Maintainer: TYPO3 (Andreas Wolf)

Frontend Routing

This skill covers Frontend Routing in TYPO3. It manages the mapping of URLs to specific pages, plugins and content within a TYPO3 site. It defines how URLs are structured and resolved, ensuring that users and search engines can access the correct content efficiently.

Maintainer: TYPO3 (Andreas Wolf)

TYPO3 Request Life Cycle

This skill covers the TYPO3 Request Life Cycle, which is the process a request goes through from the moment it is received by the server until a response is delivered to the client. This life cycle includes stages such as routing, controller action execution, and rendering, ensuring that TYPO3 handles each request consistently and efficiently.

Maintainer: TYPO3 (Andreas Wolf)

Validation in TYPO3

This skill covers validation in TYPO3 to ensure that user input applies to defined rules and constraints, to maintain data integrity and quality. This process includes configuring validation rules for forms and data models, checking for errors, and providing feedback to users to ensure correct and secure data handling.

Maintainer: TYPO3 (Andreas Wolf)

Logging in TYPO3

This skill covers logging in TYPO3, which refers to the system's ability to track and record various activities and events within the CMS, such as user actions, errors, and system processes.

Maintainer: TYPO3 (Andreas Wolf)

Software Development Standards

PSR Standards

Knowing the most important PSR programming standards in the TYPO3 world.

Maintainer: TYPO3 (Andreas Wolf)

JSON

This skill covers basics of the JSON format.

Maintainer: TYPO3 (Andreas Wolf)

SQL

This skill covers knowledge about the SQL standard for interacting with databases.

Maintainer: TYPO3 (Andreas Wolf)

PHP

This skill covers the ability to develop and execute PHP scripts.

Maintainer: TYPO3 (Andreas Wolf)

PSR-7: Request/Response

This skill covers the PSR standard for HTTP request/response objects.

Maintainer: TYPO3 (Andreas Wolf)

PSR-3: Logger Interface standard

This skill covers knowledge about the PSR-3 logging standard for PHP.

Maintainer: TYPO3 (Andreas Wolf)

Docblocks in PHP

This skill covers knowledge about the syntax and general purpose of documentation blocks, tags and annotations.

Maintainer: TYPO3 (Andreas Wolf)

PSR-15: Middlewares

This skill covers the PHP standard on middlewares.

Maintainer: TYPO3 (Andreas Wolf)

PHP autoloading standards

This skill covers the different PHP autoloading standards (PSR-4, class maps), how they map PHP classes to files and folders, and how the PSR-4 autoloading is configured.

Maintainer: TYPO3 (Andreas Wolf)

PSR-18: HTTP Client

This skill covers the PSR HTTP client standard.

Maintainer: TYPO3 (Andreas Wolf)

PSR-17: HTTP Message Factories

This skill covers the PSR standard for HTTP message factories and the differences to the earlier HTTP request/response standard.

Maintainer: TYPO3 (Andreas Wolf)

PSR-14: Event Dispatching

This skill covers the basics of the PHP standard on Event dispatching.

Maintainer: TYPO3 (Andreas Wolf)

PSR-11: Dependency Injection

This skill covers different types of dependency injection in TYPO3 and the configuration of dependency injection.

Maintainer: TYPO3 (Andreas Wolf)

XLIFF

This skill covers the standard XML format XLIFF (XML Localization Interchange File Format) which is used for the exchange of localization data between different software tools. It facilitates the translation and management of text within applications by providing a structured format for source and target language content.

Maintainer: TYPO3 (Andreas Wolf)

reStructuredText

This skill covers the lightweight markup language reStructuredText (reST), which is used for documentation in the TYPO3 world.

Maintainer: TYPO3 (Andreas Wolf)

Markdown

This skill covers the lightweight markup language Markdown, which is designed for formatting text in a simple and readable way

Maintainer: TYPO3 (Andreas Wolf)

CVE

This skill covers the knowledge of CVE (Common Vulnerabilities and Exposures). CVE provides a standardized identifier for publicly known cybersecurity vulnerabilities and exposures. This system helps organizations and users track and manage security issues by offering a unique reference for each vulnerability.

Maintainer: TYPO3 (Andreas Wolf)

SQL Data Management

This skill covers the principles of SQL Data Management, including the processes of querying, updating, and organizing data within a relational database using SQL commands.

Maintainer: TYPO3 (Andreas Wolf)

SQL Structure Management

This skill covers designing and maintaining the schema of a relational database with SQL Structure Management including the creation, modification, and optimization of tables, indexes, and relationships. This helps to ensure that the database structure supports efficient data storage and retrieval while adhering to integrity constraints and normalization principles.

Maintainer: TYPO3 (Andreas Wolf)

HTTP

This skill covers the methods for requesting and delivering resources by HTTP (Hypertext Transfer Protocol), such as web pages and files, and includes status codes to indicate the result of these requests.

Maintainer: TYPO3 (Andreas Wolf)

TYPO3 APIs

FlexForm Configuration Data Structure

This skill covers knowledge of how to create and configure a data structure for my plugin's configuration.

Maintainer: TYPO3 (Andreas Wolf)

Accessing FlexForm Data

Using data provided in FlexForms in plugin CEs and custom records.

Maintainer: TYPO3 (Andreas Wolf)

Implementing ViewHelpers

This skill provides the foundations for using custom PHP code in a Fluid-based view.

Maintainer: TYPO3 (Andreas Wolf)

Using the QueryBuilder

This skill covers knowledge for writing database queries in TYPO3.

Maintainer: TYPO3 (Andreas Wolf)

Using Query Restrictions

This skill covers how to automatically restrict the data returned by database queries.

Maintainer: TYPO3 (Andreas Wolf)

TYPO3 Debugging Utilities

This skill covers knowledge about debugging utilities provided by TYPO3.

Maintainer: TYPO3 (Andreas Wolf)

Logging API

This skill covers knowledge about the logging API provided by TYPO3.

Maintainer: TYPO3 (Andreas Wolf)

Creating Scheduler Tasks and Commands

This skill covers building Scheduler tasks and commands for automated recurring tasks.

Maintainer: TYPO3 (Andreas Wolf)

Creating CLI Commands

This skill covers the creation of console commands for TYPO3, based on the Symfony Console component.

Maintainer: TYPO3 (Andreas Wolf)

Mail API

This skill covers the TYPO3 Mail API, which internally uses Symfony's Mailer and Mime component for creating and sending emails.

Maintainer: TYPO3 (Andreas Wolf)

DataHandler

This skill handles knowledge about the DataHandler and how it can be used in custom developed extensions.

Maintainer: TYPO3 (Andreas Wolf)

Writing and using own Symfony Expressions

This skill covers extending the Symfony Expression syntax (used in e.g. TypoScript conditions) with custom code.

Maintainer: TYPO3 (Andreas Wolf)

JavaScript handling in the Backend

This skill covers the TYPO3-specific parts of ES6: how to load modules in TYPO3 and how developers can leverage the TYPO3 Core API to use their own JavaScript code in the TYPO3 Backend.

Maintainer: TYPO3 (Andreas Wolf)

AJAX handling in the TYPO3 Backend

This skill covers knowledge about how AJAX actions are handled in the TYPO3 Backend and how custom code can be made available for AJAX calls.

Maintainer: TYPO3 (Andreas Wolf)

PageTitle API and ViewHelper

This skill covers the PageTitle API, which can be used to modify the title of the generated page, e.g. in the single view of a plugin. It also covers how to set the page title directly from Fluid templates.

Maintainer: TYPO3 (Andreas Wolf)

Using the PageRenderer in Extensions

This skill covers the PageRenderer for extension usage, a TYPO3 Core component that is responsible for collecting information from various parts of the page and handling the final rendering of a page.

Maintainer: TYPO3 (Andreas Wolf)

MetaTag API

This skill covers the MetaTag API, which can be used to manipulate the meta tags in the head section of the generated HTML page.

Maintainer: TYPO3 (Andreas Wolf)

Implementing upgrade wizards

This skill covers the implementation of upgrade wizards, which can be used by integrators to update existing extension data and configuration after upgrading the extension.

Maintainer: TYPO3 (Andreas Wolf)

Environment class

This skill covers knowledge about TYPO3's Environment class, which provides system-specific details that are independent from the system environment.

Maintainer: TYPO3 (Andreas Wolf)

The System Registry API

This skill covers the system registry API, provided by the TYPO3 Core to store instance-specific data.

Maintainer: TYPO3 (Andreas Wolf)

Request processing with middlewares

This skill covers the knowledge of PSR-15 middlewares in TYPO3 - both for frontend and backend request processing.

Maintainer: TYPO3 (Andreas Wolf)

Extending site configurations

This skill covers custom extensions of the TYPO3 Core Site configuration module.

Maintainer: TYPO3 (Andreas Wolf)

The USER/USER_INT TypoScript objects

This skill covers the USER and USER_INT TypoScript objects, which are used to integrate custom code in the TYPO3 frontend rendering process.

Maintainer: TYPO3 (Andreas Wolf)

JavaScript Event API in the Backend

This skill covers the JavaScript API for Events in the TYPO3 Backend, relevant for programming custom backend modules and extending existing modules.

Maintainer: TYPO3 (Andreas Wolf)

Providing own events

This skill covers providing custom events within the TYPO3 PSR-14 implementation.

Maintainer: TYPO3 (Andreas Wolf)

Using existing PSR-14 events

This skill covers the implementation and usage of events in the TYPO3 Core.

Maintainer: TYPO3 (Andreas Wolf)

Backend Notifications

This skill focuses on how to utilize notifications for backend users.

Maintainer: TYPO3 (Andreas Wolf)

Pagination API

This skill covers the abstraction for paginations provided by the TYPO3 Core.

Maintainer: TYPO3 (Andreas Wolf)

Rich Text Editor API

This skill covers the knowledge of modifying CKeditor's configuration programmatically: modify existing or add complete new configurations.

Maintainer: TYPO3 (Andreas Wolf)

Building Custom Dashboard Widgets

This skill covers creating custom widgets for the TYPO3 Backend Dashboard and configuring

existing widget groups.

Maintainer: TYPO3 (Andreas Wolf)

Custom Route Enhancers

This skill covers the creation of custom Route Enhancers for the TYPO3 frontend routing.

Maintainer: TYPO3 (Andreas Wolf)

AssetCollector class and ViewHelpers

This skill covers the AssetCollector class and the corresponding ViewHelpers, which are used to register and render CSS and JS assets.

Maintainer: TYPO3 (Andreas Wolf)

TYPO3 Version API

This skill covers the TYPO3 Version information API.

Maintainer: TYPO3 (Andreas Wolf)

Extension: Lowlevel

This skill covers the lowlevel extension, which allows examining the current TYPO3 configuration.

Maintainer: TYPO3 (Andreas Wolf)

User-defined TCA type

This skill covers the TCA type "user".

Maintainer: TYPO3 (Andreas Wolf)

TCA Types for record relations

This skill covers TCA configuration options to define relations to other records.

Maintainer: TYPO3 (Andreas Wolf)

TCA types File and Folder

This skill covers the TCA types "file" and "folder", used for relations from records to files and folders.

Maintainer: TYPO3 (Andreas Wolf)

TCA type Slug

This skill covers the TCA type slug to create URL parts for records.

Maintainer: TYPO3 (Andreas Wolf)

TCA Types for Basic Input

This skill groups knowledge about TCA Types that define input possibilities.

Maintainer: TYPO3 (Andreas Wolf)

Special Input TCA Types

This skill covers specialized text input types in TCA.

Maintainer: TYPO3 (Andreas Wolf)

TYPO3 Message Bus

This skill covers the TYPO3 message bus solution based on the Symfony Messenger component.

Maintainer: TYPO3 (Andreas Wolf)

Building data processors

This skill covers the creation of data processors for TYPO3.

Maintainer: TYPO3 (Andreas Wolf)

Content Security Policy in Extensions

This skill covers the usage and configuration of a Content Security Policy (CSP) for TYPO3 Extensions.

Maintainer: TYPO3 (Andreas Wolf)

Extending the Admin Panel

This skill covers implementing custom functionality for the Admin Panel.

Maintainer: TYPO3 (Andreas Wolf)

Creating Backend modules

This skill covers the creation of custom backend modules for TYPO3.

Maintainer: TYPO3 (Andreas Wolf)

Using Caches and the CacheManager

This skill covers managing and optimizing the storage of frequently accessed data to improve performance. This includes creating custom caches, and using the CacheManager to clear or manage cache entries effectively.

Maintainer: TYPO3 (Andreas Wolf)

Customizing Error and Exception Handling

The Exception and Error Handlers in TYPO3 manage and respond to errors and exceptions within an installation. This skill handles configuring custom error pages, logging errors, and implementing strategies for handling various types of exceptions to ensure a smooth user experience and reliable system operation.

Maintainer: TYPO3 (Andreas Wolf)

Sites API

This skill covers the Sites PHP API, which allows accessing the configuration of a specific site and resolving sites from within PHP. It allows for accessing site-specific settings such as languages, error handling, and base URLs through a centralized interface.

Maintainer: TYPO3 (Andreas Wolf)

Session Handling

This skill covers Session Handling in TYPO3, both for backend and frontend. This includes knowledge about the session lifecycle and adding, reading, and removing session data.

Maintainer: TYPO3 (Andreas Wolf)

Authentication Implementation

This skill covers understanding of how security mechanisms for authentication are implemented in TYPO3.

Maintainer: TYPO3 (Andreas Wolf)

Backend Module Registration

This skill covers creating and configuring custom modules for the TYPO3 backend. This process includes defining module functionality, setting up module access permissions, and integrating the module into the TYPO3 backend interface.

Maintainer: TYPO3 (Andreas Wolf)

Software Development Concepts

Domain-Driven Design (DDD)

This skill covers the knowledge about the concept of DDD.

Maintainer: TYPO3 (Andreas Wolf)

Database Management Systems (DBMS)

This skill covers knowledge about DBMS.

Maintainer: TYPO3 (Andreas Wolf)

Model

This skill covers the model in the MVC context.

Maintainer: TYPO3 (Andreas Wolf)

View Pattern

This skill covers the view in MVC context.

Maintainer: TYPO3 (Andreas Wolf)

Controller

This skill covers controllers, the "C" in the MVC pattern.

Maintainer: TYPO3 (Andreas Wolf)

Prepared Statements

This skill covers the concept of Prepared Statements in relational databases.

Maintainer: TYPO3 (Andreas Wolf)

Dependency Injection

This skill covers knowledge about dependency injection in general.

Maintainer: TYPO3 (Andreas Wolf)

Builder design pattern

This skill covers the "Builder" Design Pattern.

Maintainer: TYPO3 (Andreas Wolf)

Software Design Patterns

This skill covers Software Design Patterns, established solutions for repeated problems in software development.

Maintainer: TYPO3 (Andreas Wolf)

Static code analysis

This skill covers tools and the process of providing static code analysis.

Maintainer: TYPO3 (Andreas Wolf)

View Models

This skill covers View Models, which are a pattern in software development. They serve as intermediaries between the controller and the view, encapsulating the data and logic required for rendering templates. This approach promotes a cleaner separation of concerns, making it easier to manage complex data structures and maintain reusable, organized code.

Maintainer: TYPO3 (Andreas Wolf)

SOLID Principles

This skill covers the definition of the SOLID Principles term, which refers to a set of design principles aimed at creating maintainable, scalable, and robust software. By adhering to these principles—Single Responsibility, Open/Closed, Liskov Substitution, Interface Segregation, and Dependency Inversion—developers can write cleaner, more modular code, making their software easier to manage and extend.

Maintainer: TYPO3 (Andreas Wolf)

Software Tests

This skill covers the principle of software tests, which involves systematically checking and validating the functionality, performance, and reliability of your code to ensure it behaves as expected. Implementing tests, such as unit tests or functional tests, helps catch bugs early, improve code quality, and maintain stable and reliable software.

Maintainer: TYPO3 (Andreas Wolf)

Single Table Inheritance

This skill covers the database design pattern Single Table Inheritance (STI). It stores multiple related entities in a single database table, identified by a field in the database.

Maintainer: TYPO3 (Andreas Wolf)

Routing

This skill covers the process of mapping URLs to specific controllers and actions within the system, enabling the creation of clean, user-friendly URLs.

Maintainer: TYPO3 (Andreas Wolf)

Recurring Code Tasks

This skill covers Recurring Code Tasks, which refer to automated processes or scripts that run at regular intervals to perform routine maintenance, updates, or other repetitive tasks.

Maintainer: TYPO3 (Andreas Wolf)

Migration between versions

This skill covers the approach of migration between versions. It involves upgrading from one major version to another, ensuring that all features, and configurations remain functional.

Maintainer: TYPO3 (Andreas Wolf)

PHP Extensions

This skill covers the knowledge of extending the functionality of PHP with PHP extensions by adding new functions, classes, or libraries.

Maintainer: TYPO3 (Andreas Wolf)

Asynchronous Task Execution (Message Queue)

This skill covers the method of asynchronous task execution. It runs tasks concurrently, rather than one after the other, allowing applications to perform multiple operations without waiting for each to finish before starting the next.

Maintainer: TYPO3 (Andreas Wolf)

Localization

This skill covers localization, which refers to the process of adapting content, interfaces, and functionality to different languages and regions. This ensures that software can cater to diverse audiences by providing accurate translations and regional settings, enhancing user experience and accessibility across various locales.

Maintainer: TYPO3 (Andreas Wolf)

Internationalization

This skill covers the process of internationalization. It prepares a website and its content to support multiple languages and regional formats. This involves designing for various languages, date formats, currencies, and cultural differences, ensuring that your website or software can effectively reach and engage a global audience.

Maintainer: TYPO3 (Andreas Wolf)

Meta Programming

This skill covers the technique of Meta Programming. It involves creating code that can manipulate or generate other code, providing powerful ways to automate tasks and create more adaptable systems.

Maintainer: TYPO3 (Andreas Wolf)

Inversion of Control

This skill covers the design principle of Inversion of Control (IoC). In this principle the flow of control for components is received by an external source. So the external code or framework is in control and calls the custom code.

Maintainer: TYPO3 (Andreas Wolf)

Registry Pattern

This skill covers the design pattern of Registry Pattern. -It is used to store and manage global objects or settings that need to be accessed throughout an application.

Maintainer: TYPO3 (Andreas Wolf)

Key/Value Storage

This skill covers the data storage paradigm of key-value storages. In this kind of storage each unique key is associated with a specific value. This method is particularly useful for handling configuration settings, caching, or other scenarios where fast and flexible data access is needed.

Maintainer: TYPO3 (Andreas Wolf)

Relationship Types (Cardinalities)

This skill covers different types of relationships, or cardinalities between database entities. They define associations such as one-to-one, one-to-many, or many-to-many.

Maintainer: TYPO3 (Andreas Wolf)

Repository Design Pattern

This skill covers the Repository Design Pattern. It provides a way to abstract and manage data access, separating the data layer from the business logic.

Maintainer: TYPO3 (Andreas Wolf)

Data Sanitization

This skill covers the concept of data sanitization. It involves cleaning and formatting input data to remove or neutralize any potentially harmful content before it is processed or stored. This practice is essential for preventing security vulnerabilities, such as injection attacks, and ensuring that the data used within the system is safe and reliable.

Maintainer: TYPO3 (Andreas Wolf)

Error / Exception Handling

This skill covers the handling of Errors and Exceptions. It involves managing and responding to runtime errors or unexpected conditions that occur during the execution of code.

Maintainer: TYPO3 (Andreas Wolf)

Debugging

This skill covers the process of debugging. It involves identifying and resolving errors or issues within the system, whether in custom code, extensions, or configuration.

Maintainer: TYPO3 (Andreas Wolf)

Caching

This skill covers the performance optimization technique called Caching. Caching stores generated data temporarily, allowing for faster retrieval and reducing server load. By implementing effective caching strategies, software can work more efficiently, enhancing the user experience and improving overall responsiveness.

Maintainer: TYPO3 (Andreas Wolf)

Data Validation

This skill covers knowledge about data validation. It ensures that the data coming from an input conforms to the expected formats and rules before it is processed or stored.

Maintainer: TYPO3 (Andreas Wolf)

Package/Dependency Management

This skill covers the process of managing packages and dependencies in projects. It involves managing external libraries and extensions that your project depends on, ensuring that they are correctly installed, updated, and compatible with your system.

Maintainer: TYPO3 (Andreas Wolf)

Convention over Configuration

This skill covers the development paradigm of Convention over Configuration. It reduces the need for explicit configuration by relying on sensible defaults and established conventions.

Maintainer: TYPO3 (Andreas Wolf)

Semantic Versioning

This skill covers the standardized versioning system called Semantic Versioning. It assigns version numbers in a “major.minor.patch” format, clearly indicating the nature of changes in each release.

Maintainer: TYPO3 (Andreas Wolf)

Code Autoloading

This skill covers the mechanism of code autoloading, which automatically loads additional classes and files at runtime when they are needed.

Maintainer: TYPO3 (Andreas Wolf)

Loose Coupling

This skill covers the design principle of Loose Coupling, in which different components of the system are minimally dependent on each other.

Maintainer: TYPO3 (Andreas Wolf)

Event Handling

This skill covers implementation and handling of Events, which promotes loose coupling and scalability.

Maintainer: TYPO3 (Andreas Wolf)

Extbase

Extbase Request/Response

This skill covers knowledge about how requests are handled by Extbase.

Maintainer: TYPO3 (Andreas Wolf)

Extbase View

This skill explains the view part of MVC in Extbase.

Maintainer: TYPO3 (Andreas Wolf)

Extbase Fluid View

This skill covers knowledge about the Fluid-based HTML view of Extbase.

Maintainer: TYPO3 (Andreas Wolf)

Extbase Persistence

This skill covers knowledge how Extbase interacts with the permanent storage.

Maintainer: TYPO3 (Andreas Wolf)

Extbase PersistenceManager

This skill covers knowledge about the built-in PersistenceManager.

Maintainer: TYPO3 (Andreas Wolf)

Standard Extbase Repository

This skill covers the default Repository class shipped with Extbase.

Maintainer: TYPO3 (Andreas Wolf)

Customizing Extbase Repositories

This skill covers implementing custom persistence functionality in Extbase.

Maintainer: TYPO3 (Andreas Wolf)

Validation in Extbase

This skill covers concepts to validate Extbase controller action input parameters.

Maintainer: TYPO3 (Andreas Wolf)

Implementing Custom Validators

This skill covers knowledge of how to provide custom data validation in Extbase.

Maintainer: TYPO3 (Andreas Wolf)

Error Actions

This skill covers the handling of validation errors.

Maintainer: TYPO3 (Andreas Wolf)

Extbase Annotations/Attributes

This skill is about PHPDoc annotations and PHP attributes particular to Extbase.

Maintainer: TYPO3 (Andreas Wolf)

Registering Frontend Plugins

This skill covers the registration of frontend plugins to make them available for integrators.

Maintainer: TYPO3 (Andreas Wolf)

TypoScript Object EXTBASEPLUGIN

This skill covers the integration of Extbase plugins into rendering via TypoScript.

Maintainer: TYPO3 (Andreas Wolf)

Single Table Inheritance in Extbase

This skill covers the usage of the Single Table Inheritance (STI) pattern in Extbase.

Maintainer: TYPO3 (Andreas Wolf)

Error/Exception Handling in Extbase

This skill covers the handling of Errors and Exceptions in Extbase. It involves managing and responding to errors and exceptions that occur within TYPO3 extensions. This includes configuring custom error pages, logging exceptions, and implementing strategies to handle exceptions gracefully within Extbase controllers and services.

Maintainer: TYPO3 (Andreas Wolf)

Extbase MVC Implementation

This skill covers knowledge about the MVC pattern used in Extbase.

Maintainer: TYPO3 (Andreas Wolf)

Third Party APIs

Doctrine DBAL

This skill covers basic knowledge about the Doctrine Database Abstraction Layer (DBAL) component for transparently accessing several DBMS in PHP.

Maintainer: TYPO3 (Andreas Wolf)

Notification Actions

This skill covers knowledge about notifications as flash messages in the backend and the actions which can be assigned to interact with the editor.

Maintainer: TYPO3 (Andreas Wolf)

Symfony Routing

This skill covers Symfony Routing. It is a component used in TYPO3 to map HTTP requests to specific controllers and actions. It allows for defining routes using various methods, including annotations and YAML, and supports complex routing requirements such as parameter constraints and localization.

Maintainer: TYPO3 (Andreas Wolf)

Symfony Finder

This skill covers the Symfony Finder component, which provides a fluent interface for locating files and directories based on various criteria, such as name, size, and modification date. It simplifies file system operations in Symfony applications, making it easier to handle file searches and manipulations.

Maintainer: TYPO3 (Andreas Wolf)

Symfony Console

This skill covers the Symfony Console component, which is used in TYPO3 to implement Command Line Interface (CLI) commands to control various aspects of the system from the command line. Custom commands can also be implemented and registered in every TYPO3 extension.

Maintainer: TYPO3 (Andreas Wolf)

Symfony Mailer

This skill covers the Symfony Mailer component, which is used for sending emails from applications. It supports various transport methods, including SMTP, Sendmail, and third-party services, and provides features such as email templating, attachments, and logging.

Maintainer: TYPO3 (Andreas Wolf)

Symfony Dependency Injection

This skill covers Symfony Dependency, a core design pattern which is used in Symfony applications to manage the creation and injection of service dependencies. This component promotes the decoupling of application components, making the code more modular, testable, and maintainable.

Maintainer: TYPO3 (Andreas Wolf)

Symfony Expression Language

This skill covers the Symfony Expression Language component, which allows defining expressions for use e.g. in conditional rendering of content.

Maintainer: TYPO3 (Andreas Wolf)

About Symfony

Symfony is a set of PHP Packages, a Web Application framework, a Philosophy, and a Community.

Maintainer: TYPO3 (Andreas Wolf)

Security Concepts

Handling User Input

This skill covers knowledge about how to retrieve and process user input.

Maintainer: TYPO3 (Andreas Wolf)

Web Vulnerability Types

This skill covers knowledge about possible security issues in web development.

Maintainer: TYPO3 (Andreas Wolf)

Authentication & Authorization

This skill covers two key security processes: Authentication and Authorization. Authentication verifies a user's identity, while authorization determines the permissions and access levels that the authenticated user has within an environment.

Maintainer: TYPO3 (Andreas Wolf)

Development Tooling

Debugging in PHP

This skill covers basic knowledge about error tracing methods in PHP.

Maintainer: TYPO3 (Andreas Wolf)

System and TYPO3 Error Logs

This skill covers the ability to locate and use logs provided by system components and TYPO3.

Maintainer: TYPO3 (Andreas Wolf)

Extension scanner

This skill covers the Extension Scanner, which extension authors and project maintainers can use to detect possible problems in their extensions while upgrading them to a newer TYPO3 version.

Maintainer: TYPO3 (Andreas Wolf)

Admin Panel usage as a developer

This skill handles the usage of the TYPO3 Admin Panel as an Extension Developer.

Maintainer: TYPO3 (Andreas Wolf)

PHP Code Style Tools

This skill covers tools for automatic code formatting in PHP.

Maintainer: TYPO3 (Andreas Wolf)

phpDocumentor

This skill covers the PHP Package used for generating and rendering documentation.

Maintainer: TYPO3 (Andreas Wolf)

Code migration

This skill covers concepts related to automated code migrations. They help with updating existing program code for usage with newer TYPO3 versions and with applying best practices.

Maintainer: TYPO3 (Andreas Wolf)