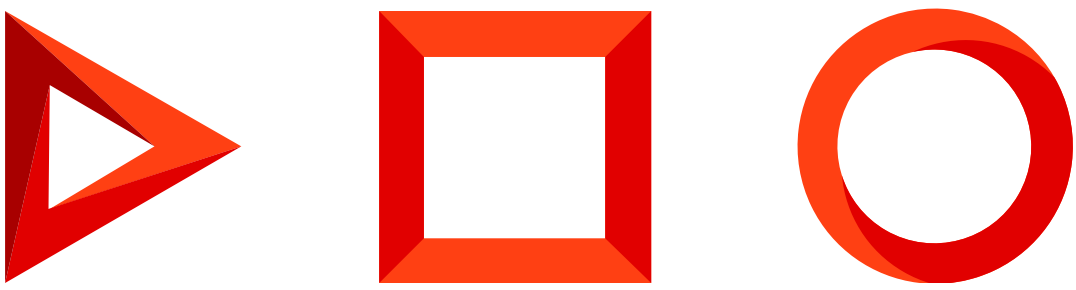
Creatio Academy

Develop your first application

Step 4. Implement the population of the timetable

Version 7.17



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Step 4. Implement the population of the timetable

Beginner

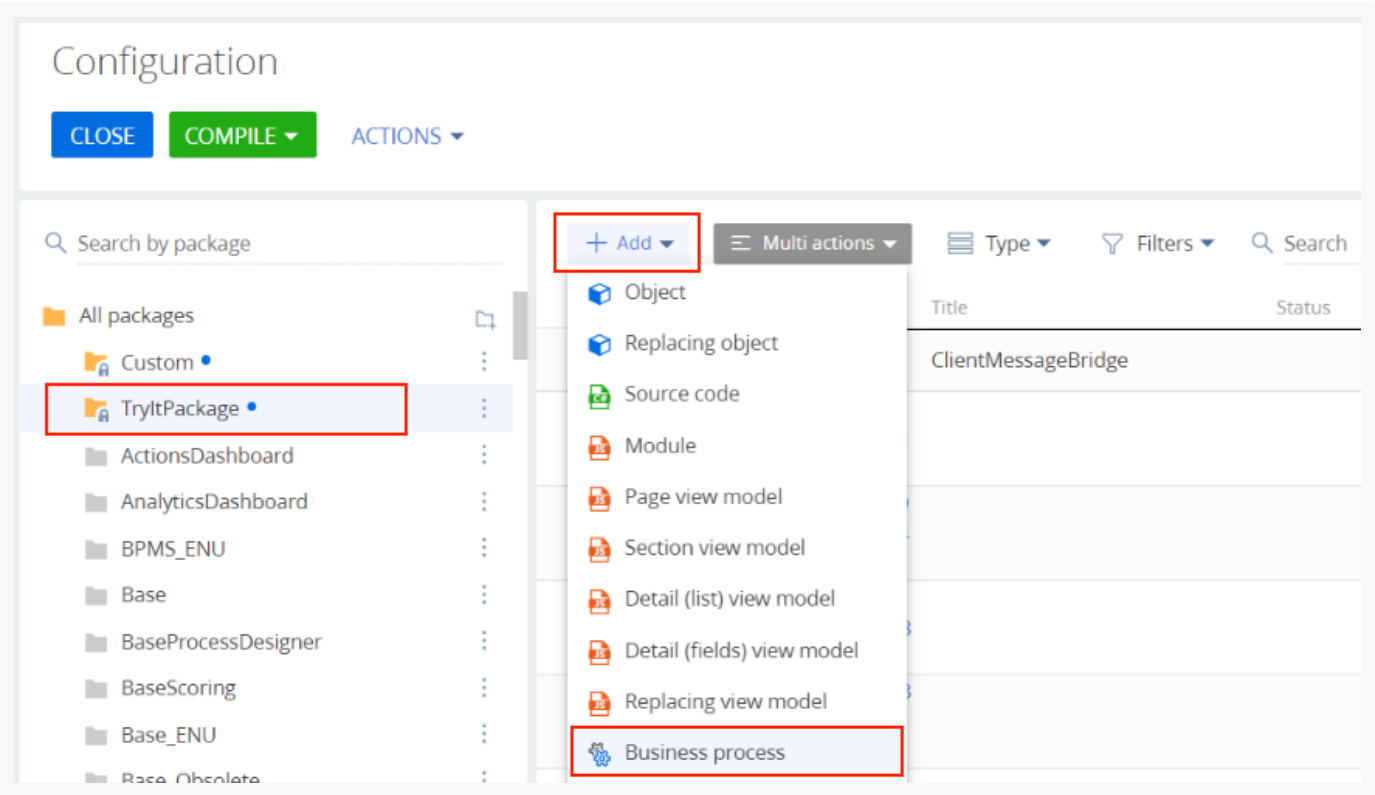
On the previous step, we added a check for the current daily class number matching the group gym number to the page.

Now, implement the population of the group class timetable. Add a page action that inserts 4 new records into the timetable.

To do this, create a business process that populates the database table with relevant data and returns a message to the page schema that the records were added successfully.

Create a business process

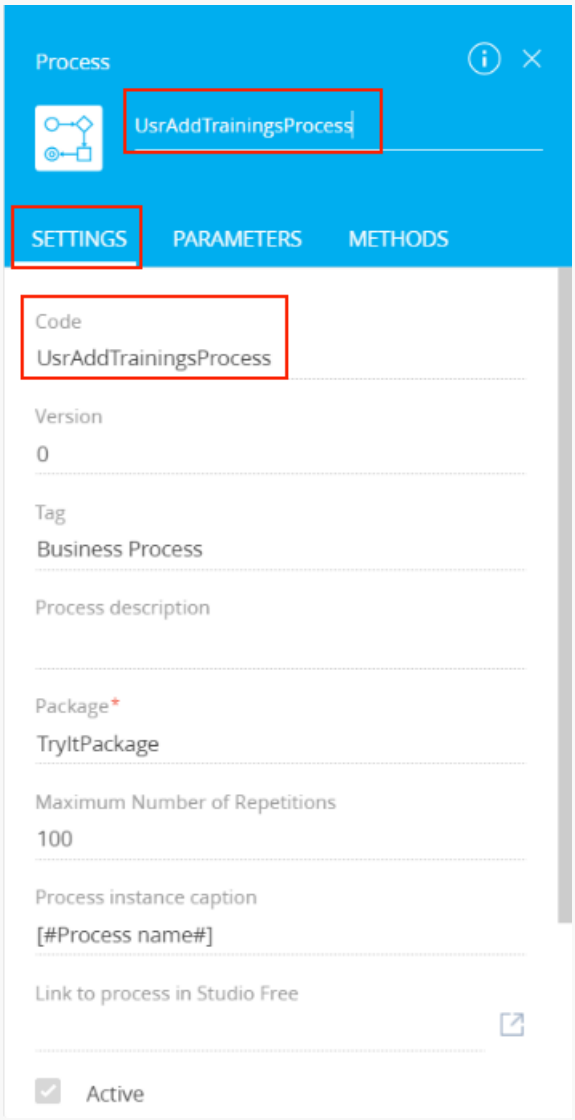
1. Go to the [*Configuration*] section.
2. Select the "TryItPackage" package from the package list.
3. Click [*Add*] on the workspace toolbar and select the [*Business process*] configuration element type.



4. **Fill out the property fields** as follows:

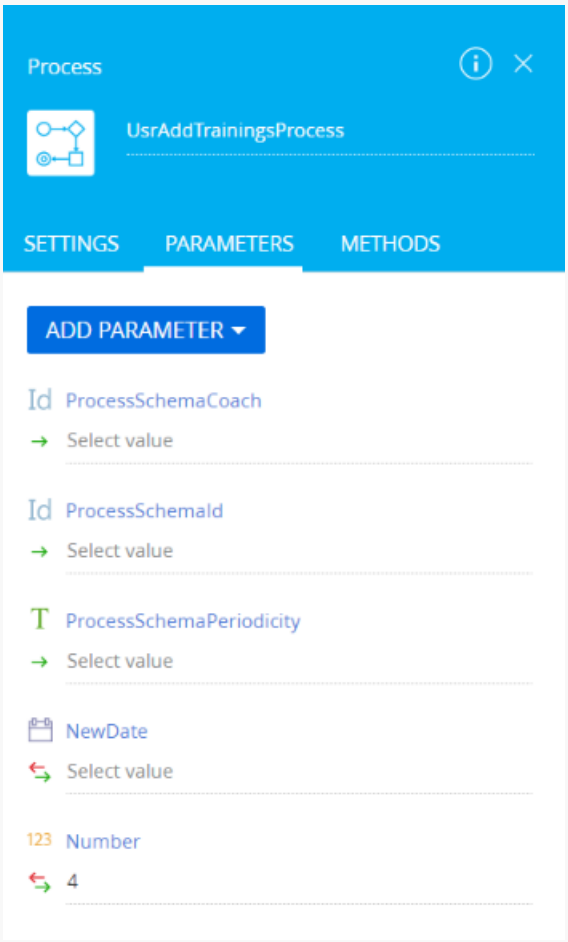
   - Set [*Name*] to "`UsrAddTrainingsProcess`."

- Set [*Code*] to "`UsrAddTrainingsProcess`."



5. Add the incoming parameters and parameters the process requires to the [*Parameters*] tab:

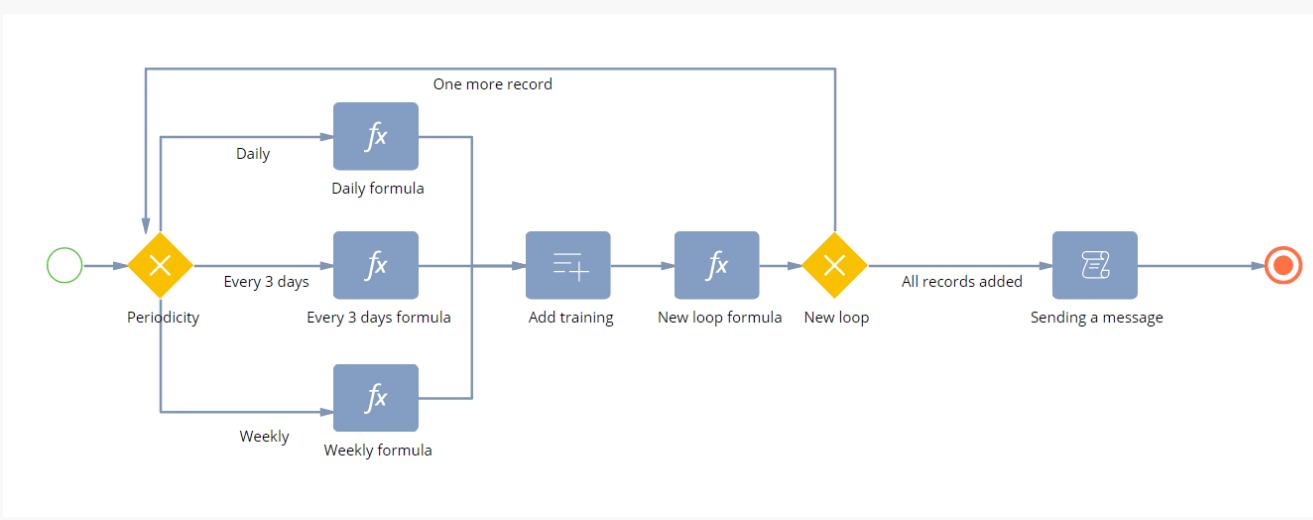
[***Title***]	[***Code***]	[***Data type***]	[***Direction***]	[***Value***]
`ProcessSchema Periodicity`	`ProcessSchema Periodicity`	Text (500 characters)	Input	
`NewDate`	`NewDate`	Date/Time	Bidirectional	
`Number`	`Number`	Integer	Bidirectional	4
`ProcessSchemaId`	`ProcessSchemaId`	Unique identifier	Input	
`ProcessSchemaCoach`	`ProcessSchemaCoach`	Unique identifier	Input	



6. Add the following elements to the process working area:

   - [*Exclusive gateway (OR)*]
   - [*Formula*]
   - [*Add data*]
   - [*Script task*]

   Connect the elements as specified in the figure below.



The process must run as follows:

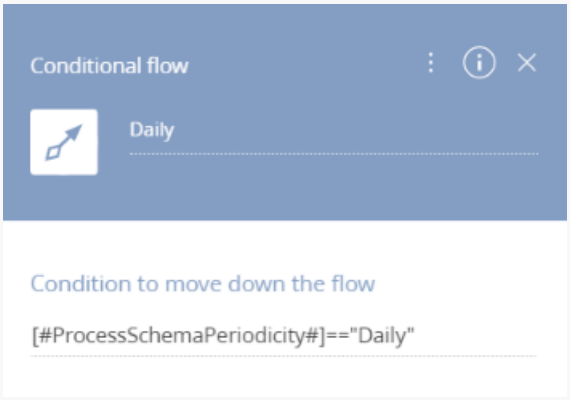
- The "Periodicity" [*Exclusive gateway (OR)*] gateway checks the periodicity of the class to add to the timetable and branches the process on the next step depending on the periodicity.
- The [*Formula*] elements calculate the class date depending on the periodicity. The process writes the date to the `NewDate` process parameter.
- The [*Add data*] element writes the new group class data to the database table.
- The "New loop formula" [*Formula*] element calculates the number of remaining empty records. For this example, the process must populate and write 4 new records. The results must be written to the `Number` process parameter.
- The "New loop" [*Exclusive gateway (OR)*] gateway checks the value of the `Number` process parameter. If it is more than 0, the process repeats the previous steps. If it equals 0, the process moves to the next step.
- The [*Script task*] element publishes the message that the new group class records were added.

7. Set up the business process elements.

   Periodicity [*Exclusive gateway (OR)*].

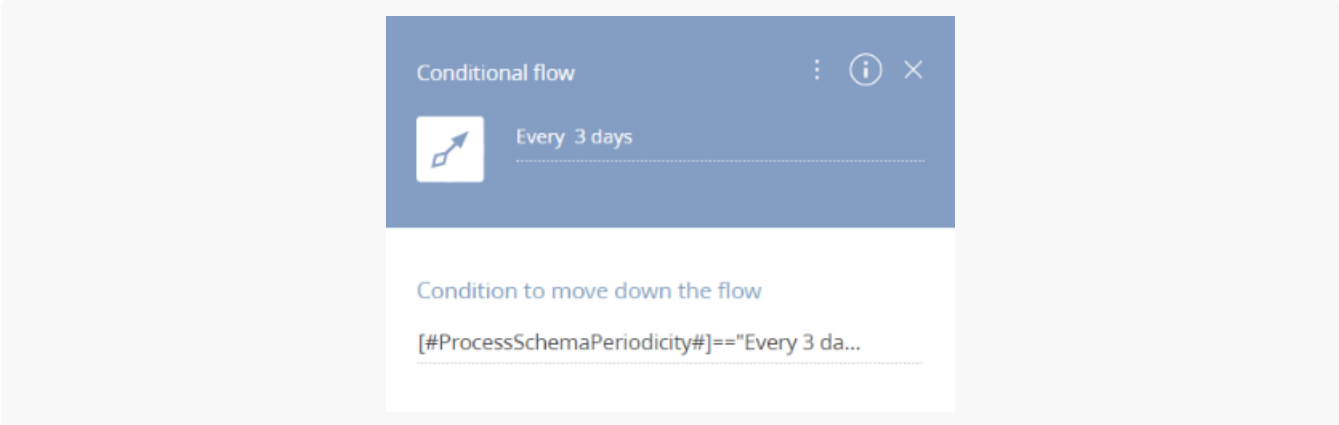
   a. Daily [*Conditional flow*]:

   - Set [*Condition to move down the flow*] to `[#ProcessSchemaPeriodicity#]=="Daily"`.



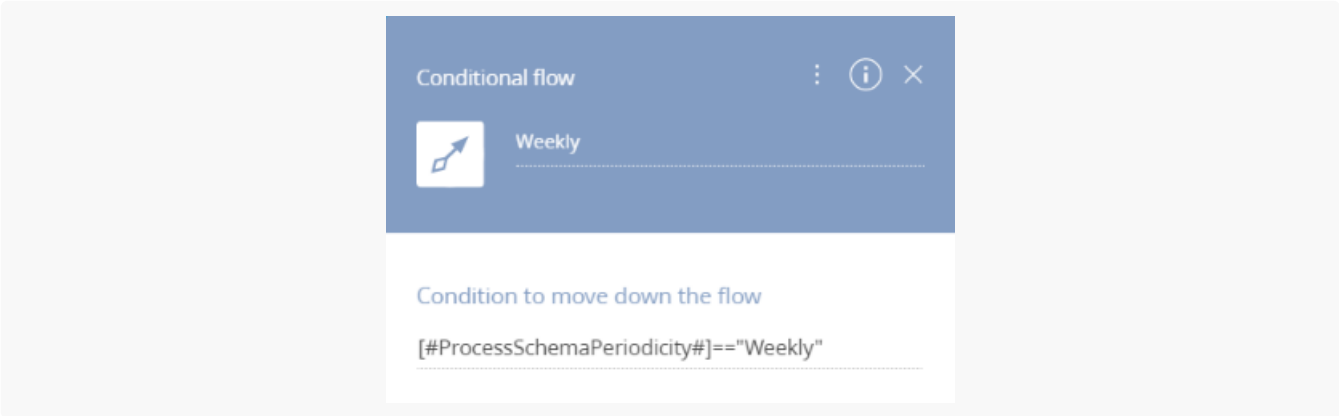
   c. Every 3 days [*Conditional flow*]:

   - Set [*Condition to move down the flow*] to `[#ProcessSchemaPeriodicity#]=="Every 3 days"`.



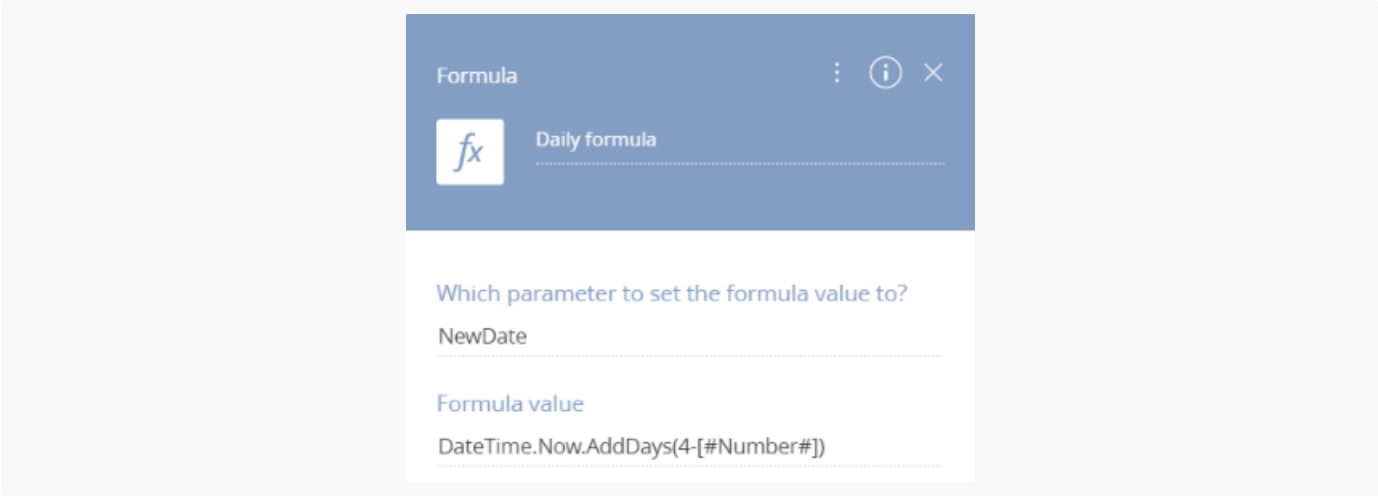
e. Weekly [*Conditional flow*]:

- Set [*Condition to move down the flow*] to `[#ProcessSchemaPeriodicity#]=="Weekly"`.



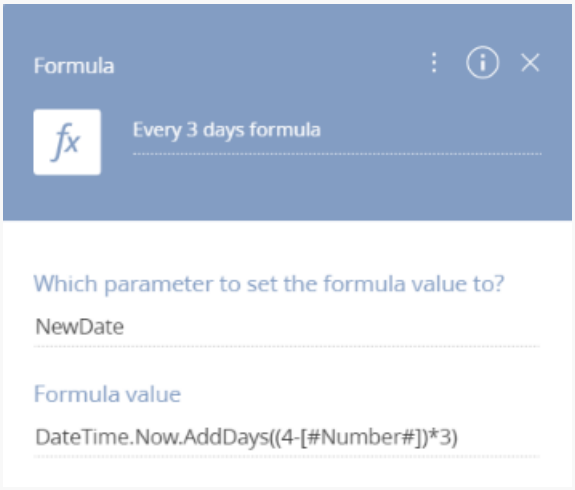
Daily formula [*Formula*]:

- Set [*Which parameter to set the formula value to?*] to "NewDate".
- Set [*Formula value*] to `DateTime.Now.AddDays(4-[#Number#])`.



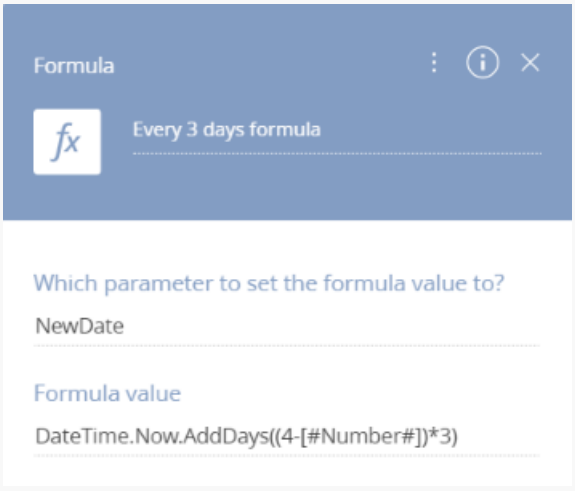
Every 3 days formula [*Formula*]:

- Set [*Which parameter to set the formula value to?*] to "`NewDate`".
- Set [*Formula value*] to `DateTime.Now.AddDays((4-[#Number#])*3)`.



Weekly formula [*Formula*]:

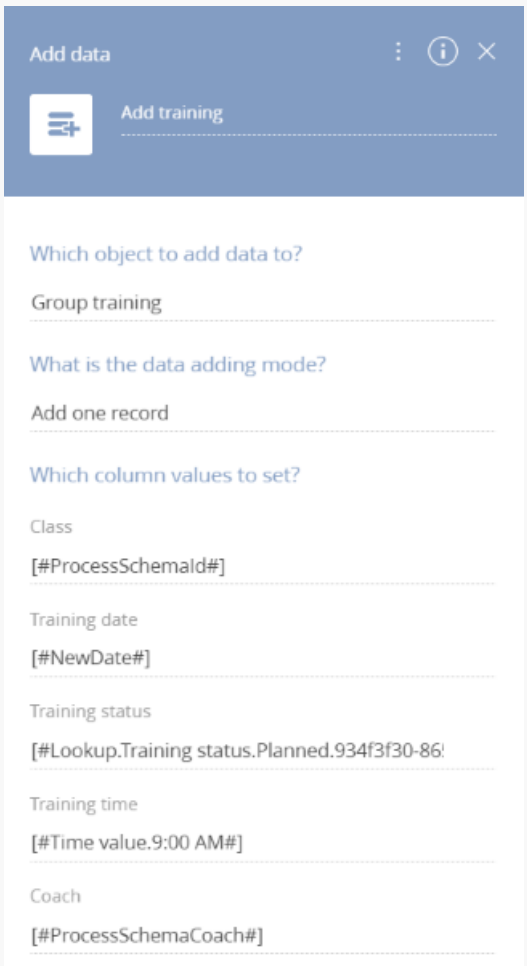
- Set [*Which parameter to set the formula value to?*] to "`NewDate`".
- Set [*Formula value*] to `DateTime.Now.AddDays((4-[#Number#])*7)`.



Add training [*Add data*]:

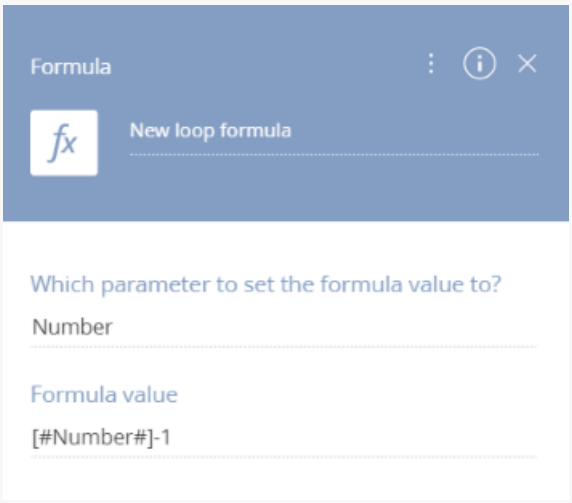
- Set [*Which object to add data to?*] to "`Group training`".
- Set [*What is the data adding mode?*] to "Add one record".
- Set [*Which column values to set?*] as follows:

Object column	Type of data to add	Value
`[Class]`	Process parameter	`ProcessSchemaId`
`[Training date]`	Process parameter	`NewDate`
`[Training status]`	Lookup value	`Planned`
`[Training time]`	Time selection	`09:00 AM`
`[Coach]`	Process parameter	`ProcessSchemaCoach`



New loop formula [*Formula*]:

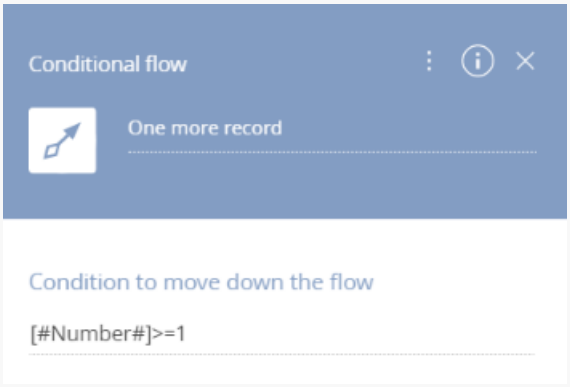
- Set [*Which parameter to set the formula value to?*] to "`Number`".
- Set [*Formula value*] to `[#Number#]-1`.



New loop [*Exclusive gateway (OR)*].

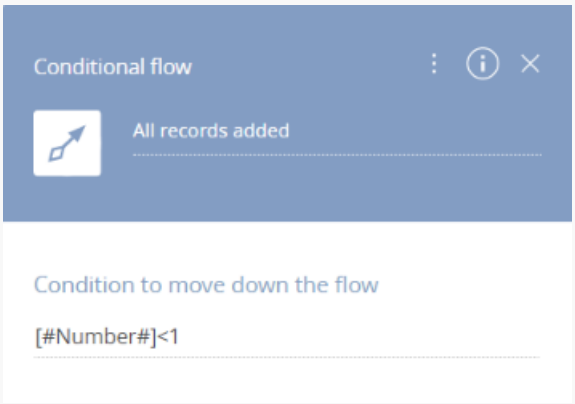
a. One more record [*Conditional flow*]:

- Set [*Condition to move down the flow*] to `[#Number#]>=1`.



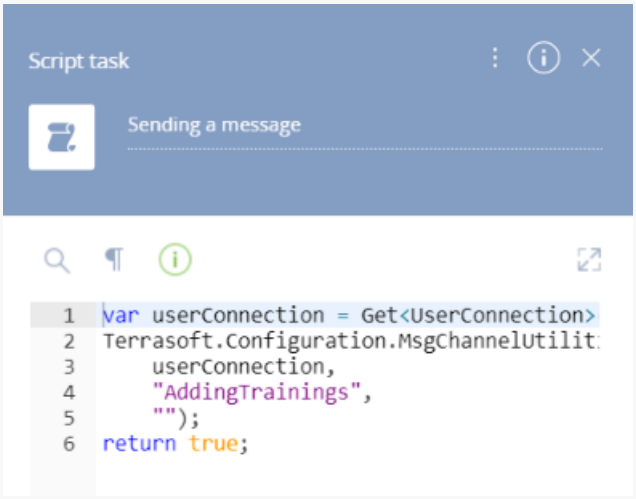
c. All records added [*Conditional flow*]:

- Set [*Condition to move down the flow*] to `[#Number#]<1`.



Sending a message [*Script task*]:

```
var userConnection = Get<UserConnection>("UserConnection");
Terrasoft.Configuration.MsgChannelUtilities.PostMessage(
    userConnection,
    "AddingTrainings",
    "");
return true;
```

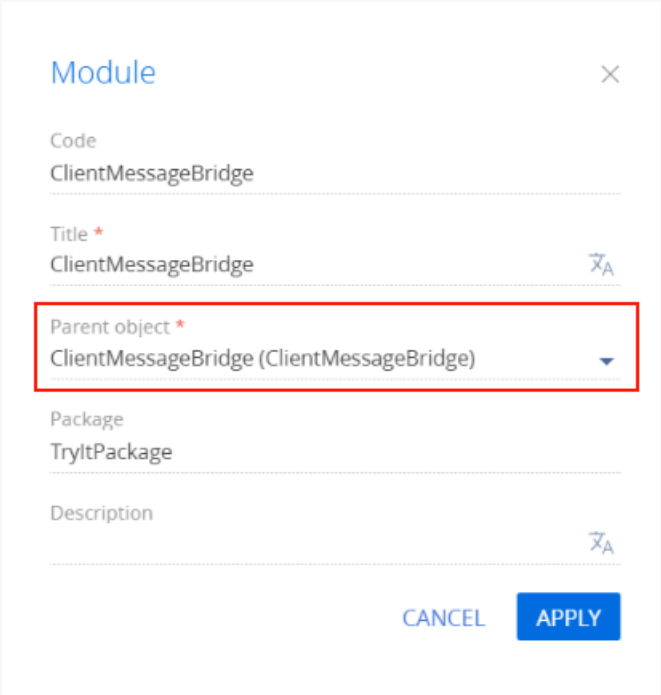


8. Save the process.

Create a replacing view model

Create a view model that replaces the `ClientMessageBridge` base schema to implement message passing between the process and the page module. The base schema implements the broadcasting of WebSocket messages to Creatio subscribers.

1. Go to the [*Configuration*] section.
2. Select the "TryItPackage" package from the package list.
3. Click [*Add*] on the workspace toolbar and select the [*Replacing view model*] configuration type.
4. Set the [*Parent object*] field to "`ClientMessageBridge`" ("`ClientMessageBridge`"). Creatio will populate the other fields.



5. Add the source code in the Schema Designer.

ClientMessageBridge.js

```
define("ClientMessageBridge", ["ConfigurationConstants"],
    function(ConfigurationConstants) {
        return {
            /* The messages. */
            messages: {
                /* The message name. */
                "AddingTrainings": {
                    /* Set the message type to broadcast, do not specify the subscriber. */
                    "mode": Terrasoft.MessageMode.BROADCAST,
                    /* Set the message direction to publishing. */
                    "direction": Terrasoft.MessageDirectionType.PUBLISH
                }
            },
            methods: {
                /* Initialize the schema. */
                init: function() {
                    /* Call the parent method. */
                    this.callParent(arguments);
                    /* Add a new configuration object to the configuration object collection.
                    this.addMessageConfig({
                        /* The name of the message received via WebSocket. */
                        sender: "AddingTrainings",
                        /* Send the message with this name. */
                        messageName: "AddingTrainings"
                    });
```

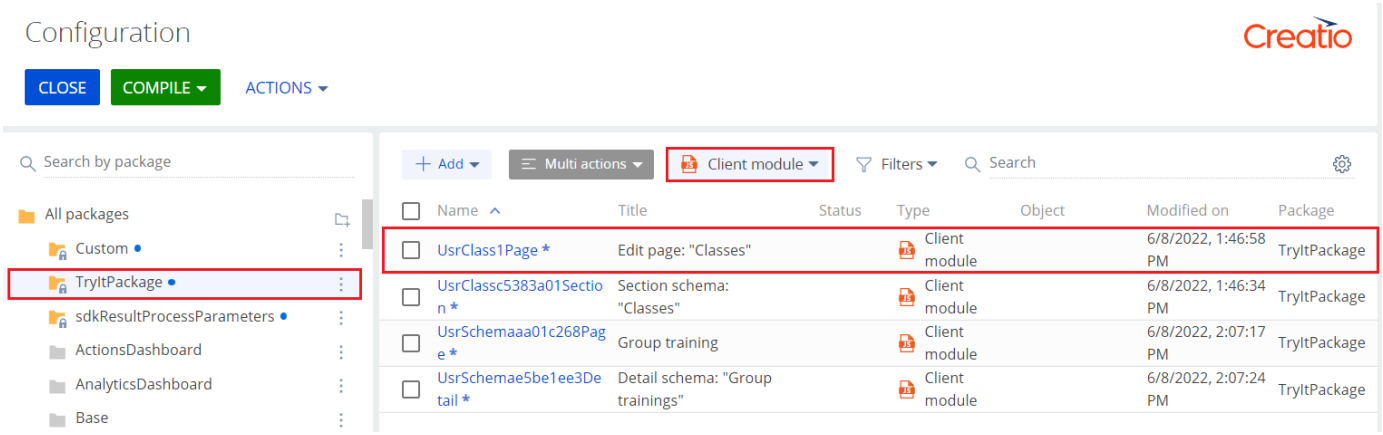
```
                }
            }
        };
    });
```

6. Click the [*Save*] button to save the schema.

Modify the page source code

Add the class page action that adds new group classes to the "Group trainings" detail.

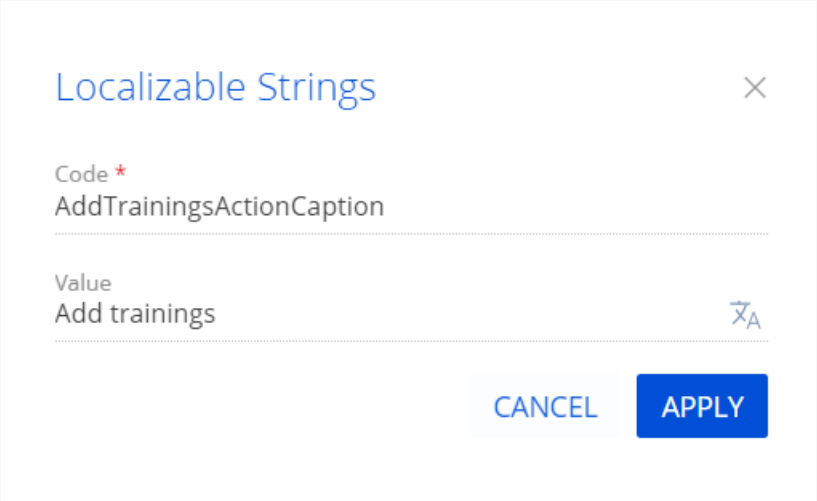
1. Go to the [*Configuration*] section.
2. Select the "TryItPackage" package from the package list.
3. The Wizards added schemas of various types to the package. Filter schemas by the [*Client module*] type.



4. Double-click the `UsrClass1Page` schema to open it.
5. Add a new localizable string for the action name to the schema.

   Click the + button in the [*Localizable strings*] block of the properties panel and fill out the **localizable string properties**:

   - Set [*Code*] to "`AddTrainingsActionCaption`".
   - Set [*Value*] to "`Add trainings`".



6. Modify schema source code:

UsrClass1Page.js

```
define("UsrClass1Page", ["ProcessModuleUtilities"], function(ProcessModuleUtilities) {
 return {
  entitySchemaName: "UsrClass",
  messages: {
   /* The message that calls the detail update. */
   "AddingTrainings": {
    "mode": Terrasoft.MessageMode.BROADCAST,
    "direction": Terrasoft.MessageDirectionType.SUBSCRIBE
   }
  },
  details: /**SCHEMA_DETAILS*/{
   // ...
  }/**SCHEMA_DETAILS*/,
  /* Add new methods to the existing methods. */
  methods: {

   // ...

   init: function() {
    this.callParent(arguments);
    /* Subscribe to the message that calls the detail update. */
    this.sandbox.subscribe("AddingTrainings", this.updateTrainings, this);
   },
   /* Add the action to the action menu. */
   getActions: function() {
    var actionMenuItems = this.callParent(arguments);
    actionMenuItems.addItem(this.getButtonMenuItem({
     "Caption": {bindTo: "Resources.Strings.AddTrainingsActionCaption"},
     /* Define the handler method for the action. */
     "Click": {bindTo: "getBusinessProcessAddTrainings"},
```

```
      "Enabled": true
     }));
     return actionMenuItems;
    },
    /* Call the update of the record page detail. */
    updateTrainings: function() {
     this.updateDetail({
      /* The detail code from details section.*/
      "detail": "UsrSchema12c4c6adDetail5a26acfb",
      "reloadAll": true
     });
    },
    /* The handler method for the new menu action. */
    getBusinessProcessAddTrainings: function() {
     /* Retrieve the incoming parameters the process requires. */
     var id = this.get("Id");
     var periodicity = this.get("UsrPeriodicity").displayValue;
     var coach = this.get("UsrCoach").value;
     if (!periodicity) {
      return;
     }
     /* Create a configuration object for running the process. */
     var args = {
      /* The name of the process you created on the previous steps. */
      sysProcessName: "UsrAddTrainingsProcess",
      /* The incoming process parameters. */
      parameters: {
       ProcessSchemaId: id,
       ProcessSchemaPeriodicity: periodicity,
       ProcessSchemaCoach: coach
      }
     };
     /* Run the process. */
     ProcessModuleUtilities.executeProcess(args);
    },
   },
   /* No changes. */
   diff: /**SCHEMA_DIFF*/[

   // ...

   ]/**SCHEMA_DIFF*/
  };
});
```

7. Click [*Save*] to save the schema.

As a result, we implemented the population of the group class timetable. On the next step, implement the web service that provides the information about the number of classes in the timetable.