# DEVEXTREME

## 1 Basics of DevExtreme

### 1.1 What is DevExpress and DevExtreme?

* DevExpress is component vendor for variety of controls for different technologies.

### 1.2 Nuget Package installation

* Install-Package DevExtreme -Version 21.1.3

### 1.3 jQuery widgets

* Any devextreme UI component must be placed inside a container.
* dxButton is a jQuery plugin provided by devextreme to each UI component.
* To configure the UI component u have to pass **an object** to the plugin. The props of this object act as mirror to the props of the UI component.
* $(“#container”).dxButton() is different from $(“#conatiner”).dxButton(“instance”).
* At first place dx create a dx-button-content class div inside the conatiner and returns the conatiner jQuery element.
* At second, dx returns the button widget instance using which u can call dx’s method or access its properties.

### 1.4 Call methods of dx widgets

* There are several ways to invoke a dx UI component methods.

#### 1.4.1 Using the widget instance:

*myWidget.methodName();*

#### 1.4.2 Using the jQuery interface:

*$(“#myWidgetElement”).dxMyWidget(“methodName”);*

#### 1.4.3 Using DOM Element:

* First get raw widget instance,
* Then get the dx instance of that widget,
* And the it is as same as 1.4.1.

*var widgetElement = document.getElementById(“myWidgetElement”);*

*var widgetInstance = DevExpress.ui.getWidgetInstance(widgetElement);*

*widgetInstance.methodName();*

#### 1.4.3 Using global widget instance method

For some widget, there are global method available on ‘DevExpress.ui’, which can be used to interact with widgets.

E.g., DevExpress.ui.notify to show notification for some widget.

### 1.5 DevExpress.ui namespace

* DevExpress.ui is a namespace that contains global utility methods and properties related to UI components.
* Task performed by DevExpress.ui:
  1. Notification
  2. Widget Registraction
  3. Widget Lookup
  4. Widget Theme

### 1.6 Accessing custom handlers

*let buttonInstance = $("#container").dxButton("instance");*

*buttonInstance.\_options.\_optionManager.\_options.onClick*

*document.getElementById(“#container”).jQuery351039286975644576462.dxButton.\_options.\_optionManager.\_options.onClick*

* Another way to register an event in devextreme is using .on method. It allows you to subscribe to events at runtime and even to attach several handlers to a single event. E.g., myWidgetInstance.on(“click”, function(){  
   alert(“click1”);  
  });

myWidgetInstance.on(“click”, function(){  
 alert(“click2”);  
});

* To manually locate this handlers:

*document.getElementById(“#container”).jQuery351039286975644576462*.dxButton.\_eventsStrategy.\_events.click.\_list

#### Unsubscribing from an event handler

To unsubscribe from an event handler attached using .on() method. You have to invoke .off() method. (Both invokes \_eventStrategy methods only).

myWidgetInstance.off(“click”) => empty the \_list attached to click event in \_eventStrategy instance.

myWidgetInstance.off(“click”, handlerRef) => pops out the handlerRef from the \_list attached to click event in \_eventStrategy instance.

To unsubscribe from handler attached using .onEventName property, u have to do, myWidgetInstance.option(“eventName”, undefined);

## 2 Editors

### 2.1 Checkbox

* A box which when selected by end user => shows that a particular feature has been enabled or chosen.

#### Configuration object for checkbox

accessKey – what key should set focus on the UI component.

accessKeyEnabled – when user interacts with the UI component then UI component should change its state.

Disabled – whether UI Component responds to user.

FocusStateEnabled – whether UI component can be focused using kb navigation.

onInitialized – when the widget has been fully initialized but before its content is rendered or ready for interaction. After this UI component is rendered on the screen. E.g, apply filters.

onContentReady – is executed when the widget is ready for interaction i.e., Ui is painted on the screen. E.g., highlight row.

Raised Events" refers to the events that are triggered or fired when a particular property or option is changed.

### DevExtreme Components Options (Version 21.1)

#### Common Options

Data Binding

* dataSource: Specifies the data source for the component.
* value: Specifies the current value.
* valueExpr: Specifies which data field provides the component's value.
* displayExpr: Specifies which data field provides the display text.
* valueChangeEvent: Specifies the DOM events that trigger updates to the value.

Appearance

* elementAttr: Specifies the global attributes to be attached to the component's root element.
* height: Specifies the component's height.
* width: Specifies the component's width.
* visible: Specifies whether the component is visible.
* rtlEnabled: Switches the component to a right-to-left representation.

Behavior

* disabled: Specifies whether the component is disabled.
* readOnly: Specifies whether the component is read-only.
* tabIndex: Specifies the tab index of the component.

Events

* onValueChanged: A function that is executed after the component's value is changed.
* onInitialized: A function that is executed after the component is initialized.
* onDisposing: A function that is executed before the component is disposed of.

Check Box Specific Options  
dxCheckBox is a control that allows users to make binary choices, such as yes/no or true/false.

* text: Specifies the text displayed by the Check Box.
* name: Specifies the value of the name attribute of the underlying HTML element.
* Date Box Specific Options
* type: Specifies the type of the date/time picker (date, datetime, time).
* displayFormat: Specifies the format in which the date/time is displayed.
* min: Specifies the minimum value.
* max: Specifies the maximum value.
* Drop Down Box Specific Options
* opened: Specifies whether or not the drop-down editor is displayed.
* acceptCustomValue: Specifies whether users can enter a custom value.
* showClearButton: Specifies whether to display the Clear button in the component.

#### Number Box Specific Options

dxNumberBox is an editor that allows users to enter and edit numeric values with various formatting options.

* min: Specifies the minimum value.
* max: Specifies the maximum value.
* step: Specifies the step by which a numeric value is increased or decreased.
* format: Specifies the format in which the numeric value is displayed.

#### Select Box Specific Options

dxSelectBox is a drop-down list editor that enables users to select a single value from a list of items.

* items: Specifies an array of items displayed in the Select Box.
* itemTemplate: Specifies a custom template for items.

#### Text Area Specific Options

dxTextArea is a multiline text editor that allows users to enter and edit longer texts.

* maxLength: Specifies the maximum number of characters you can enter.
* spellcheck: Specifies whether or not the spell checking is enabled.
* autoResizeEnabled: Specifies whether the height of the TextArea changes as the user types.

#### Text Box Specific Options

dxTextBox is a single-line text editor that allows users to enter and edit plain text.

* mode: Specifies the mode (text, password, email, etc.).
* mask: Specifies a mask for the TextBox.
* maskRules: Specifies custom mask rules.
* Button Specific Options
* text: Specifies the text displayed on the button.
* type: Specifies the button type (normal, default, back, etc.).
* onClick: A function that is executed when the Button is clicked.

#### FileUploader Specific Options

dxFileUploader is a widget that allows users to upload files to a server with support for chunked file uploads.

* accept: Specifies the accepted file types.
* multiple: Specifies whether the FileUploader allows multiple file selection.
* uploadUrl: Specifies the URL where files are uploaded.
* chunkSize: Specifies the size of file chunks in bytes.

#### Validation Specific Options

Validation is a feature that enables the addition of validation rules to editors, ensuring that user inputs meet specified criteria.

* validationGroup: Specifies the validation group the editor will be a part of.
* validationRules: An array of validation rules to be checked for the editor.

#### Radio Group Specific Options

dxRadioGroup is a control that allows users to select a single option from a group of mutually exclusive options.

* items: Specifies an array of items displayed in the Radio Group.
* layout: Specifies the layout of items (horizontal or vertical).