

## DEVELOPMENT ON CREATIO PLATFORM GUIDED LEARNING

**Who should take this course:** This guided learning is intended for beginner Creatio platform developers who require practical platform development skills and methods for configuring design solutions.

**What to expect:** This guided learning will help participants gain the necessary skills to start developing a configuration. We will take a look at fine-tuning the development environment, integration with the version control system and developing in the file system. The participants will learn how to set up configurations on the Creatio platform, create new objects, lookups, pages, sections, details, as well as program client side and server logic. Additionally, business processes development, standard customizations, implementation of web services, integrations and system maintenance will be covered.

**⚠️ PREWORK: The participant must install local Creatio instance and successfully complete the required e-learning course before starting their guided learning:**

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Time	Topic
DAY 1. FIRST STEPS	
45 minutes	Introduction. Configuring development environment. Basics of Creatio development process. Setting up File System Development mode. Outline of system capabilities in this mode.
60 minutes	Creating a package for development. Setting up package dependencies. Creating sample package items. Committing a package to file system. Version control system options: Git and SVN. Setting up Git integration.
15 minutes	Q&A
Time	Topic
DAY 2. WORKING WITH OBJECTS. BINDING DATA	
70 minutes	First development steps. Working with objects. Setting up columns. Creating and registering lookup objects. Binding data to package. Inserts and updates of records using package data items. Frequent data binding mistakes.
20 minutes	Different object types: base objects, virtual objects, database views. Using DB views when working with objects. Example of connecting DB view in Lookups section.
20 minutes	New section creation using Section Wizard. Examining section settings in a package. Fine tuning of section items in Configuration section.
15 minutes	Q&A
Time	Topic
DAY 3. UI CUSTOMIZATION BASICS	
60 minutes	Working with client modules and JavaScript code in Creatio. Analysis of client side code created by Section Wizard. Adding custom UI items (buttons, actions). Working with different page modes (insert mode, edit mode).
45 minutes	Business rules overview. Using formulas in business rules. Using ViewModel attributes in business rules conditions. Checking of system operations in client side code and combining it with business rules.
15 minutes	Q&A

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<b>DAY 4. UI PROGRAMMING</b>	
<b>35 minutes</b>	Creating details. Setting up detail objects. New detail creation example. Saving column setup as data item into a package. Using Creatio Marketplace add-ons. Using DataBindingTool.
<b>45 minutes</b>	Working with methods in client schemas. Implementing calculated fields. Overriding of parent methods. Using of virtual columns. Using access to additional columns of lookup objects.
<b>10 minutes</b>	Client side debugging. Console output. Using browser developer tools. Logging of client errors at server side. Using alternative JavaScript code editors.
<b>20 minutes</b>	Setting up field validation. Using of localizable strings. Creating universal validators.
<b>10 minutes</b>	Q&A

Time	Topic
<b>DAY 5. ADVANCED UI PROGRAMMING</b>	
<b>15 minutes</b>	Working with lookup fields in JavaScript. Reading and setting values. Setting up additional columns for lookup fields.
<b>30 minutes</b>	Filtering of lookup contents. Programming of complex lookup filters.
<b>60 minutes</b>	WebSocket messages. Sending messages from server to the client side. Working with messaging mechanism. Data exchange between client modules.
<b>15 minutes</b>	Q&A

Time	Topic
<b>DAY 6. SERVER SIDE PROGRAMMING</b>	
<b>70 minutes</b>	Object model. Selecting data with the EntitySchemaQuery class. Programming in C# using business process Script Task item and process methods. Using parameters in Script Task. Using Entity class for CRUD operations. Alternative data access tools: Select and CustomQuery classes.
<b>10 minutes</b>	Integration with Visual Studio. Debugging server code.
<b>30 minutes</b>	Processing object events in the event sub-process and event layer. Handling object events using business process signals.
<b>10 minutes</b>	Q&A

Time	Topic
<b>DAY 7. DEVELOPMENT OF WEB SERVICES</b>	
<b>45 minutes</b>	Web services development. Creating a web service class. Code debugging.
<b>30 minutes</b>	Calling service methods from Creatio client side. Working with ServiceHelper class.
<b>30 minutes</b>	Service call authentication from third-party applications. Working with Postman. Working with user session data. Anonymous services.
<b>15 minutes</b>	Q&A

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Time	Topic
<b>DAY 8. INTERGATIONS, REPORTS, MAINTENANCE AND DELIVERY</b>	
<b>30 minutes</b>	Data exchange tools overview: OData and DataService. Using OData for integration with third party systems. OData and DataService call examples.
<b>25 minutes</b>	Calls of third party services using "Call web service" process item.
<b>20 minutes</b>	Using CLIO tool for package transfer and system maintenance. Overview of CLIO commands.
<b>30 minutes</b>	Creating reports using FastReport feature.
<b>15 minutes</b>	Q&A

Time	Topic
<b>DAY 9. PREPARATION FOR DEVELOPMENT CERTIFICATION EXAM</b>	
<b>70 minutes</b>	Working with client ESQ examples. Async data operations. Using batch queries (BatchQuery). Async validation example (asyncValidate).
<b>30 minutes</b>	Example of WebSocket message call from server side to the client side. Example: client side detail refresh after finishing of server side operations.
<b>20 minutes</b>	Organizing of simplified developer certification. Q&A.