



# Web Blocks

---

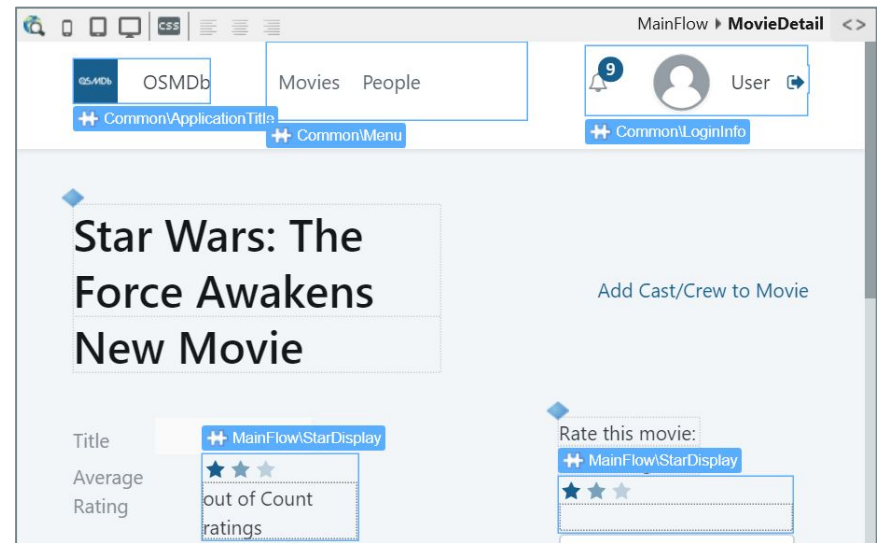


# Topics

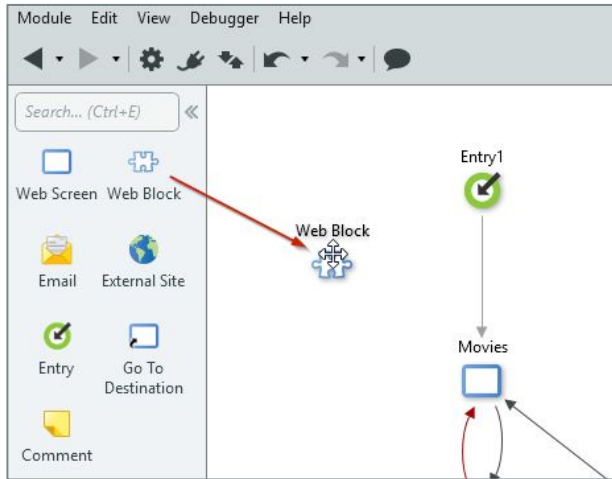
- Creating a Web Block
- Designing and Using Web Blocks
- Web Block Interactions
  - Events
  - Event Handlers
- Screen Lifecycle with Web Blocks

# Web Blocks

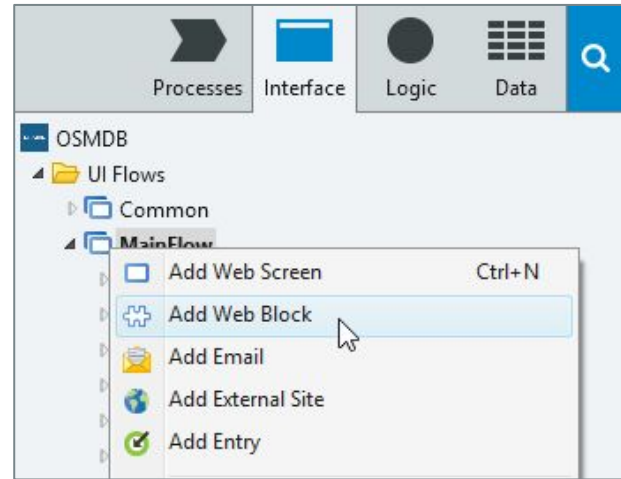
- A Web Block is a **reusable UI** component
- Web Blocks promote reusability
  - Develop once, use many times
  - Encapsulates its own logic
- Web Blocks improve maintainability
  - Changes are reflected on every Screen that uses the Web Block



# Creating Web Blocks



Drag and Drop



UI Flow context menu

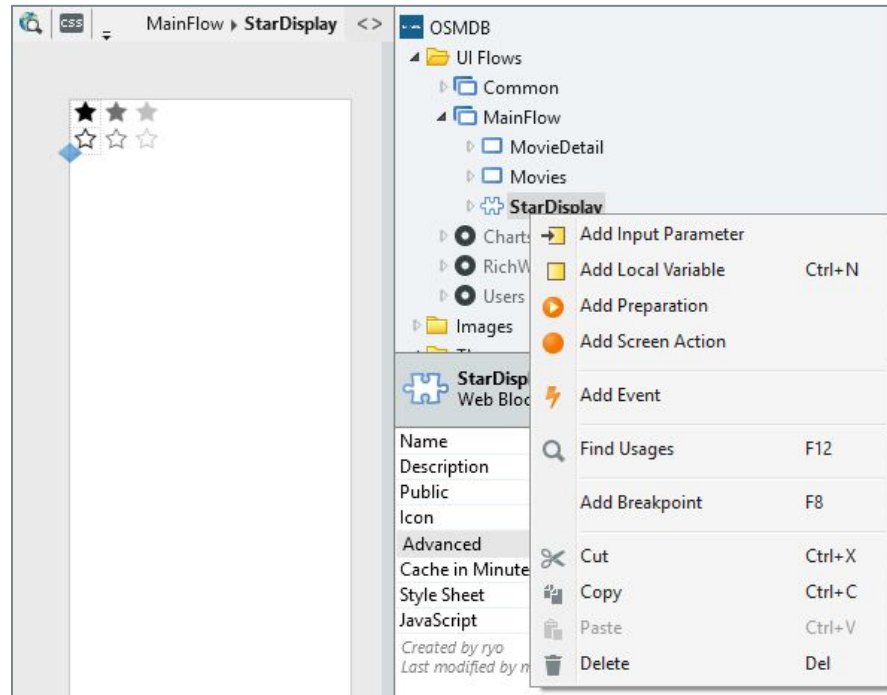
# Designing Web Blocks

Web Blocks are designed just like Screens

Web Blocks can have:

- Input Parameters
- Local Variables
- Preparation
- Screen Actions
- **Events**
- **Placeholders**

Web Blocks do **not** have  
Output Parameters

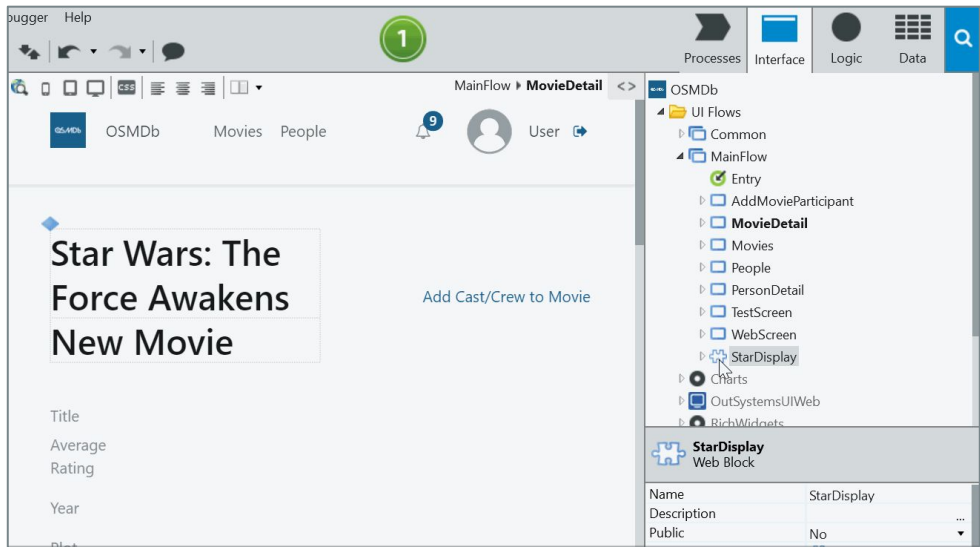


# Using Web Blocks

Web Blocks can be placed inside a Web Screen or another Web Block

- **Parent** of the Web Block
- Recursion not allowed

Parents can have multiple instances of a Web Block



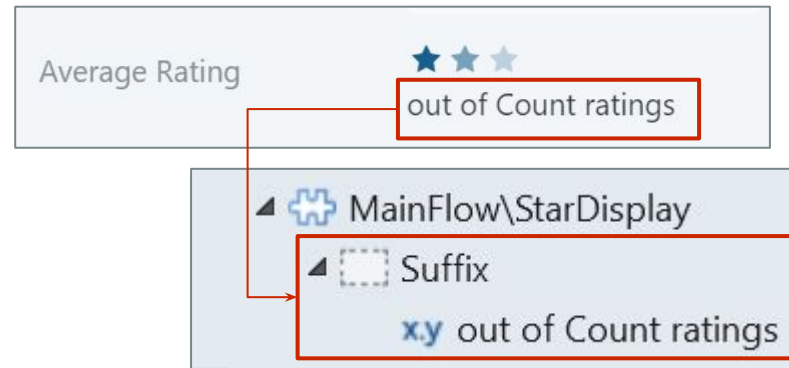
# Placeholder Widget

- Only available inside Web Blocks
- Reserves space for dynamic content defined when instantiated

## Designing the Web Block

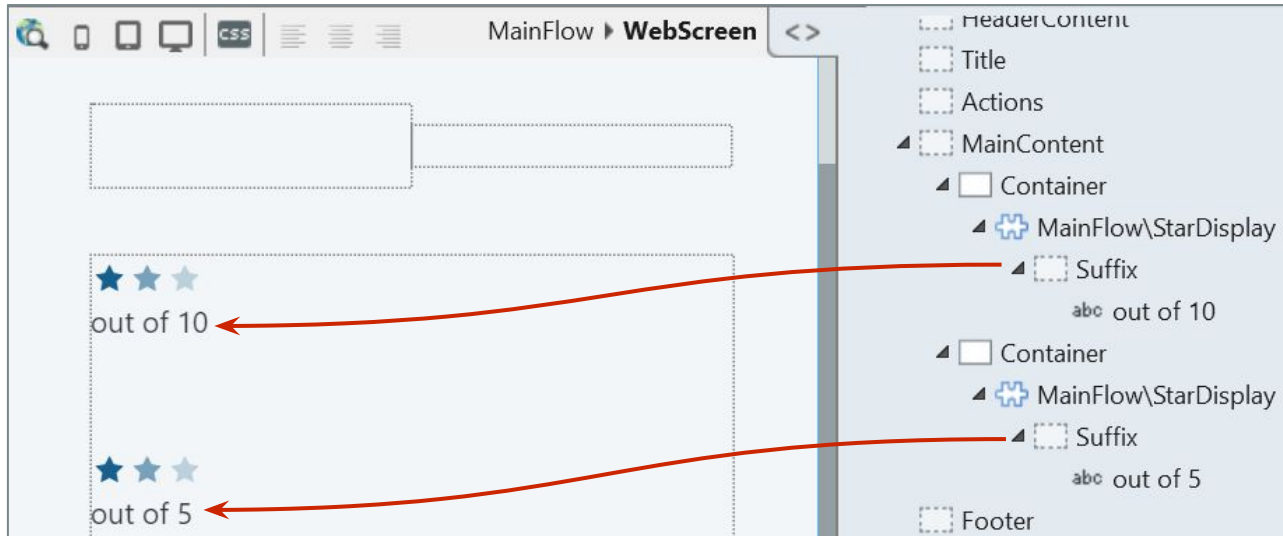


## Instance of the Web Block



# Dynamic Content in Web Blocks

Each instance of the Web Block can have different content inside the Placeholders

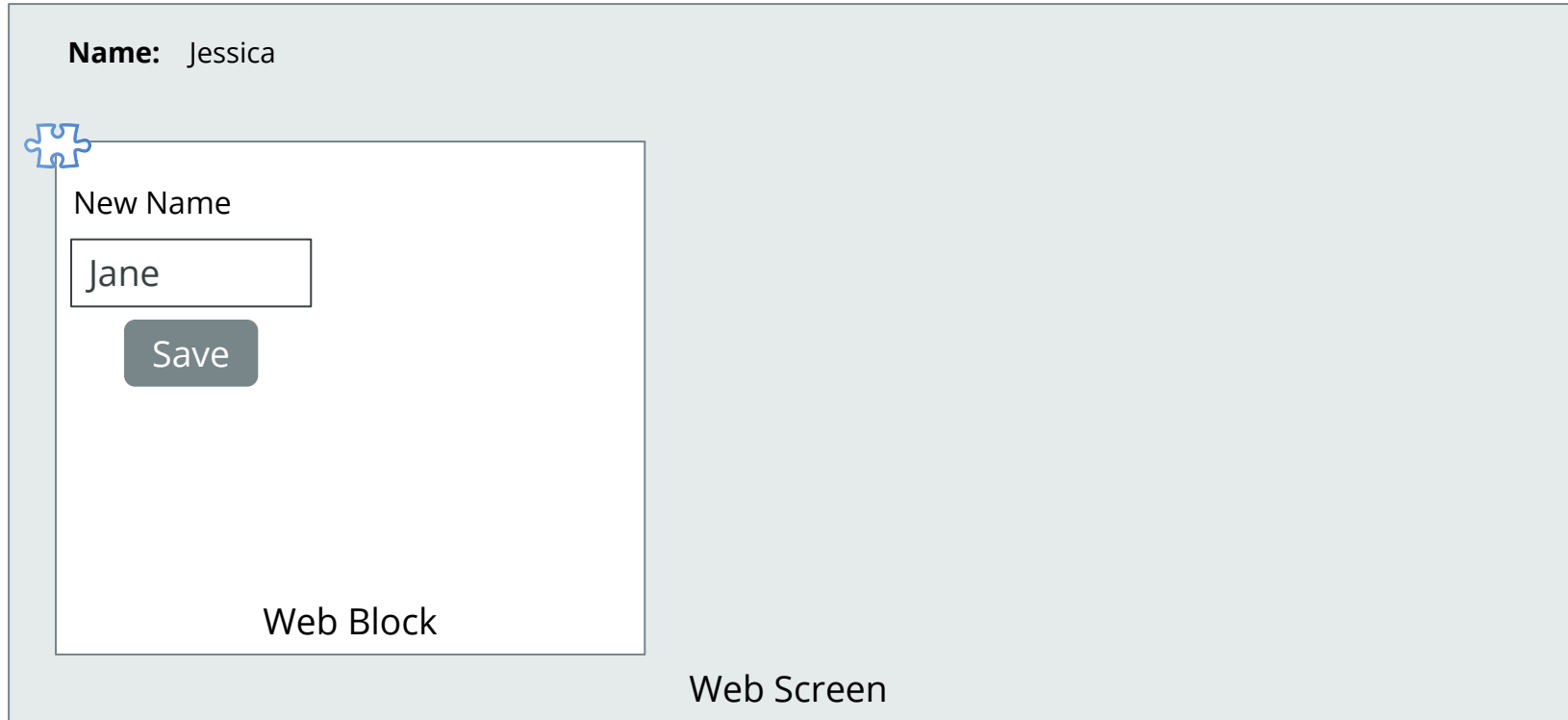




# Web Block Interactions

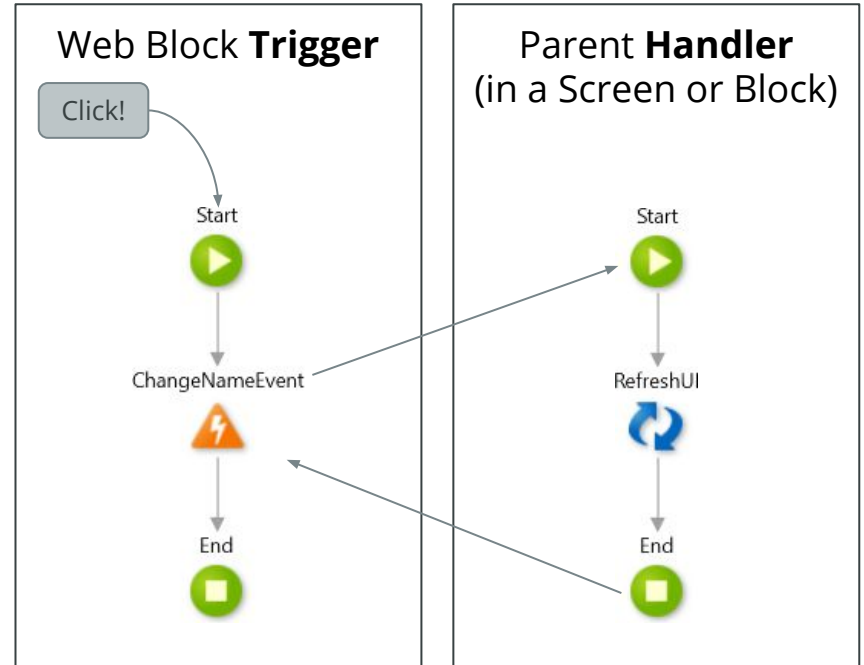


# Web Block inside a Screen

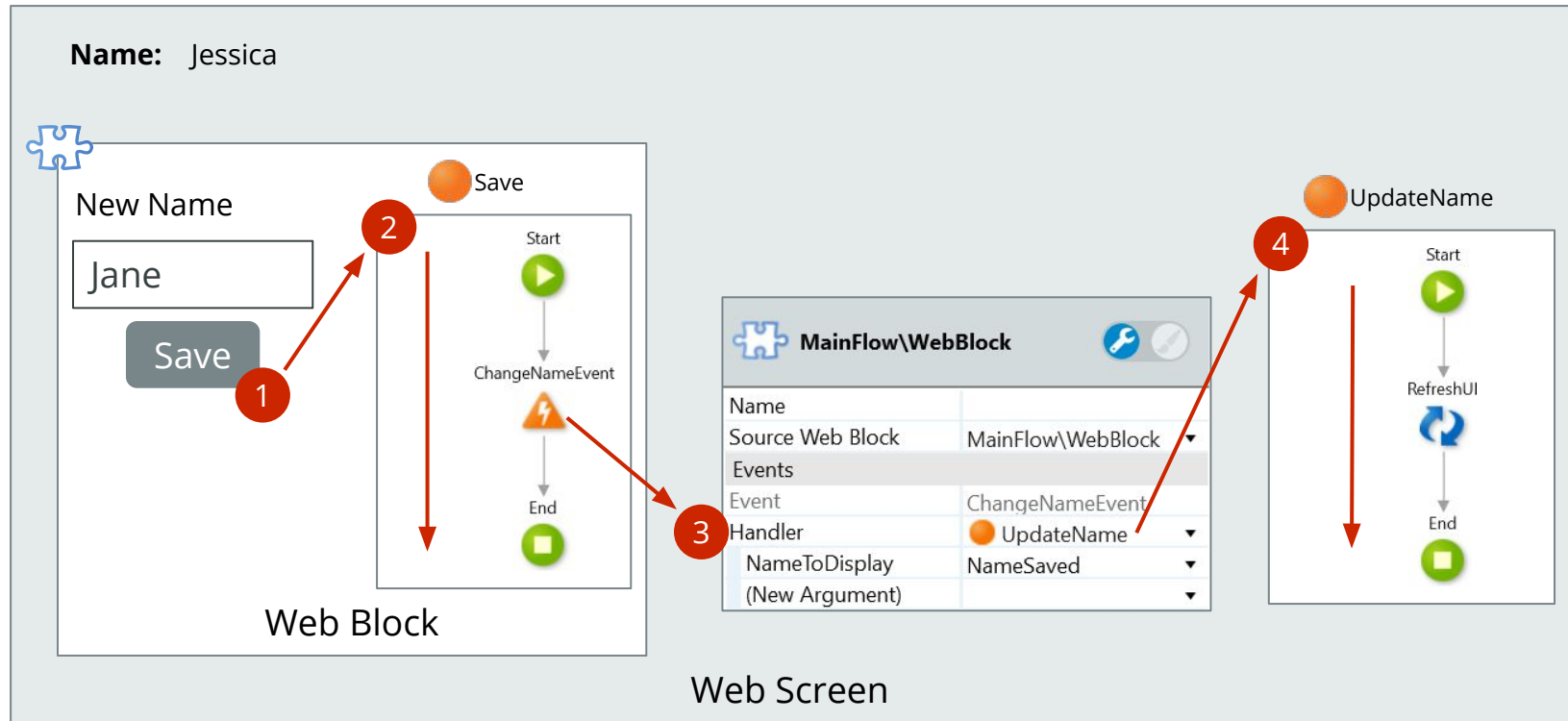


# Interaction with the Parent

- Web Blocks have:
  - Their own scope
  - No access to the parent's scope
  - Events to facilitate interaction
- Interaction with the parent is done using events
  - The Web Block **triggers** an event
  - Parent **handles** (reacts to) the event from the block



# Triggering and Handling Events



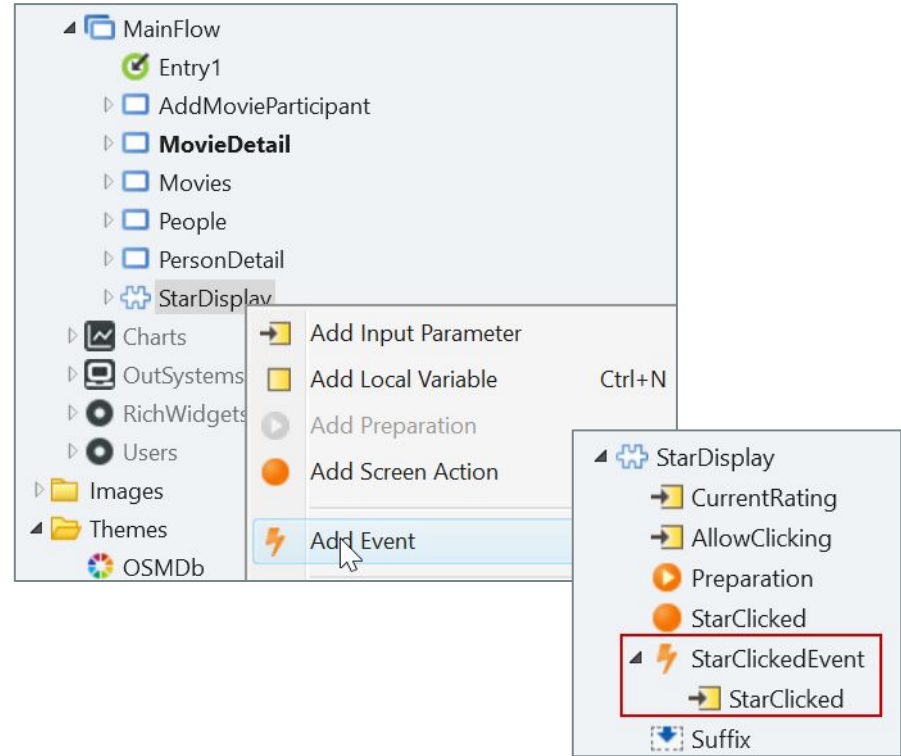


A full-page background image featuring an astronaut in a white spacesuit floating in the black void of space, surrounded by stars. The astronaut is holding a silver laptop in front of their chest. The text 'Events and Event Handlers' is overlaid in white, bold font on the left side of the image.

# **Events and Event Handlers**

# Defining Events

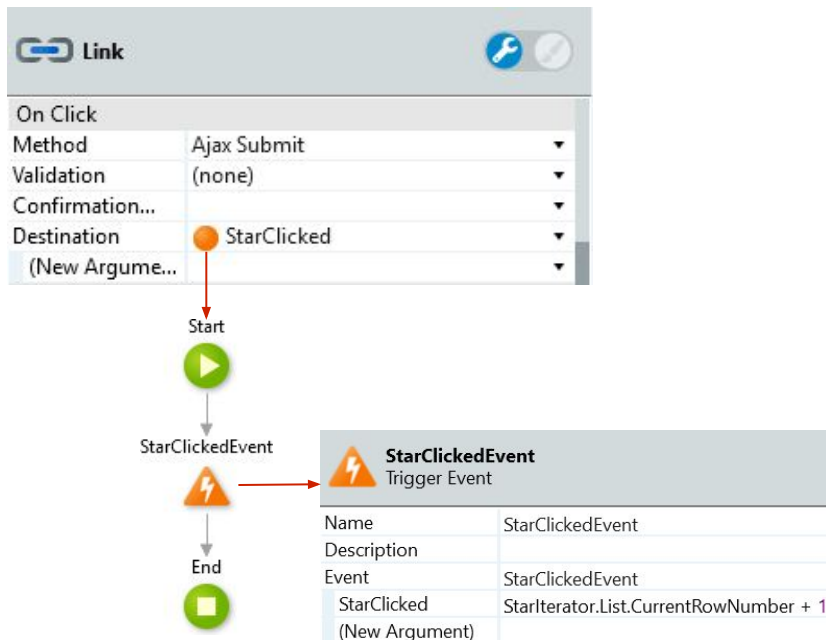
- Events can only be defined in the scope of Web Blocks
- Events can have Input Parameters to send data to the parent
- Input parameters can be defined as mandatory (or not)



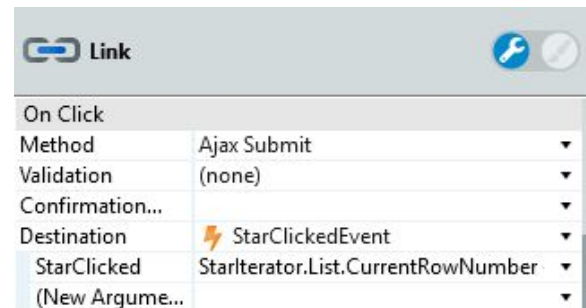
# Triggering Events

Events can only be triggered within a Web Block

## Inside a Screen Action



## Directly as Destination



# Handling Events

## Event handlers

- Screen Actions defined in the scope of the parent
- Specify the logic to handle an Event
- Have access to the Event Input Parameters

## When a Web Block triggers an Event

- The Event handler Action is executed

The screenshot displays the OutSystems Studio interface. The top part shows a preview of a web application titled "Star Wars: The Force Awakens". It includes a title input field, an "Average Rating" section with three stars and the text "out of 5 ratings", and a "Rate this movie:" section with three stars and a "Click to add Suffix" button. A red dashed line connects the "Click to add Suffix" button in the preview to the "StarClicked" event in the "MainFlow\StarDisplay" web block configuration panel.

The "MainFlow\StarDisplay" web block configuration panel is shown below the preview. It has a table with the following data:

MainFlow\StarDisplay	
Name	
Source Web Block	MainFlow\StarDisplay
Rating	GetUserMovieRating.List.Current.U
AllowClicking	CheckRegisteredRole(UserId:)
(New Argument)	
Events	
Event	StarClickedEvent
Handler	StarClickedEventHandler
StarClicked	StarClicked

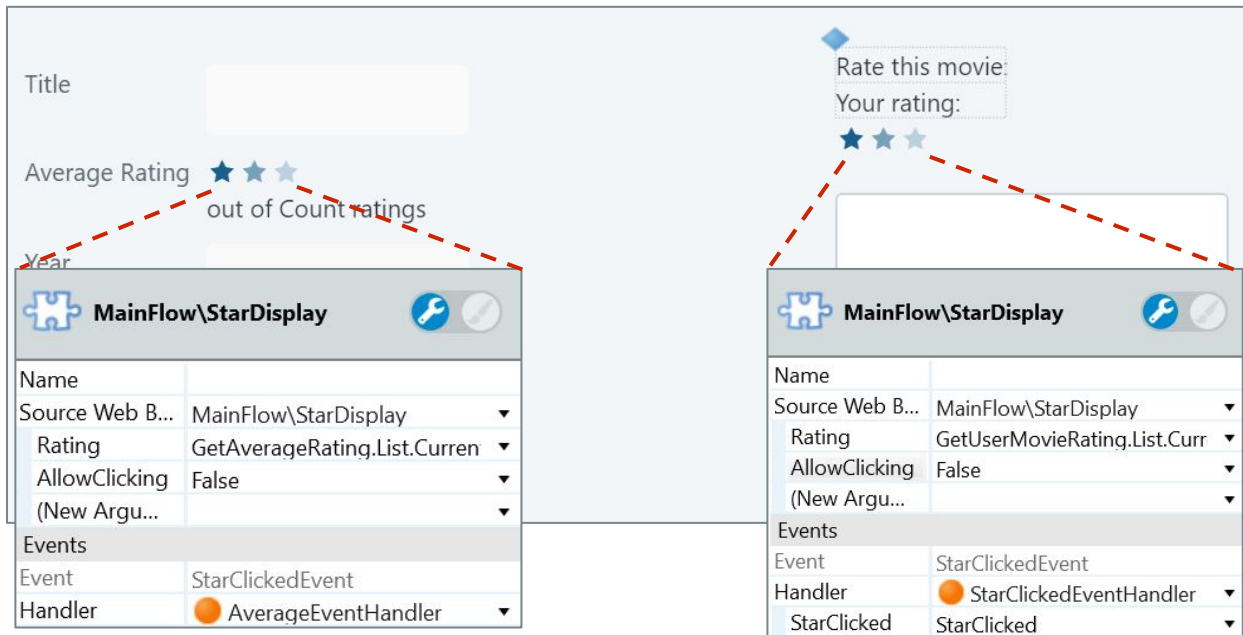
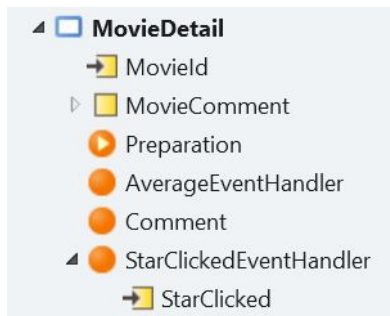
The "MovieDetail" web block configuration panel is shown to the right of the "MainFlow\StarDisplay" panel. It has a tree view with the following structure:

- MovieDetail
  - MovieId
  - MovieComment
    - Preparation
    - Comment
    - Save
    - StarClickedEventHandler
      - StarClicked



# Different Event Handlers


- Each Handler can use a different Screen Action
- The same Screen Action can be used in multiple handlers



A full-page background image featuring an astronaut in a white spacesuit floating in the black void of space, surrounded by distant stars. The astronaut is holding a silver laptop in front of their chest. The text 'Screen Lifecycle with Web Blocks' is overlaid in white, bold, sans-serif font, centered horizontally and partially overlapping the astronaut's torso and the laptop.

# Screen Lifecycle with Web Blocks

# Web Blocks Lifecycle

 OSMDB [Movies](#) [People](#) [Login](#)

## Fight Club

Title \*

Fight Club

Year \*

1999

Plot Summary

An insomniac office worker that is looking for a change in life and a devil-may-care soap maker form an underground fight club that evolves into something

Genre

Drama

Gross Takings


98763847

Is Available On DVD

☒

Save

[Back to list](#)



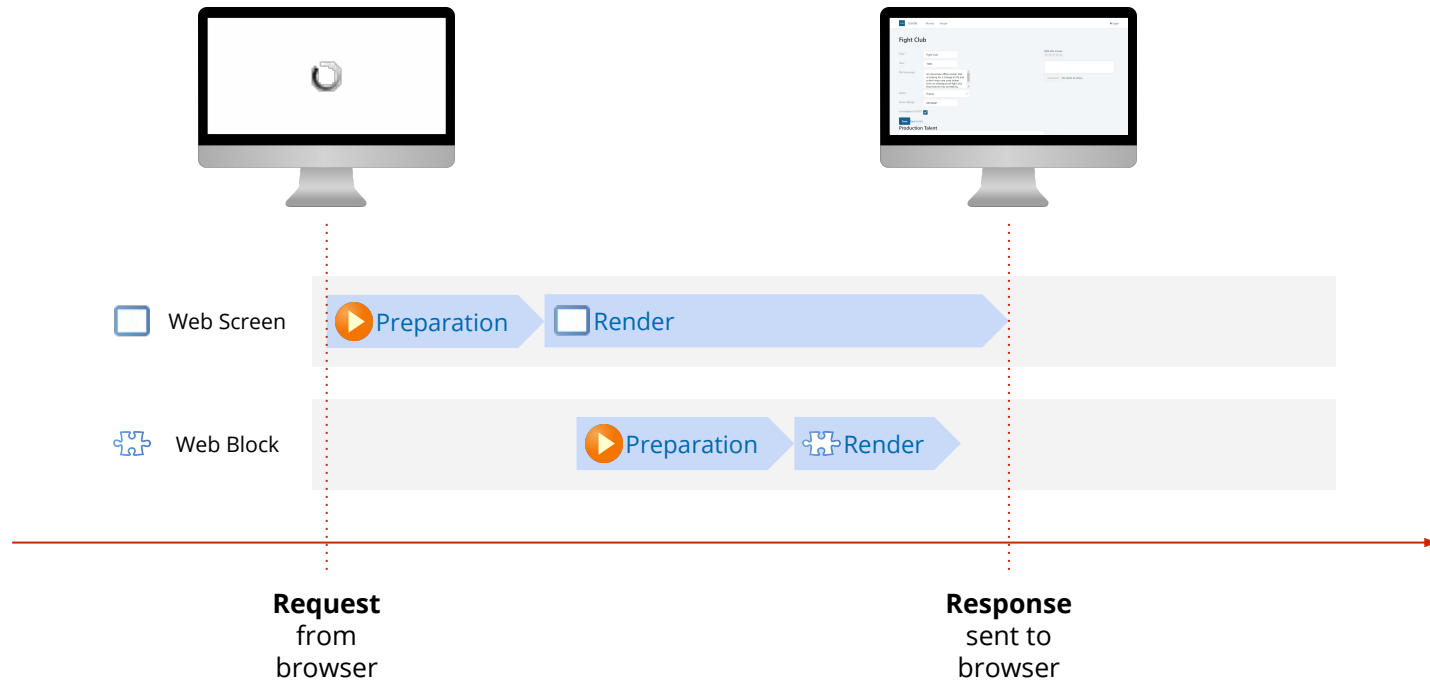
Rate this movie:

☐ ☐ ☐ ☐ ☐

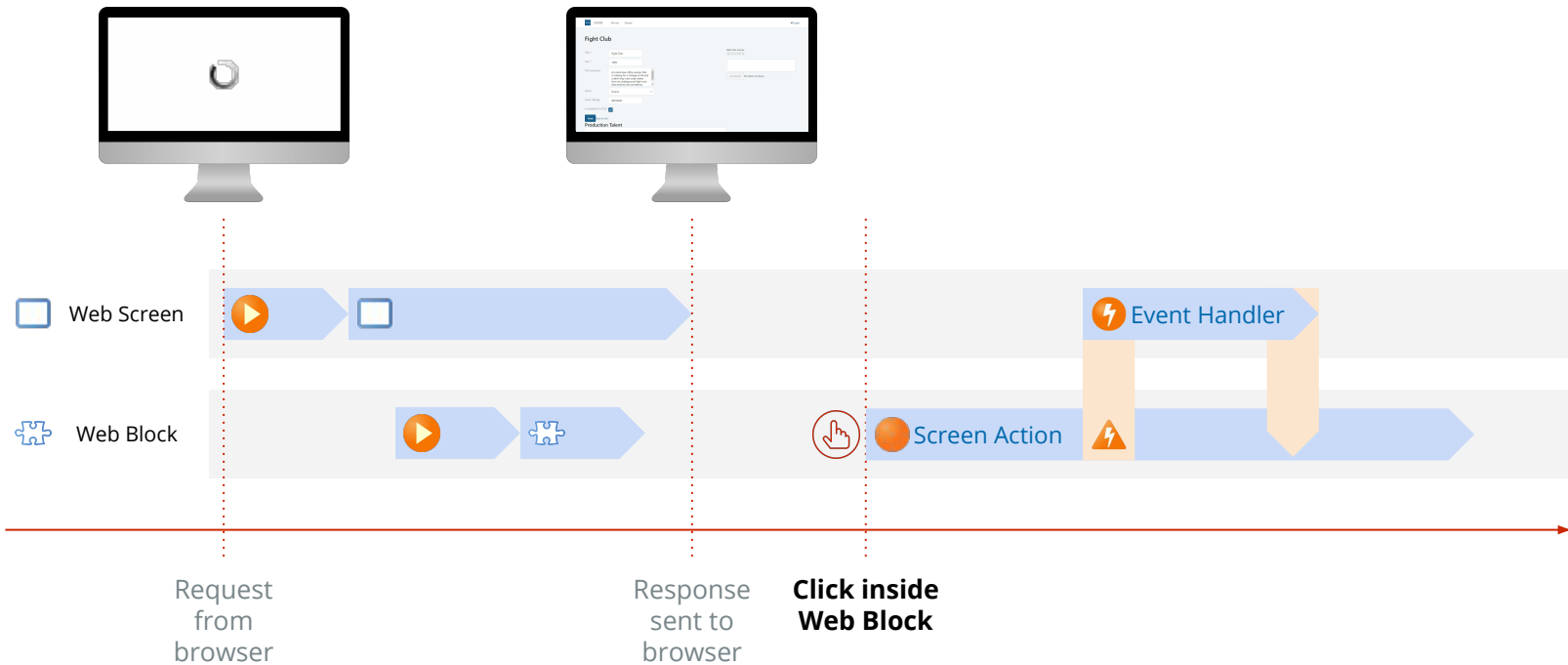
Comment

No items to show...

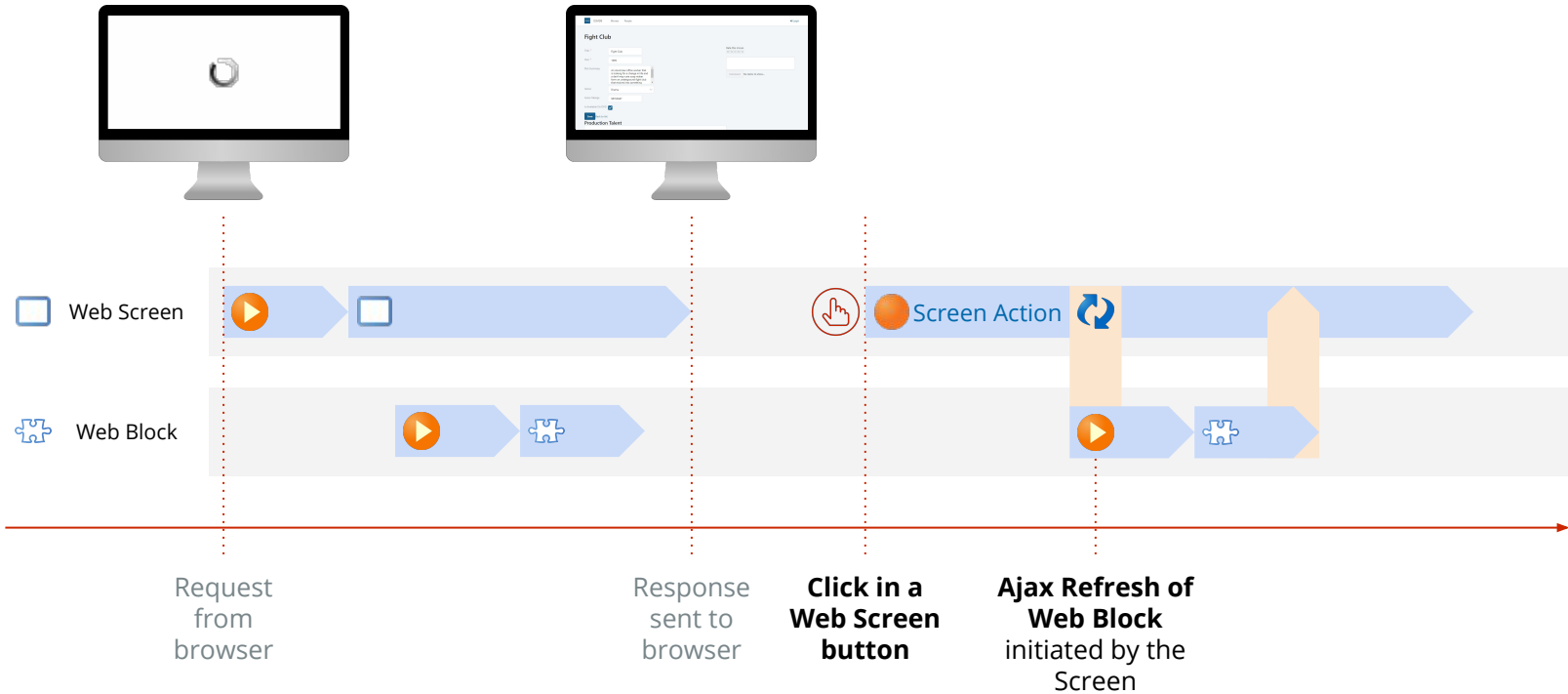
# Screen Lifecycle with Web Blocks



# Web Blocks Events Lifecycle



# Ajax Refreshing a Web Block



# Summary

- Creating a Web Block
- Designing and Using Web Blocks
- Web Block Interactions
  - Events
  - Event Handlers
- Screen Lifecycle with Web Blocks



A city skyline at night, featuring several tall skyscrapers. The buildings are illuminated with warm lights, and some have distinctive architectural features like a grid-like facade. In the foreground, there are bright, horizontal light trails in yellow and white, suggesting fast-moving traffic or a long-exposure photograph. The sky is a deep blue with some faint clouds.

**Web Blocks**  
**Thank You!**



# Web Screen Request

Name

Techy


Year

2017


Nr. Offices

13

See Sales



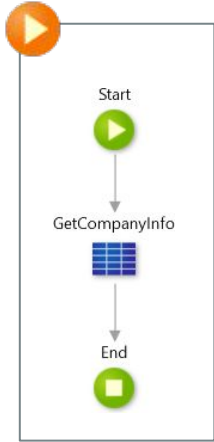
Monthly Sales



Month	Sales (K)
Jan 2017	0.5
Feb 2017	0.5
Mar 2017	0.6
Apr 2017	0.5
May 2017	0.9
Jun 2017	1.0
Jul 2017	1.1
Aug 2017	1.0
Sep 2017	1.5
Oct 2017	1.7
Nov 2017	1.1
Dec 2017	1.2

Web Screen

# Screen's Preparation Runs




**Screen's  
Preparation**

**Web Screen**

# Screen rendering...

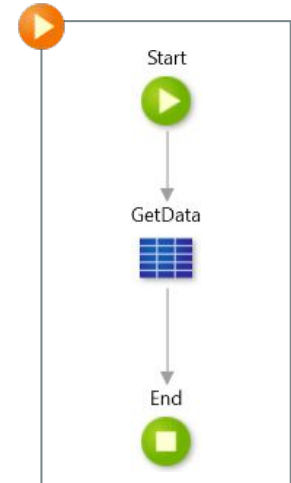
Name  Year

Nr. Offices

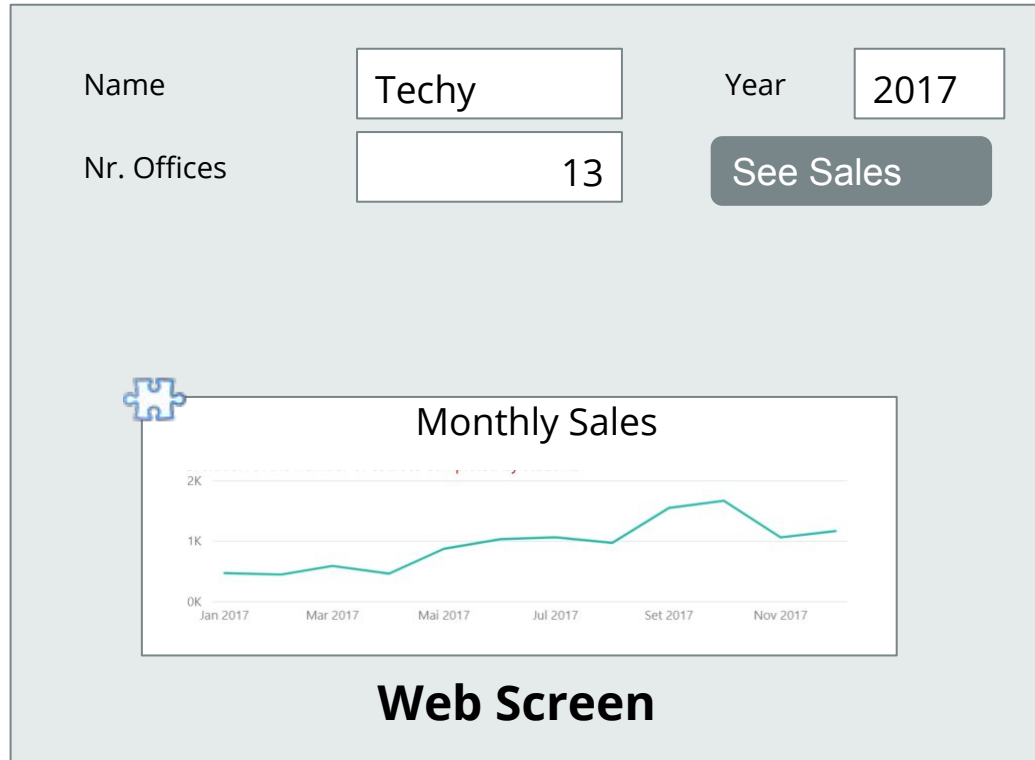


**Web Screen**

## Web Block's Preparation




# Web Block Rendered




# Ajax Request of a Web Block

Name  Year

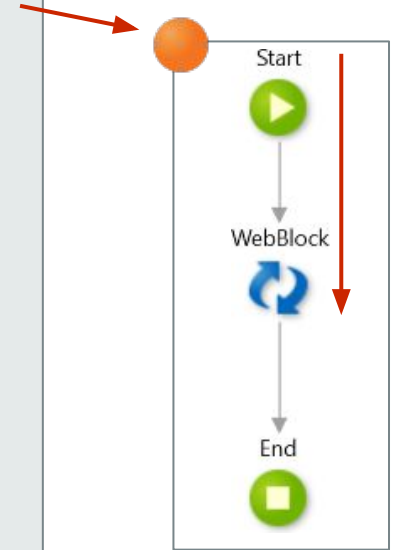
Nr. Offices

 **Monthly Sales**



Month	Sales (K)
Jan 2017	0.5
Feb 2017	0.5
Mar 2017	0.6
Apr 2017	0.5
May 2017	0.9
Jun 2017	1.0
Jul 2017	1.1
Aug 2017	1.0
Sep 2017	1.6
Oct 2017	1.7
Nov 2017	1.1
Dec 2017	1.2


**Web Screen**




# Web Block's Preparation Runs

Name  Year

Nr. Offices  [See Sales](#)

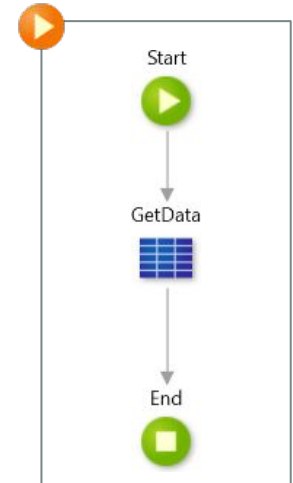
 **Monthly Sales**



Month	Sales (K)
Jan 2017	0.5
Feb 2017	0.5
Mar 2017	0.6
Apr 2017	0.5
May 2017	0.9
Jun 2017	1.0
Jul 2017	1.1
Aug 2017	1.0
Sep 2017	1.6
Oct 2017	1.7
Nov 2017	1.1
Dec 2017	1.2

**Web Screen**


## Web Block's Preparation

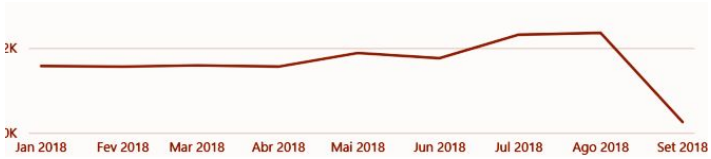


# Web Block UI is rendered

Name  Year

Nr. Offices

 **Monthly Sales**



Month	Sales (K)
Jan 2018	1.5
Fev 2018	1.5
Mar 2018	1.5
Abr 2018	1.5
Mai 2018	1.6
Jun 2018	1.5
Jul 2018	1.8
Ago 2018	1.9
Set 2018	1.9

**Web Screen**

## Web Block's Preparation

