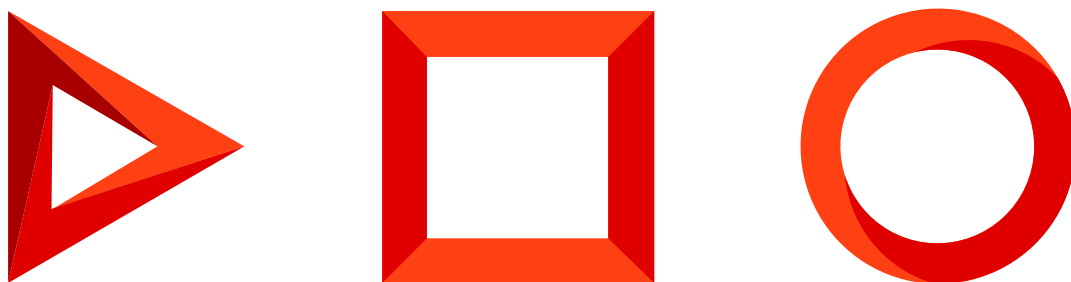


Develop your first application

Step 4. Implement the population of the timetable

Version 7.18



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Step 4. Implement the population of the timetable

 Beginner

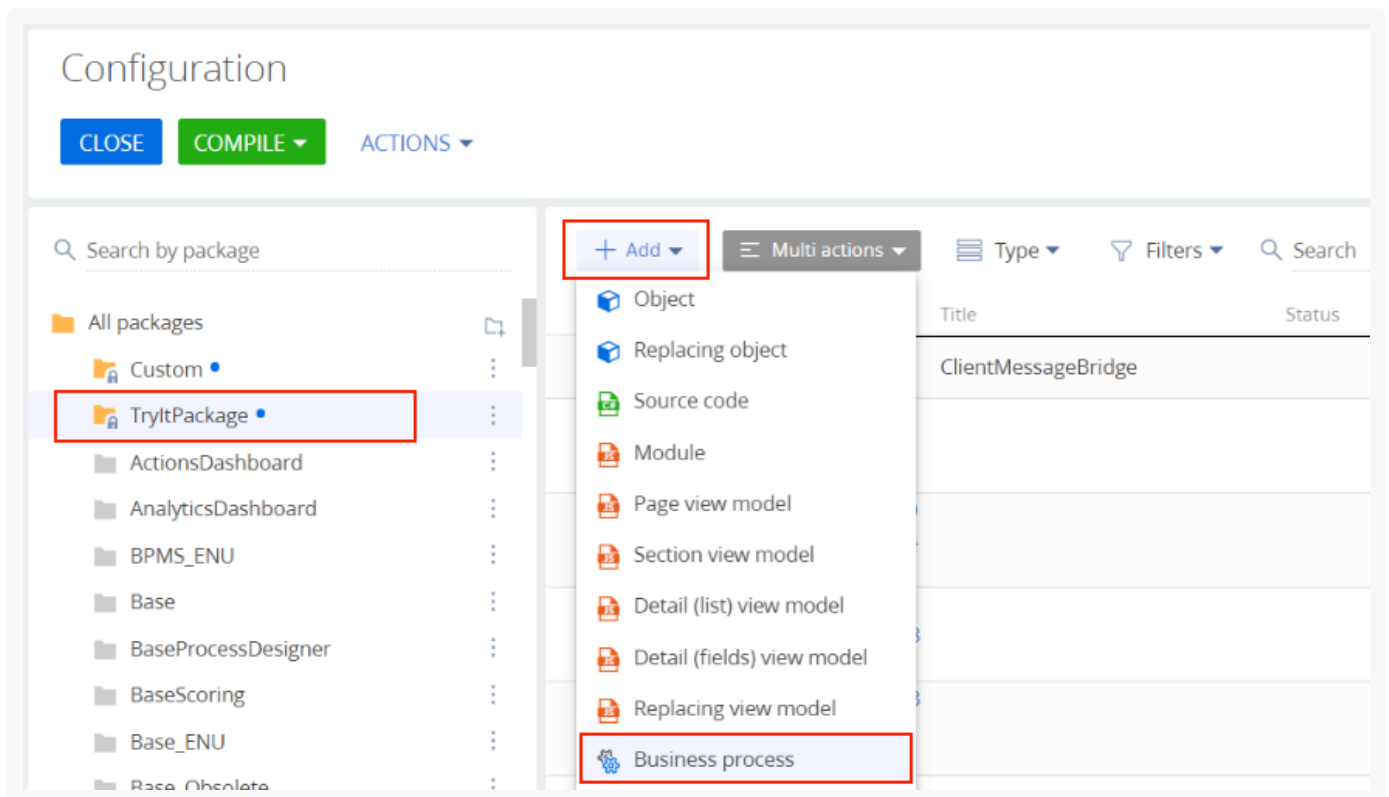
On the [previous step](#), we added a check for the current daily class number matching the group gym number to the page.

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

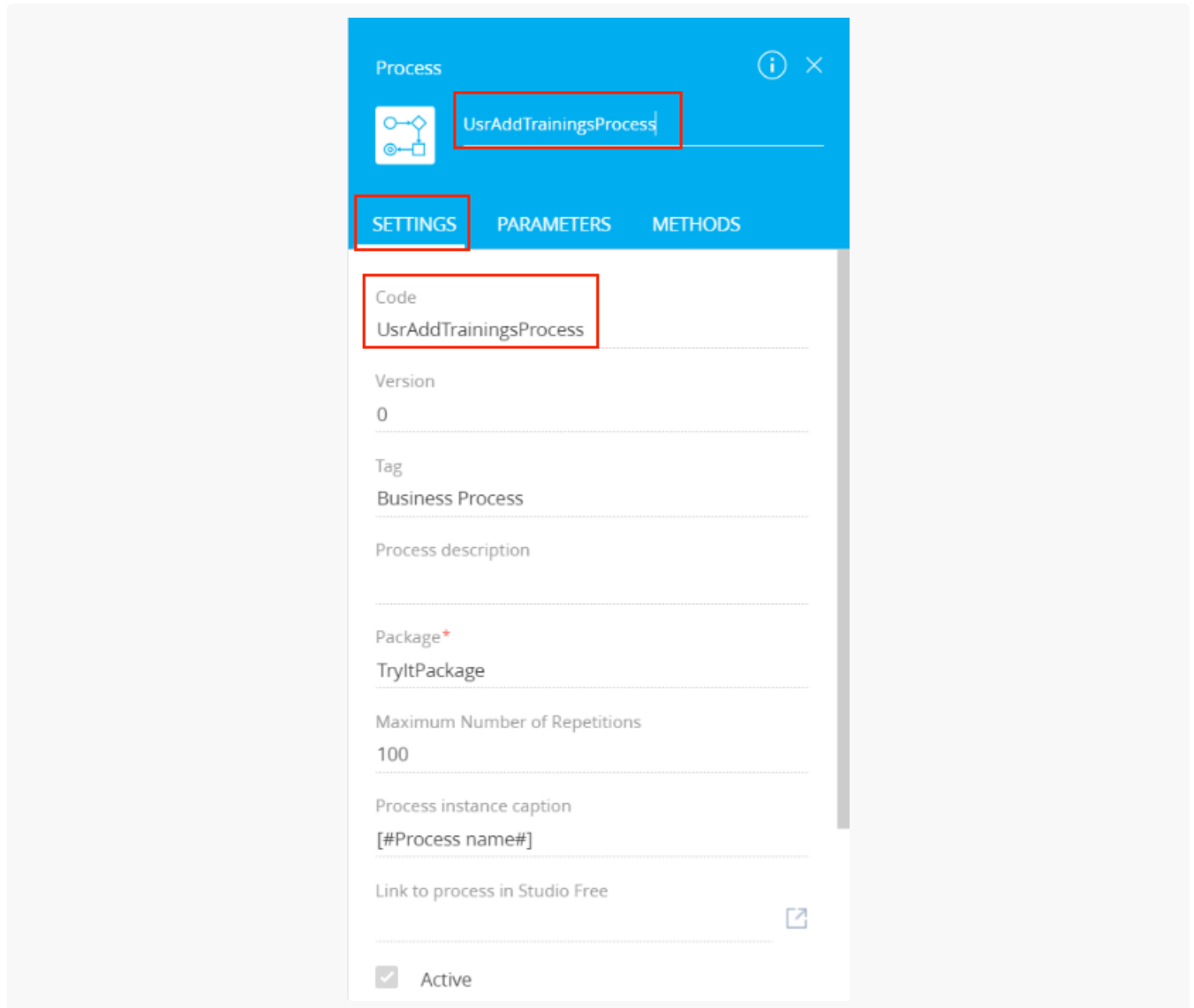
1. [Go to the \[Configuration \] section.](#)
2. Select the "TryItPackage" [package](#) from the package list.
3. Click [Add] on the workspace toolbar and select the [Business process] configuration element type.



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

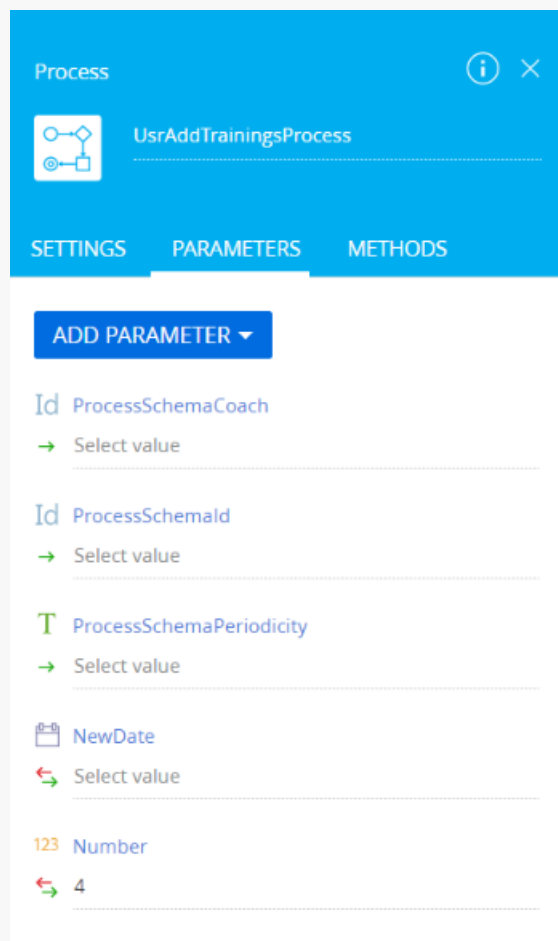
- Set [Name] to "UsrAddTrainingsProcess."

- Set [Code] to "UsrAddTrainingsProcess."



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

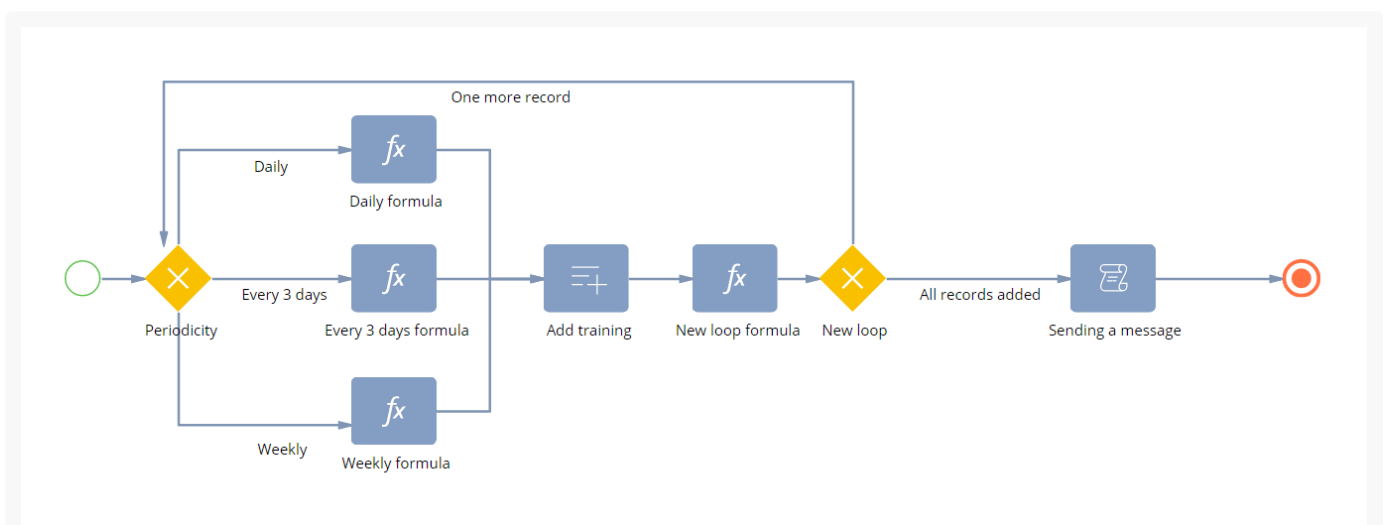
[Title]	[Code]	[Data type]	[Direction]	[Value]
ProcessSchema Periodicity	ProcessSchema Periodicity	Text (500 characters)	Input	
NewDate	NewDate	Date/Time	Bidirectional	
Number	Number	Integer	Bidirectional	4
ProcessSchemaId	ProcessSchemaId	Unique identifier	Input	
ProcessSchemaCoach	ProcessSchemaCoach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

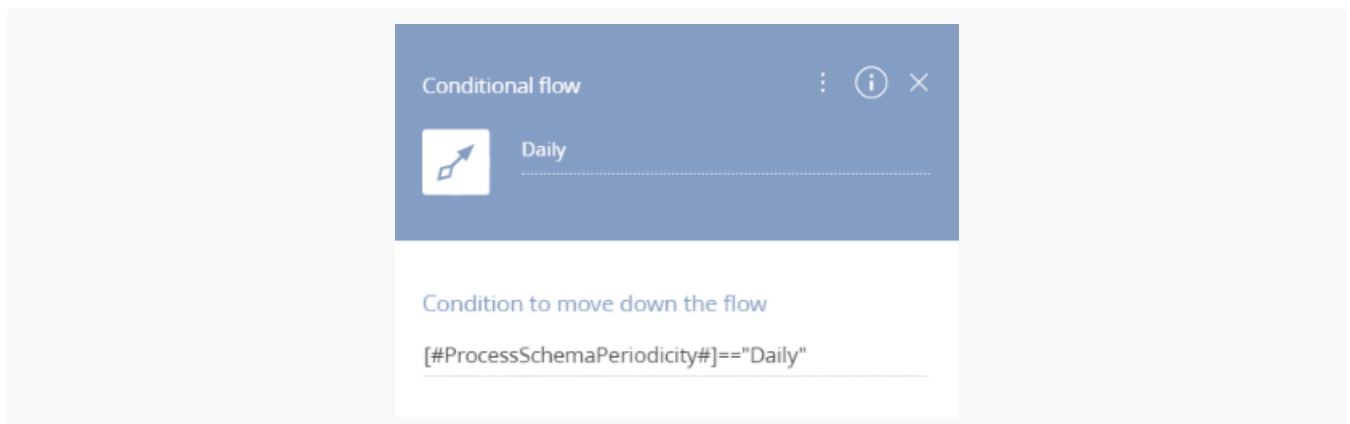
- The "Periodicity" [*Exclusive gateway (OR)*] gateway checks the periodicity of the class to add to the timetable and branches the process on the next step depending on the periodicity.
- The [*Formula*] elements calculate the class date depending on the periodicity. The process writes the date to the `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)*].

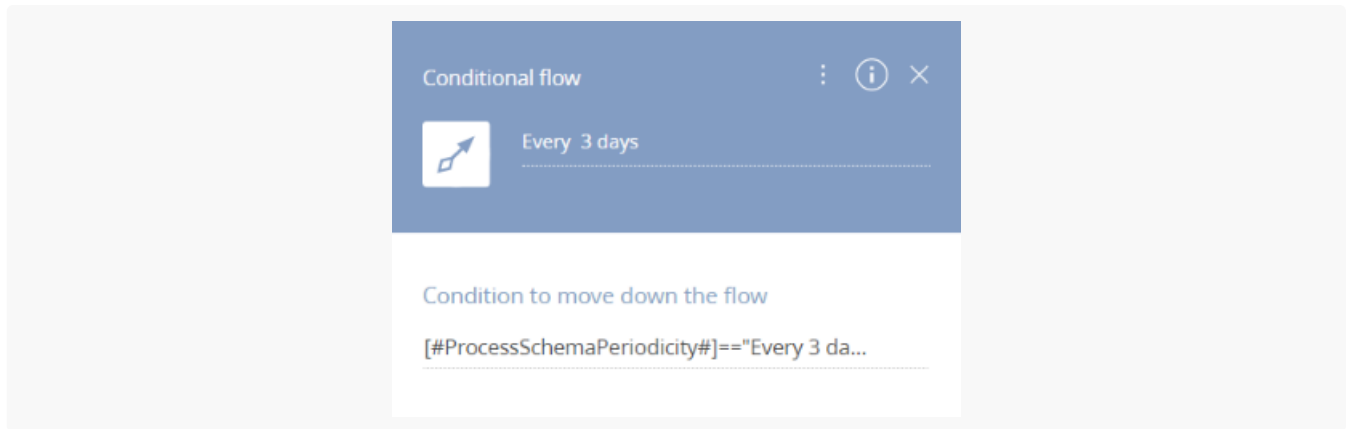
a. Daily [*Conditional flow*]:

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



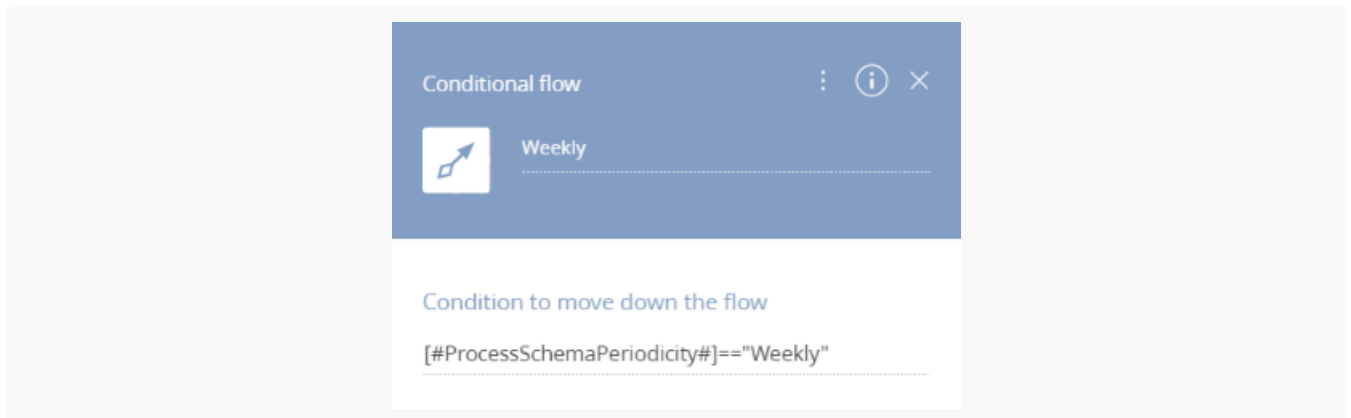
c. Every 3 days [*Conditional flow*]:

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



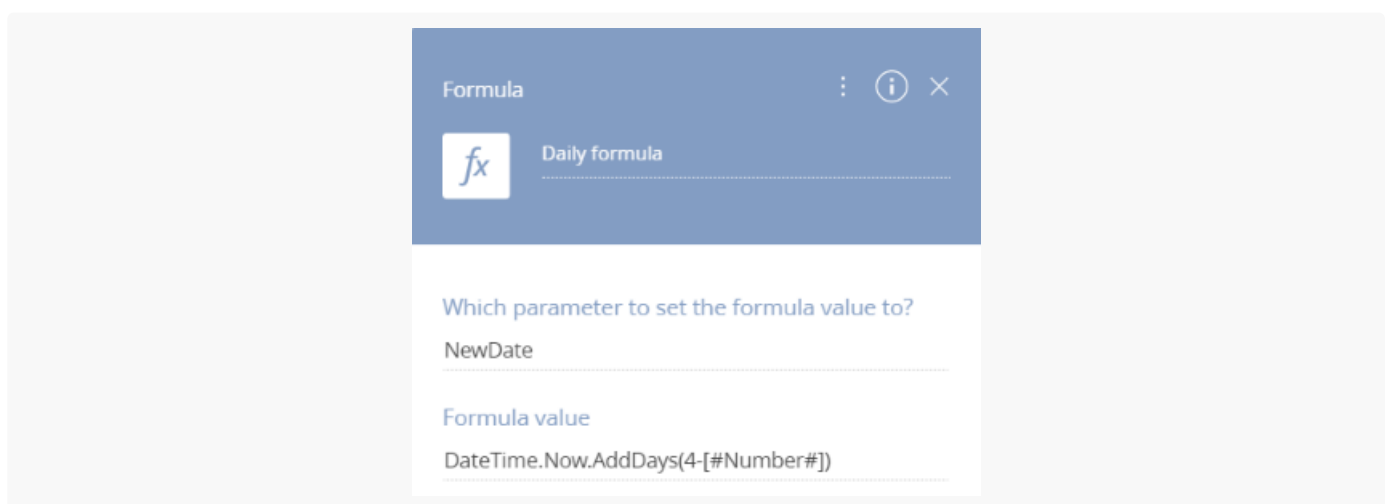
e. Weekly [*Conditional flow*]:

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



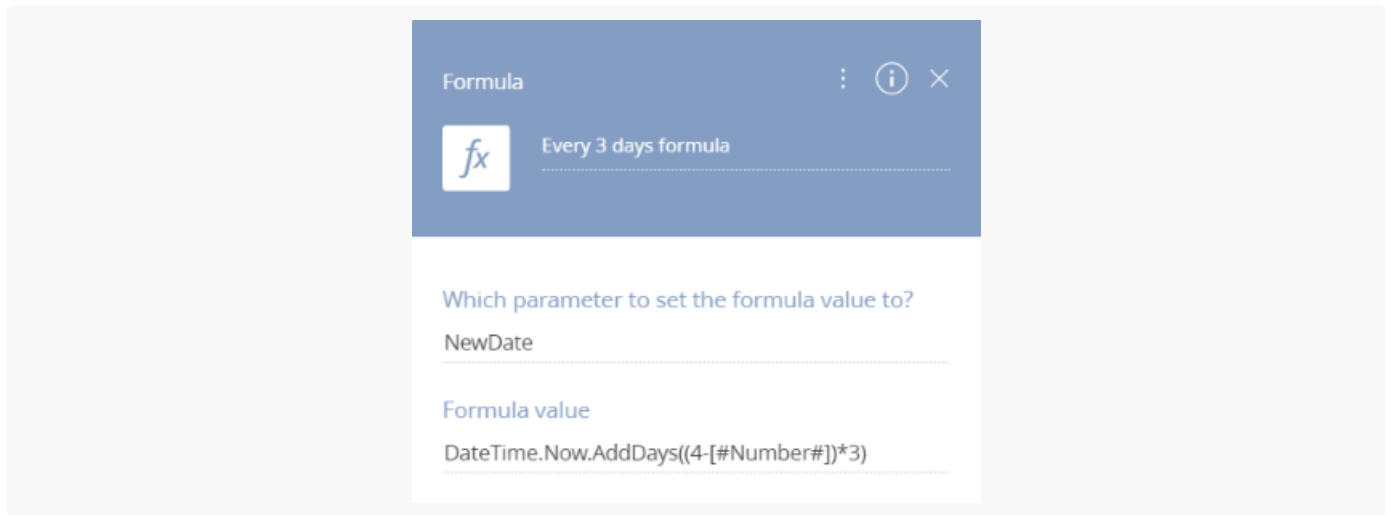
Daily formula [*Formula*]:

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



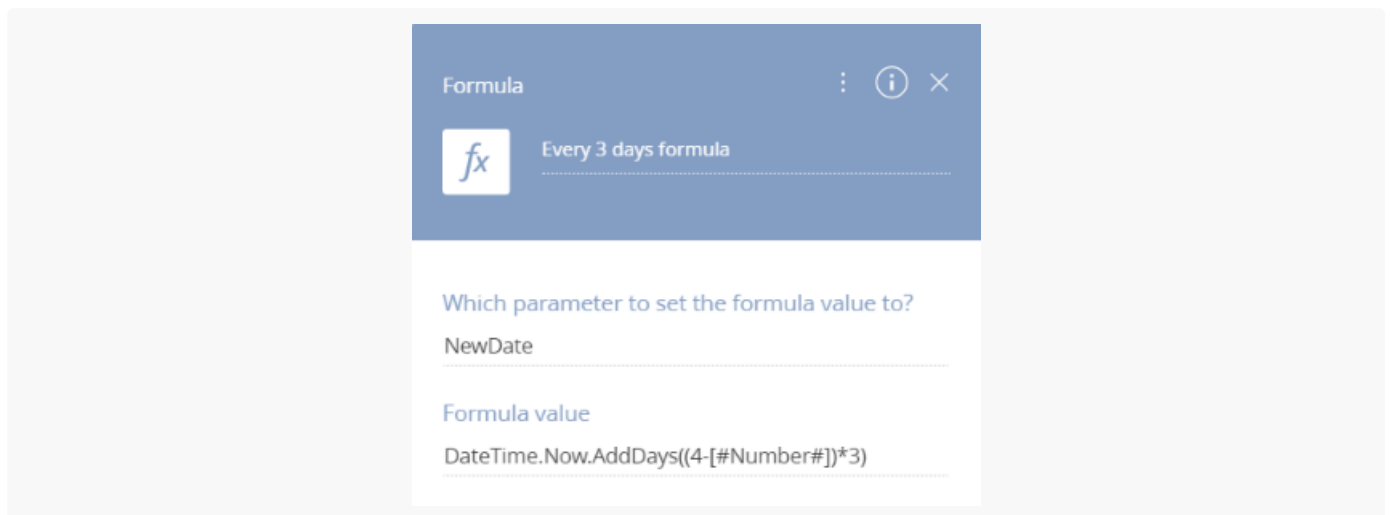
Every 3 days formula [*Formula*]:

- 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

Add data
⋮ ⓘ ✕

Add training

Which object to add data to?

Group training

What is the data adding mode?

Add one record

Which column values to set?

Class

[#ProcessSchemaId#]

Training date

[#NewDate#]

Training status

[#Lookup.Training status.Planned.934f3f30-86]

Training time

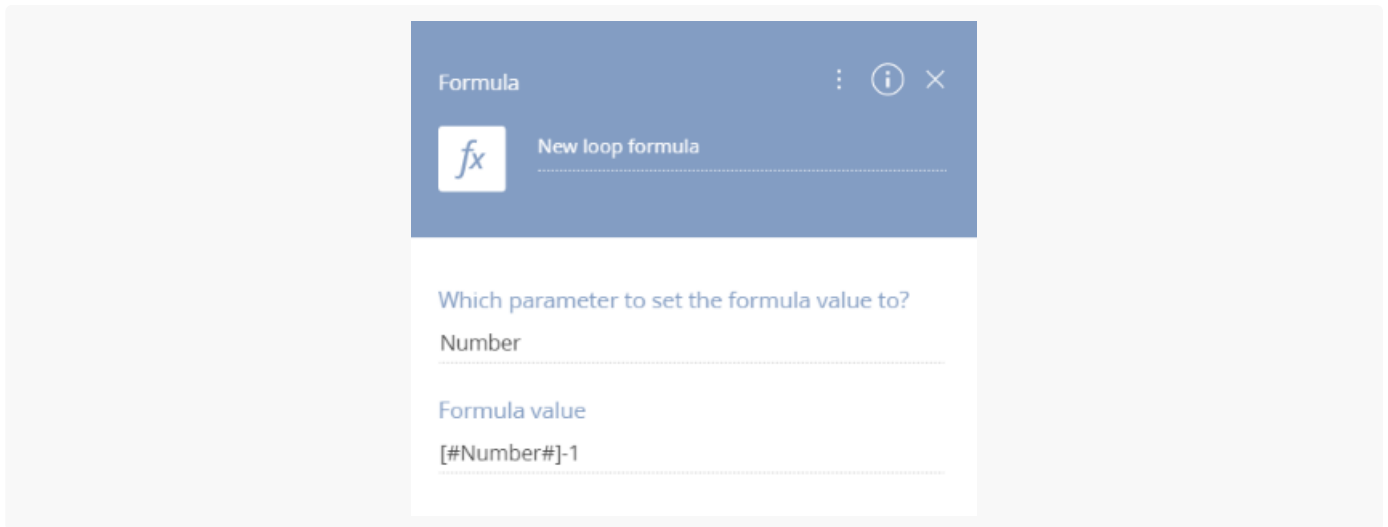
[#Time value.9:00 AM#]

Coach

[#ProcessSchemaCoach#]

New loop formula [*Formula*]:

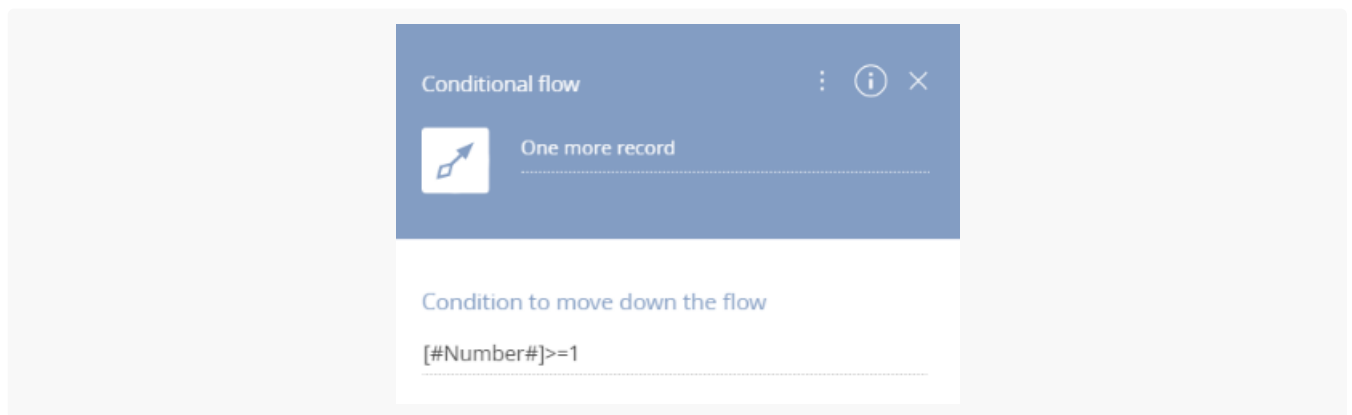
- Set [*Which parameter to set the formula value to?*] to "Number".
- Set [*Formula value*] to [#Number#]-1.



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

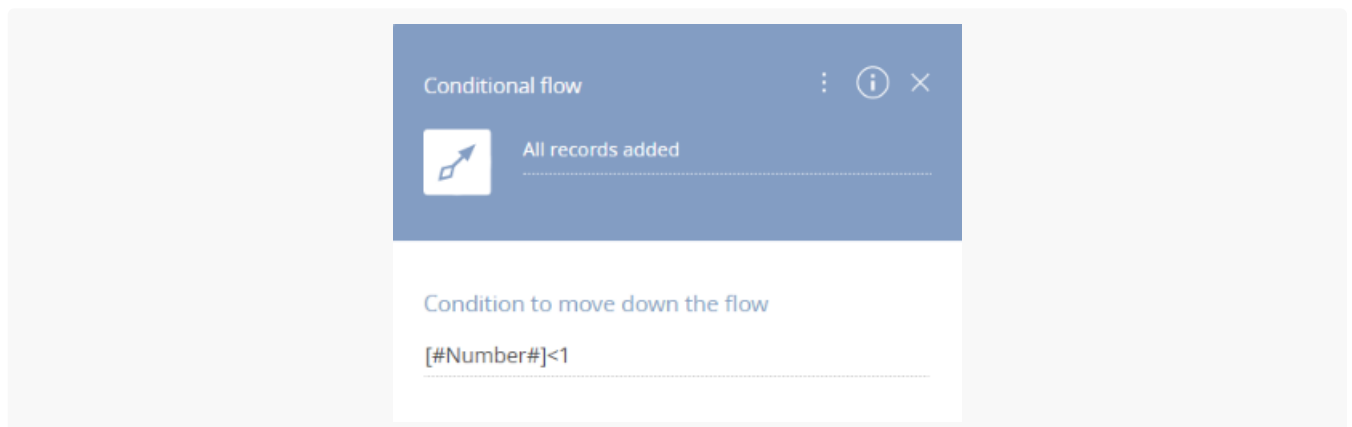
a. One more record [*Conditional flow*]:

- 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`.

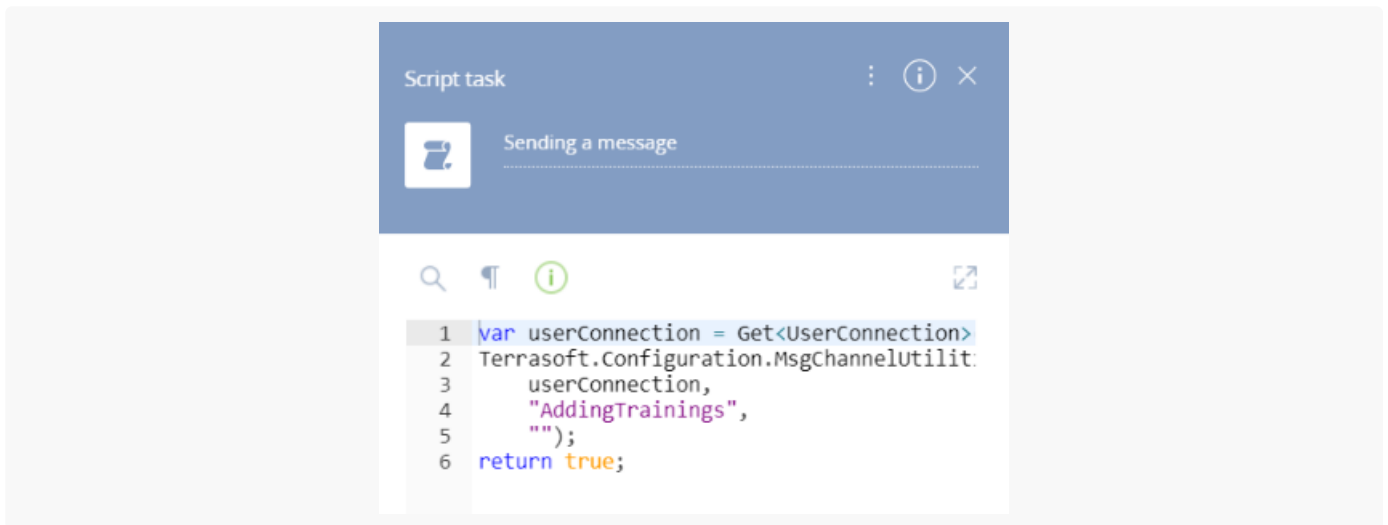


Sending a message [**Script task**]:

```

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.

Module
×

Code
ClientMessageBridge

Title *
ClientMessageBridge ⌘A

Parent object *
ClientMessageBridge (ClientMessageBridge) ▾

Package
TryItPackage

Description ⌘A

CANCEL
APPLY

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.

Configuration Creatio

CLOSE COMPILE ACTIONS

Search by package

+ Add Multi actions Client module Filters Search

Name	Title	Status	Type	Object	Modified on	Package
<input type="checkbox"/> UsrClass1Page *	Edit page: "Classes"		Client module		6/8/2022, 1:46:58 PM	TryItPackage
<input type="checkbox"/> UsrClass5383a01Section *	Section schema: "Classes"		Client module		6/8/2022, 1:46:34 PM	TryItPackage
<input type="checkbox"/> UsrSchemaaa01c268Page *	Group training		Client module		6/8/2022, 2:07:17 PM	TryItPackage
<input type="checkbox"/> UsrSchemae5be1ee3Detail *	Detail schema: "Group trainings"		Client module		6/8/2022, 2:07:24 PM	TryItPackage

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".

Localizable Strings

✕

Code *
AddTrainingsActionCaption

Value
Add trainings 🌐

CANCEL
APPLY

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.

