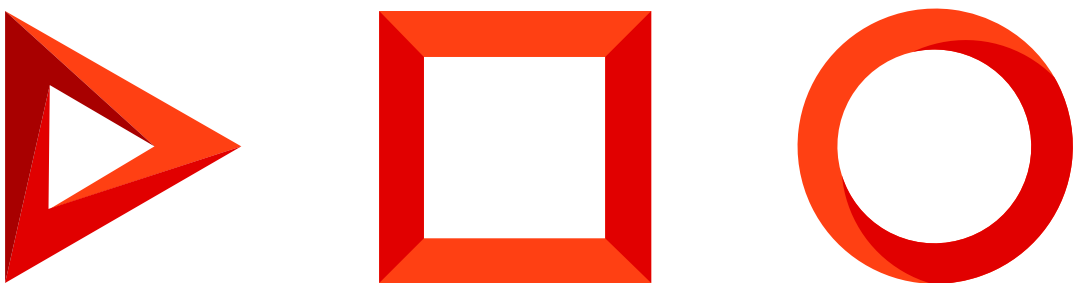
Creatio Academy

Record page

Timeline

Version 8.0



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Timeline

Advanced

Starting from version 7.12.0 you can use the [*Timeline*] tab for quick analysis of customer cooperation, opportunity, case, etc. history in Creatio. This tab is available by default in the [*Contacts*], [*Accounts*], [*Leads*], [*Opportunities*] and [*Cases*] sections.

The database tables

The following tables are provided in the database for setting up the timeline:

- `TimelinePageSetting` – for setting up sections and their tiles).
- `TimelineTileSetting` – for setting up all existing and custom timeline tiles.
- `SysTimelineTileSettingLcz` – for localizing tile names.

`TimelinePageSetting` table primary columns

Column	Details
`Id`	Record identifier.
`Key`	Key – the name of section page schema. For example, `AccountPageV2`, `ContactPageV2`, etc.
`Data`	Section timeline setup in JSON format.

`TimelineTileSetting` table primary columns

Column	Details
`Id`	Record identifier.
`Name`	Tile caption that will be displayed in the filter menu. It must have plural form, for example, “Tasks”. Localization is performed via the `SysTimelineTileSettingLcz` table. If this field is not populated, the tile caption will be derived from the entity or type schema name.
`Data`	Section timeline setup in JSON format.
`Image`	The tile icon that will be displayed in the filter menu and on the left side of the tile on the [*Timeline*] tab.

Timeline tile configuration parameters in JSON format

Column	Details	If required	Example

Column	Details	If required	Example
`entityConfigKey`	Tile key. It should match the `Id` in the `TimelineTileSetting` table of the corresponding existing tile that should be displayed for the entity.	No	`706f803d-6a30-4bcd`
`entitySchemaName`	Name of the entity object schema.	Yes	`Activity`
`referenceColumnName`	Name of the object column that will be used for selecting records.	Yes	`Account`
`masterRecordColumnName`	Name of the parent record column that will be used for selecting records.	Yes	`Id`
`typeColumnName`	Name of the type column.	No	`Type`
`typeColumnValue`	Value of the type column.	Should only be applied when typeColumnName is indicated.	`fbe0acdc-cfc0-df11`
`viewModelClassName`	The view model class name of the existing tile.	No. If the value is not populated, the `BaseTimelineItemViewModel` base class will apply.	`Terrasoft.Activity`
`viewClassName`	Name of the existing tile view class.	No. If the value is not populated, the `BaseTimelineItemViewl` base class will apply.	`Terrasoft.Activity`
`orderColumn`	Column for sorting.	Yes	`StartDate`
`authorColumnName`	Column for the author.	Yes	`Owner`
`captionColumnName`	Column for the caption.	Yes, if the `messageColumnName` column is not indicated.	`Title`

Column	Details	If required	Example
`messageColumnName`	Column for messages.	Yes, if the `captionColumnName` column is not indicated.	`DetailedResult`
`caption`	Tile caption that will be displayed in the filter menu. It must have plural form, for example, “Tasks”. It is used for setting a tile caption that would differ from the one indicated in the `Name` field of the corresponding tile setting in `TimelinePageSetting` .	No	`My Activity`
`columns`	Setup array for additional tile columns.	No	
`columnName`	Path to the entity object column.	Yes	`Result`
`columnAlias`	Column alias in the tile model view.	Yes	`ResultMessage`
`isSearchEnabled`	Indicates the capability of text search according to the column value (for text columns only).	No	`true`

Adding the [*Timeline*] tab to the section

To add the [*Timeline*] tab to the section page and display records thereon:

1. Add a new record to the `TimelinePageSetting` table.
2. Populate the corresponding columns. Indicate the section page schema name in the `Key` column. For example, if you need to add a tab to the [*Accounts*] section, the `Key` column value will be "AccountPageV2". The `Data` column contains the configuration of timeline tiles that are displayed on the indicated section tab in JSON format.

Attention. The [*Timeline*] tab will not be displayed on the section record edit page if the tile configuration in the `Data` column is not available or if there exist errors (for example, syntax error) in the configuration.

Example of using base tile

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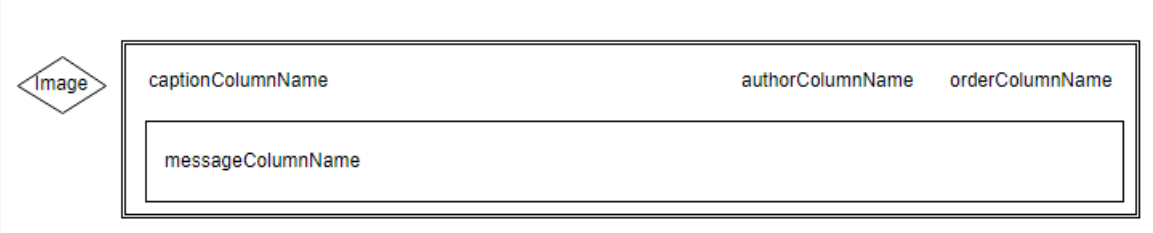
To start using the timeline in a section, perform base tile configuration. The base tile compound elements:

- icon;
- caption;
- author;
- date (sorting);
- message.



Example. Add the [*Contract*] tile to the [*Accounts*] section page. Sorting should be performed according to the `StartDate` column; the caption values, author and tile messages should be derived from the `Number`, `Owner` and `Notes` columns correspondingly.

Example implementation algorithm

1. Add a new record (or update an existing record) in the `TimelinePageSetting` table.
2. Set the "`AccountPageV2`" value for the `Key` column and populate the `Data` column with the following JSON object:

JSON object

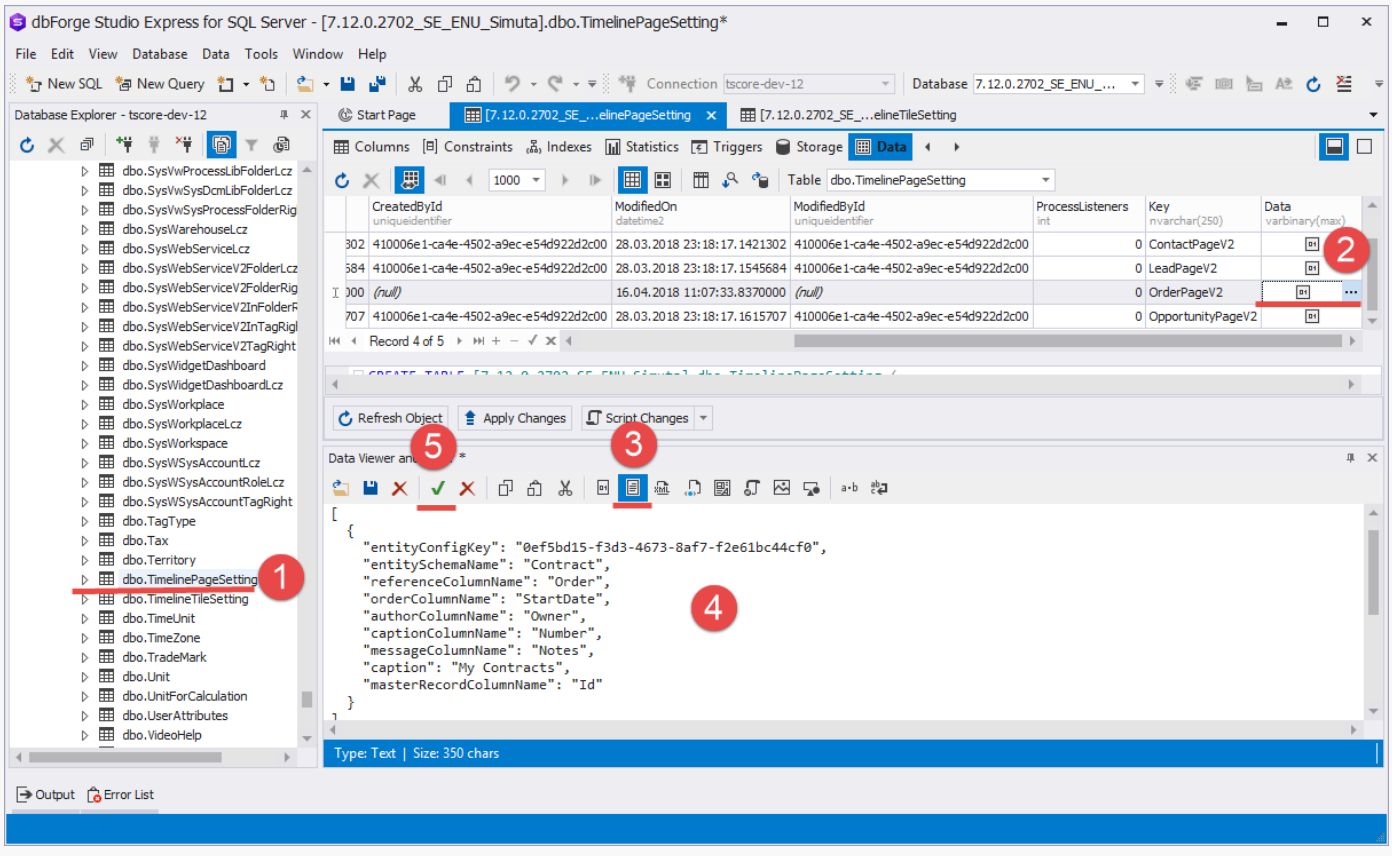
```
[
  {
    "entityConfigKey": "0ef5bd15-f3d3-4673-8af7-f2e61bc44cf0",
    "entitySchemaName": "Contract",
    "referenceColumnName": "Order",
    "orderColumnName": "StartDate",
```

```
    "authorColumnName": "Owner",
    "captionColumnName": "Number",
    "messageColumnName": "Notes",
    "caption": "My Contracts",
    "masterRecordColumnName": "Id"
  }
]
```

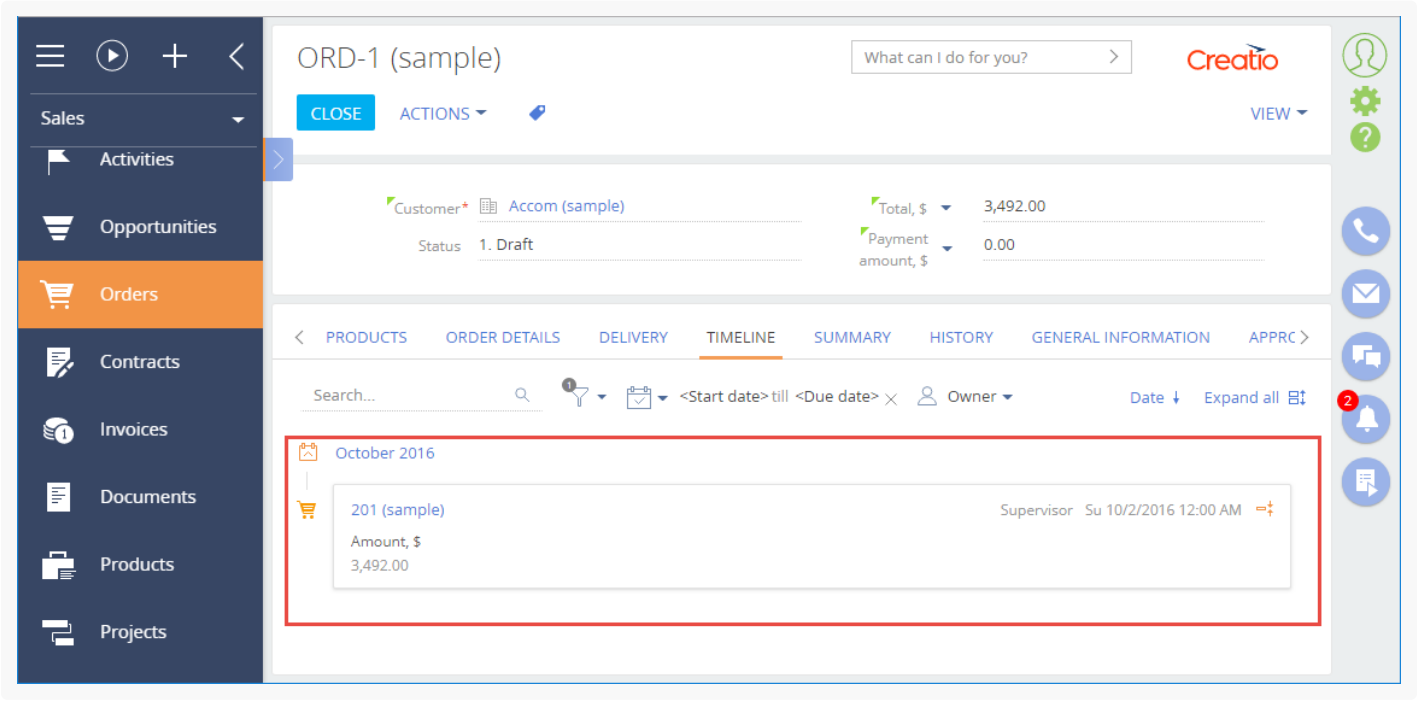
The [*Orders*] base tile is used in the following case. This tile has a record in the `[TimelineTileSettings]` table with the `0ef5bd15-f3d3-4673-8af7-f2e61bc44cf0` Id.

Attention. As the data in the [*Data*] column are stored in the `varbinary(max)` form, use specific editor (such as dbForge Studio Express for SQL Server) to modify them. To do this:

1. Select a table.
2. Select the necessary column of the record and click the edit button.
3. Enter the text data display mode in the data editor.
4. Add necessary data.
5. Save the changes in the data editor.



The result of the base tile usage on the [*Timeline*] tab in the [*Accounts*] section:



Create the [Timeline] tab tiles bound to custom section

Advanced

Starting from version 7.12.0 you can use the [*Timeline*] tab for quick analysis of customer cooperation, opportunity, case, etc. history in Creatio. This tab is available by default in the [*Contacts*], [*Accounts*], [*Leads*], [*Opportunities*] and [*Cases*] sections.

Tile setup

You can set up a tile using the `[TimelinePageSetting]` table settings as shown in the example with the base tile. In such a case you will use the following for your tile:

- the default icon;
- the `BaseTimelineItemView` and `BaseTimelineItemViewModel` base view and view model modules;
- author field;
- tile caption field;
- message field.

You can use one and the same tile for different sections if needed. However, we recommend to use the `[TimelineTileSetting]` table and set up your tiles for different sections.

The `[TimelineTileSetting]` table contains tile configurations that already exist in Creatio. The section, however,

will only display the tiles indicated in the `[TimelinePageSetting]` table for this particular section.

For example, the `[TimelinePageSetting]` contains three pre-configured tiles: `Tasks`, `Leads` and `Calls`. The `[TimelinePageSetting]` table contains the `Tasks` and `Calls` tiles that are pre-configured for usage in the [*Accounts*] section, and only the `Calls` tile that is pre-configured for usage in the [*Contacts*] section. The `Leads` tile in this case will not be displayed in any section.

Note. It is considered a good practice to differentiate the tile settings. We recommend to use the `[TimelineTileSetting]` > table for setting up tiles, and the `TimelinePageSetting` – for adding the tiles to section timeline.

Attention. If you need to add the existing `Files` tile to a section, the "`entitySchemaName`" property of the `[TimelinePageSetting]` table should contain the entity schema name for files in the corresponding section configuration (for example, `AccountFile`, `ContactFile`, etc.). The object schema name (the "entitySchemaName" property) of the `[TimelineTileSetting]` table should always look as follows: "`##ReferenceSchemaName##File`".

The algorithm for creating a pre-configured tile

1. Add a new section (if needed).
2. Add a module schema to your custom package and determine the tile view class, bound to the new section. The class should be the inheritor of `BaseTimelineItemView`.
3. Add a module schema to your custom package and determine the tile view model class, bound to the new section. The class should be the inheritor of `BaseTimelineItemView`.
4. Add a record with the tile view settings bound to the new section into the `[TimelineTileSetting]` database table.
5. In the `[TimelinePageSetting]` table add or edit the record enabling the tile display on the [*Timeline*] tab in the necessary section.

Example. Display the tiles bound to the Books custom section on the Timeline tab of the Accounts section. The tiles should contain:

- icon;
- name;
- author;
- book record date;
- price;
- ISBN number.

A short book description should also be displayed when you deploy the tile.

Attention. You should also edit the database tables to implement the case (see steps 4 and 5).

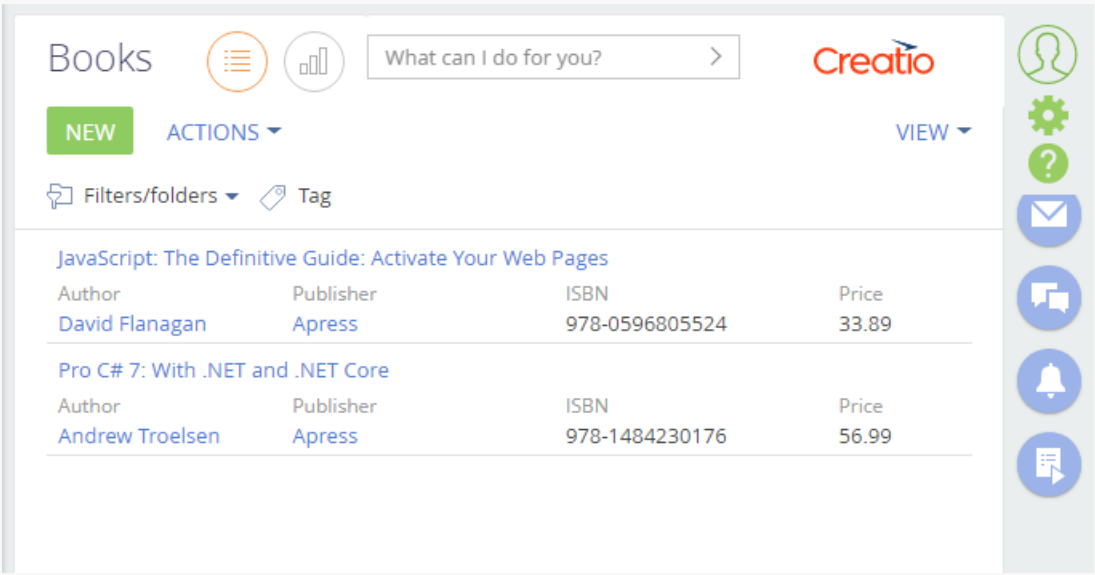
Example implementation algorithm

1. Adding a new [*Books*] section

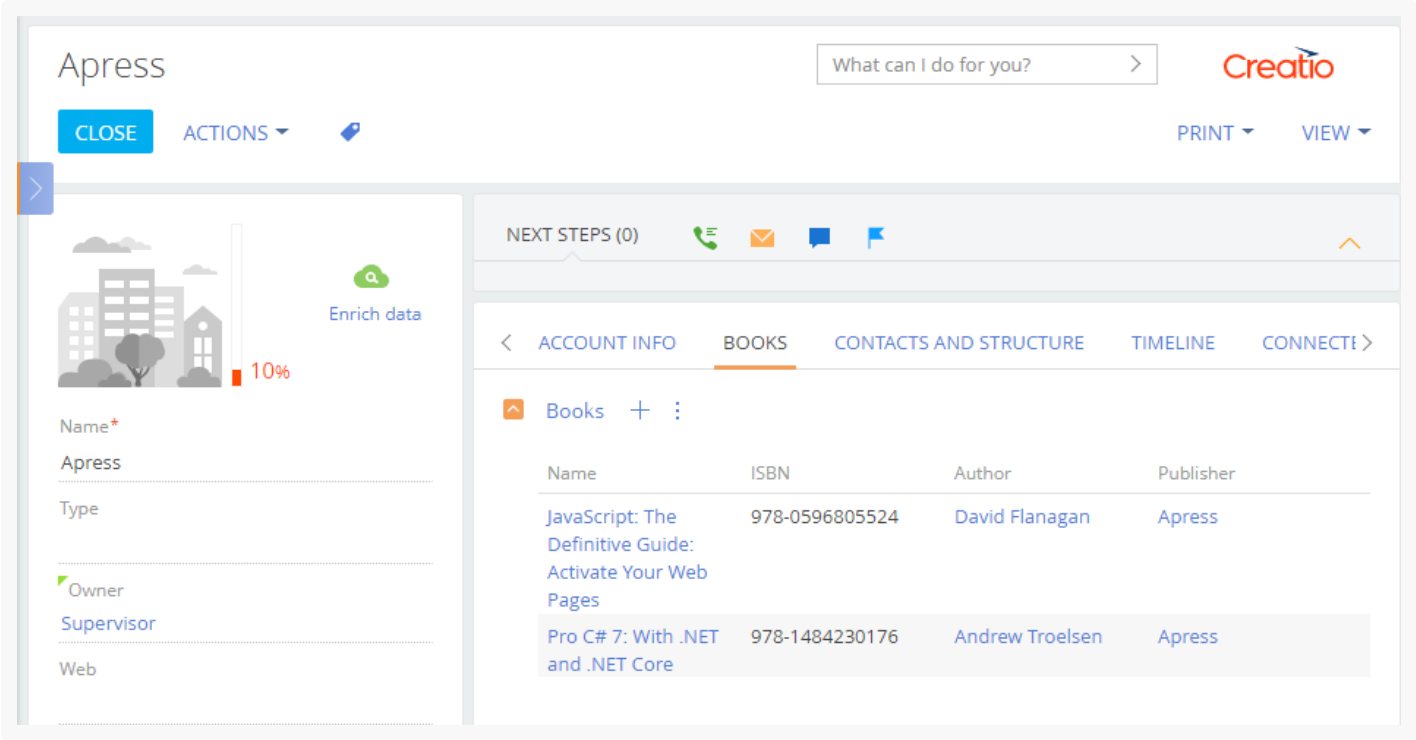
Use the archive containing the needed function package to add the new [*Books*] section. Install the package via the marketplace application installation function from the *.zip-archive.

Note. You can also add the section via section wizard.

The [*Books*] section will be available in the [*General*] workplace after you install the package.



You will also see a detail displaying the linked records from the [*Books*] section on the [*Books*] tab of the [*Accounts*] section record edit page.

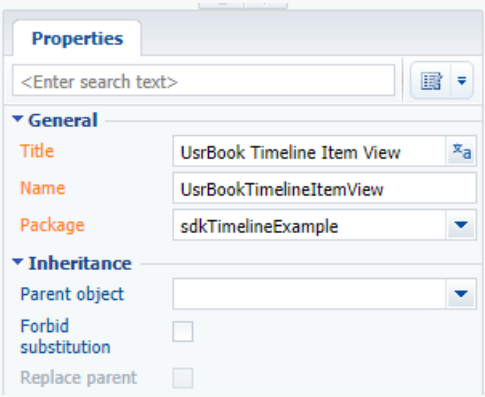


2. Adding a tile view module

Add a client module schema containing dependencies from the `Timeline` package to the custom package.

For the created module schema specify:

- [*Name*] – "`UsrBookTimelineItemView`";
- [*Title*] – "`UsrBook Timeline Item View`".



Add the following module source code to the [*Source Code*] tab of the schema:

`UsrBookTimelineItemView`

```
// Defining the module and its dependencies.
define("UsrBookTimelineItemView", ["UsrBookTimelineItemViewResources", "BaseTimelineItemView"],
    // Defining the tile view class.
```

```
Ext.define("Terrasoft.configuration.UsrBookTimelineItemView", {
    extend: "Terrasoft.BaseTimelineItemView",
    alternateClassName: "Terrasoft.UsrBookTimelineItemView",
    // Method returning the [UsrISBN] additional tile field configuration.
    getUsrISBNViewConfig: function() {
        return {
            // Field name.
            "name": "UsrISBN",
            // Field type – label.
            "itemType": Terrasoft.ViewItemType.LABEL,
            // Caption.
            "caption": {
                "bindTo": "UsrISBN"
            },
            // Visibility.
            "visible": {
                // Binding to the tile linked entity column.
                "bindTo": "UsrISBN",
                // Visibility setup.
                "bindConfig": {
                    // A field is visible if its value is populated.
                    "converter": "checkIsNotEmpty"
                }
            },
            // CSS field styles.
            "classes": {
                "labelClass": ["timeline-text-light"]
            }
        };
    },
    // Method returning the [UsrPrice] additional tile field configuration.
    getUsrPriceViewConfig: function() {
        return {
            "name": "UsrPrice",
            "itemType": Terrasoft.ViewItemType.LABEL,
            "caption": {
                "bindTo": "UsrPrice"
            },
            "visible": {
                "bindTo": "UsrPrice",
                "bindConfig": {
                    "converter": "checkIsNotEmpty"
                }
            },
            "classes": {
                "labelClass": ["timeline-item-subject-label"]
            }
        };
```

```
        },
        // Redefined method returning the [Message] tile field configuration.
        getMessageViewConfig: function() {
            // Receiving standard settings.
            var config = this.callParent(arguments);
            // Visibility setup. Visible if the tile is deployed.
            config.visible = {
                "bindTo": "IsExpanded"
            };
            return config;
        },
        // Redefined method returning general tile configuration.
        getBodyViewConfig: function() {
            // Receiving standard settings.
            var bodyConfig = this.callParent(arguments);
            // Adding additional field configurations.
            bodyConfig.items.unshift(this.getUsrISBNViewConfig());
            bodyConfig.items.unshift(this.getUsrPriceViewConfig());
            return bodyConfig;
        }
    });
});
```

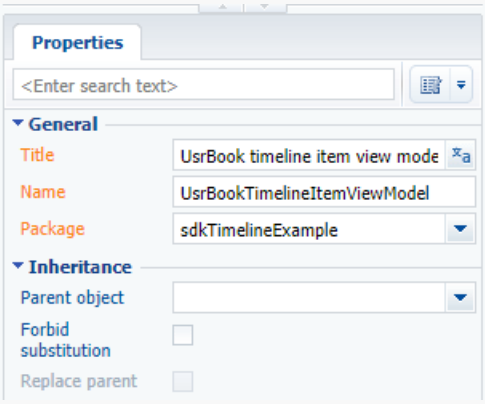
Here you can define the configuration of the [*UsrISBN*] and [*UsrPrice*] fields that are additionally displayed on the tab. The standard configuration is defined in the `BaseTimelineItemView` module.

3. Adding a tile view model module

Add a client module schema containing dependencies from the Timeline package to the custom package.

For the created module schema specify:

- [*Name*] – `"UsrBookTimelineItemViewModel"`;
- [*Title*] – `"UsrBook timeline item view model"`.



Add the following module source code to the [*Source Code*] tab of the schema:

UsrBookTimelineItemViewModel

```
define("UsrBookTimelineItemViewModel", ["UsrBookTimelineItemViewModelResources", "BaseTimelineIt
    function() {
        Ext.define("Terrasoft.configuration.UsrBookTimelineItemViewModel", {
            alternateClassName: "Terrasoft.UsrBookTimelineItemViewModel",
            extend: "Terrasoft.BaseTimelineItemViewModel"
        });
    });
```

You define the `Terrasoft.configuration.UsrBookTimelineItemViewModel` class here. Since this class is defined as the inheritor of `Terrasoft.BaseTimelineItemViewModel`, it enables using all functions of the base class.

4. Adding the record with tile view settings to the [TimelineTileSetting] table

The `[TimelineTileSetting]` table is used to set up the timeline tile properties.

Add a new record to the `[TimelineTileSetting]` table. You can add a new record via the following SQL query:

SQL query

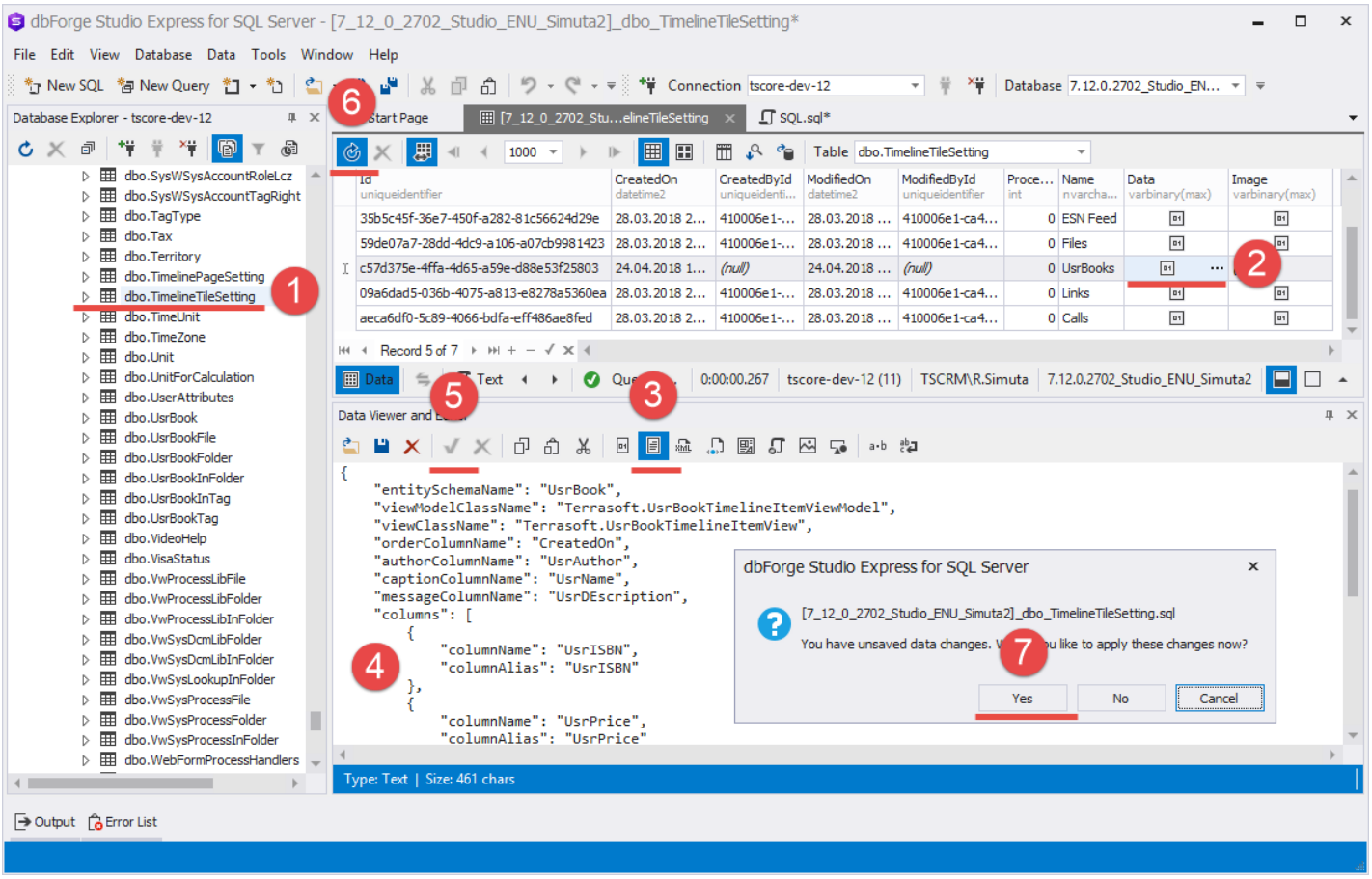
```
INSERT INTO TimelineTileSetting (CreatedOn, CreatedById, ModifiedOn, ModifiedById, Name, Data, I
  VALUES (GETUTCDATE(), NULL, GETUTCDATE(), NULL, 'UsrBooks', NULL, NULL);
```

Since data in the `Data` and `Image` columns are stored in the `varbinary(max)` format, use specific editors (such as dbForge Studio Express for SQL Server) to modify them. To do this:

1. Select a table.
2. Select the necessary record column and click the edit button.
3. Enter the text data display mode in the data editor.
4. Add necessary data.
5. Save the changes in the data editor.
6. Click the data update button.
7. Click OK in the popped up checkout window to apply the modifications.

Attention. This method is only good for the development environments deployed on-site. Since the modifications are implemented directly in the database, they are not bound to any package. That is why the modifications will not be implemented in the database if the package with the view models and the tile view models is installed into another application. For correct transfer of the developed functions you need to bind the SQL-scripts that implement the corresponding modifications in the database when installing the

package.



Add the following configuration object to the `Data` column using the above mentioned algorithm:

UsrBook

```
{
    "entitySchemaName": "UsrBook",
    "viewModelClassName": "Terrasoft.UsrBookTimelineItemViewModel",
    "viewClassName": "Terrasoft.UsrBookTimelineItemView",
    "orderColumnName": "CreatedOn",
    "authorColumnName": "UsrAuthor",
    "captionColumnName": "UsrName",
    "messageColumnName": "UsrDEscription",
    "columns": [
        {
            "columnName": "UsrISBN",
            "columnAlias": "UsrISBN"
        },
        {
            "columnName": "UsrPrice",
            "columnAlias": "UsrPrice"
        }
```

```
    ]
}
```

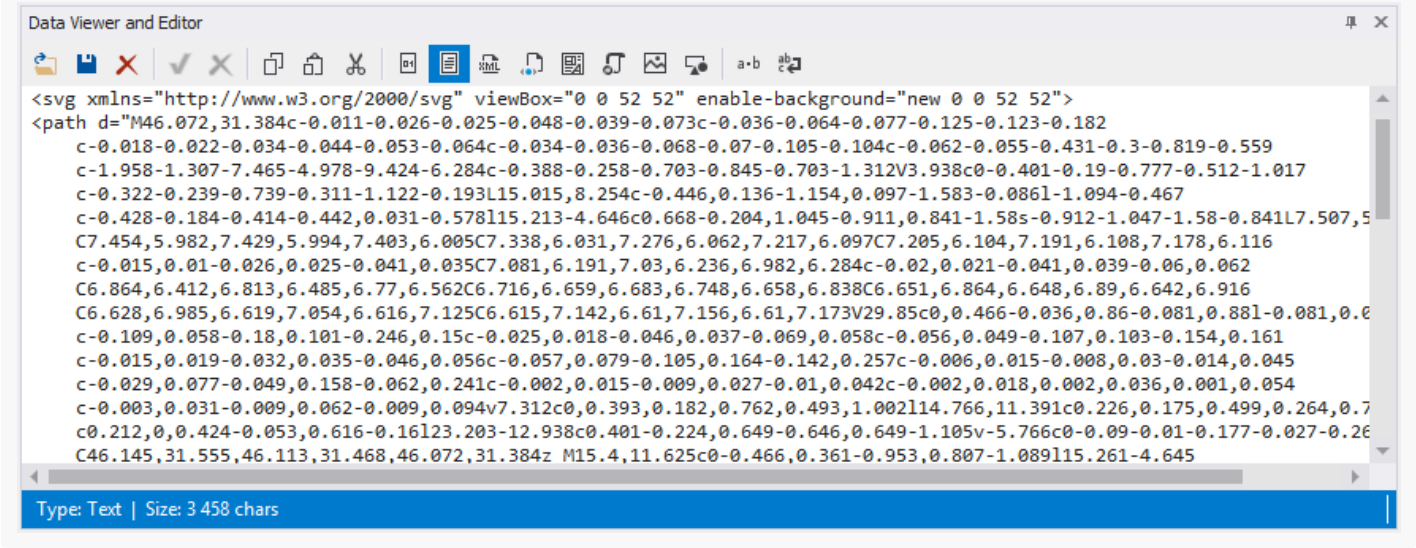
You need to indicate the additional field array whose display is configured in the `UsrBookTimelineItemView` view model in addition to the primary fields inherited from the base tile (see step 2).

Add SVG-format data to the `Image` column to display the icon that corresponds to the section icon.

SVG-format data

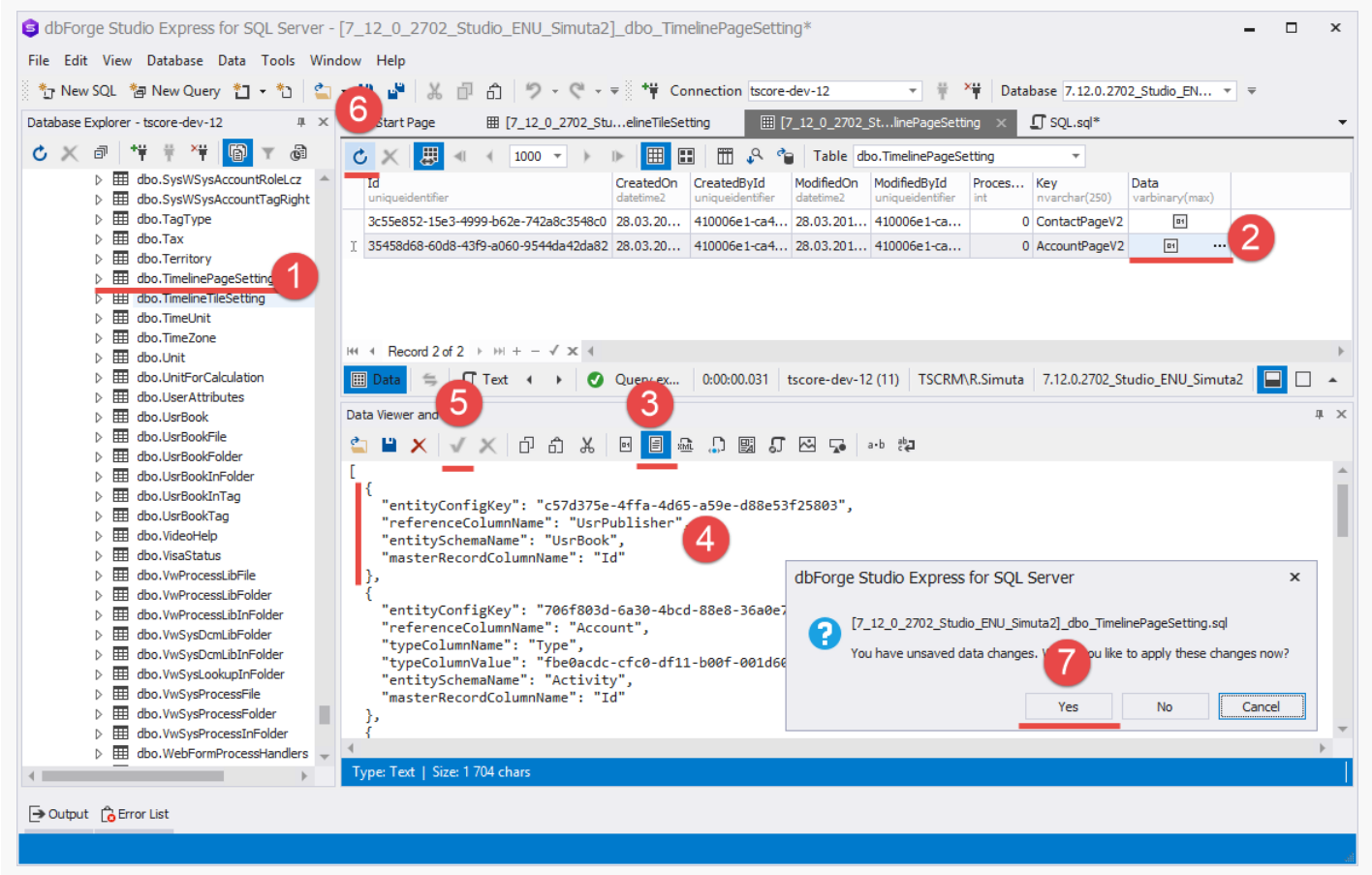
```
<svg xmlns="http://www.w3.org/2000/svg" viewBox="0 0 52 52" enable-background="new 0 0 52 52">
<path d="M46.072,31.384c-0.011-0.026-0.025-0.048-0.039-0.073c-0.036-0.064-0.077-0.125-0.123-0.18
    c-0.018-0.022-0.034-0.044-0.053-0.064c-0.034-0.036-0.068-0.07-0.105-0.104c-0.062-0.055-0.431
    c-1.958-1.307-7.465-4.978-9.424-6.284c-0.388-0.258-0.703-0.845-0.703-1.312V3.938c0-0.401-0.1
    c-0.322-0.239-0.739-0.311-1.122-0.193L15.015,8.254c-0.446,0.136-1.154,0.097-1.583-0.086l-1.0
    c-0.428-0.184-0.414-0.442,0.031-0.578l15.213-4.646c0.668-0.204,1.045-0.911,0.841-1.58s-0.912
    C7.454,5.982,7.429,5.994,7.403,6.005C7.338,6.031,7.276,6.062,7.217,6.097C7.205,6.104,7.191,6
    c-0.015,0.01-0.026,0.025-0.041,0.035C7.081,6.191,7.03,6.236,6.982,6.284c-0.02,0.021-0.041,0.
    C6.864,6.412,6.813,6.485,6.77,6.562C6.716,6.659,6.683,6.748,6.658,6.838C6.651,6.864,6.648,6.
    C6.628,6.985,6.619,7.054,6.616,7.125C6.615,7.142,6.61,7.156,6.61,7.173V29.85c0,0.466-0.036,0
    c-0.109,0.058-0.18,0.101-0.246,0.15c-0.025,0.018-0.046,0.037-0.069,0.058c-0.056,0.049-0.107,
    c-0.015,0.019-0.032,0.035-0.046,0.056c-0.057,0.079-0.105,0.164-0.142,0.257c-0.006,0.015-0.00
    c-0.029,0.077-0.049,0.158-0.062,0.241c-0.002,0.015-0.009,0.027-0.01,0.042c-0.002,0.018,0.002
    c-0.003,0.031-0.009,0.062-0.009,0.094v7.312c0,0.393,0.182,0.762,0.493,1.002l14.766,11.391c0.
    c0.212,0,0.424-0.053,0.616-0.16l23.203-12.938c0.401-0.224,0.649-0.646,0.649-1.105v-5.766c0-0
    C46.145,31.555,46.113,31.468,46.072,31.384z M15.4,11.625c0-0.466,0.361-0.953,0.807-1.089l15.
    c0.446-0.136,0.807,0.132,0.807,0.598v14.63c0,0.467-0.314,0.635-0.702,0.376l-1.127-0.752c-0.3
    l-13.059,5.805c-0.426,0.189-0.771-0.034-0.771-0.501C15.4,25.943,15.4,11.625,15.4,11.625z M28
    c0.425-0.189,1.085-0.134,1.473,0.125l11.43,7.62c0.388,0.259,0.368,0.644-0.045,0.86l-18.404,9
    c-0.412,0.216-1.047,0.163-1.418-0.121l-11.789-9.001c-0.371-0.283-0.326-0.665,0.1-0.854L28.85
    c0-0.466,0.348-0.695,0.776-0.512l2.174,0.929c0.429,0.183,0.776,0.708,0.776,1.175v2.158c-1.57
    L9.142,9.932L9.142,9.932z M9.142,13.152c0.931,0.671,2.22,1.323,3.727,1.372v7.633c-1.57-0.066
    C9.142,20.548,9.142,13.152,9.142,13.152z M9.142,21.627c0.931,0.671,2.22,1.323,3.727,1.372v3.
    l-2.163,0.876c-0.432,0.175-0.782-0.061-0.782-0.527V21.627z M43.666,36.101c0,0.467-0.33,1.027
    c-0.407,0.228-1.036,0.18-1.405-0.104L8.897,39.127c-0.369-0.284-0.668-0.893-0.668-1.358v-2.44
    l12.764,9.748c0.225,0.171,0.496,0.26,0.768,0.26c0.201,0,0.403-0.048,0.588-0.146l19.899-10.44
    c0.413-0.217,0.747-0.015,0.747,0.452V36.101z" style="fill:#6c91de;"/>
<path d="M33.81,34.064c0.072,0.049,0.155,0.073,0.239,0.073c0.072,0,0.145-0.018,0.209-0.055l4.505
    c0.126-0.072,0.207-0.204,0.212-0.349c0.006-0.146-0.063-0.283-0.183-0.365l-9.011-6.192c-0.118
    l-5.157,2.123c-0.143,0.059-0.243,0.191-0.259,0.346c-0.017,0.154,0.053,0.304,0.181,0.392L33.8
    l8.269,5.682l-3.692,2.11l-8.803-6.052L29.492,25.426z" style="fill:#6c91de;"/>
</svg>
```

Editing the Image column data via the dbForge Studio Express for SQL Server



5. Editing the record that enables the tile display on the [*Timeline*] tab of the account page in the [TimelinePageSetting] table

For the [*Accounts*] section there already exists a record in the `[TimelinePageSetting]` table with settings of tiles bound to other sections. This is the record containing the "AccountPageV2" value in the `Key` column.



Attention. Since there are several tiles used on the [*Accounts*] section page timeline, the array of configuration objects enabling the corresponding tile is stored in the [*Data*] column.

Using the algorithm mentioned in step 4, change the configuration object array by adding a new record to it.

Record for configuration object array

```
[
  {
    "entityConfigKey": "xxxxxxxx-xxxx-xxxx-xxxx-xxxxxxxxxxxx",
    "referenceColumnName": "UsrPublisher",
    "entitySchemaName": "UsrBook",
    "masterRecordColumnName": "Id"
  },
  ...
]
```

Here the "`entityConfigKey`" property: "xxxxxxxx-xxxx-xxxx-xxxx-xxxxxxxxxxxx" should contain the `[TimelineTileSetting]` table record identifier created on step 4. In our case it is the "c57d375e-4ffa-4d65-a59e-d88e53f25803" value.

Attention. The "`entityConfigKey`" should be obligatory indicated. It should match the [*Id*] column value of the record containing settings of the necessary tile in the `[TimelineTileSetting]` table.

Since the identifiers of the added records are generated at random, the generated identifier in your database will be different from the one we have in our case, when you repeat step 4.

Attention. Be careful when modifying the [*Data*] column value. Incorrect modifications can disrupt the operation of all existing timeline tiles in a section.

As a result of case implementation you will have the tiles bound to the [*Books*] custom section displayed on the [*Timeline*] tab of the [*Accounts*] section page. These tiles contain all the fields we described in our case conditions. The short book description will only be displayed when you deploy the tile.