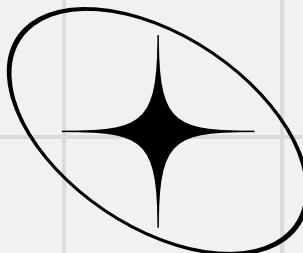


MUHAMMAD FIKRI BIN SHARUNAZIM
A21EC0075

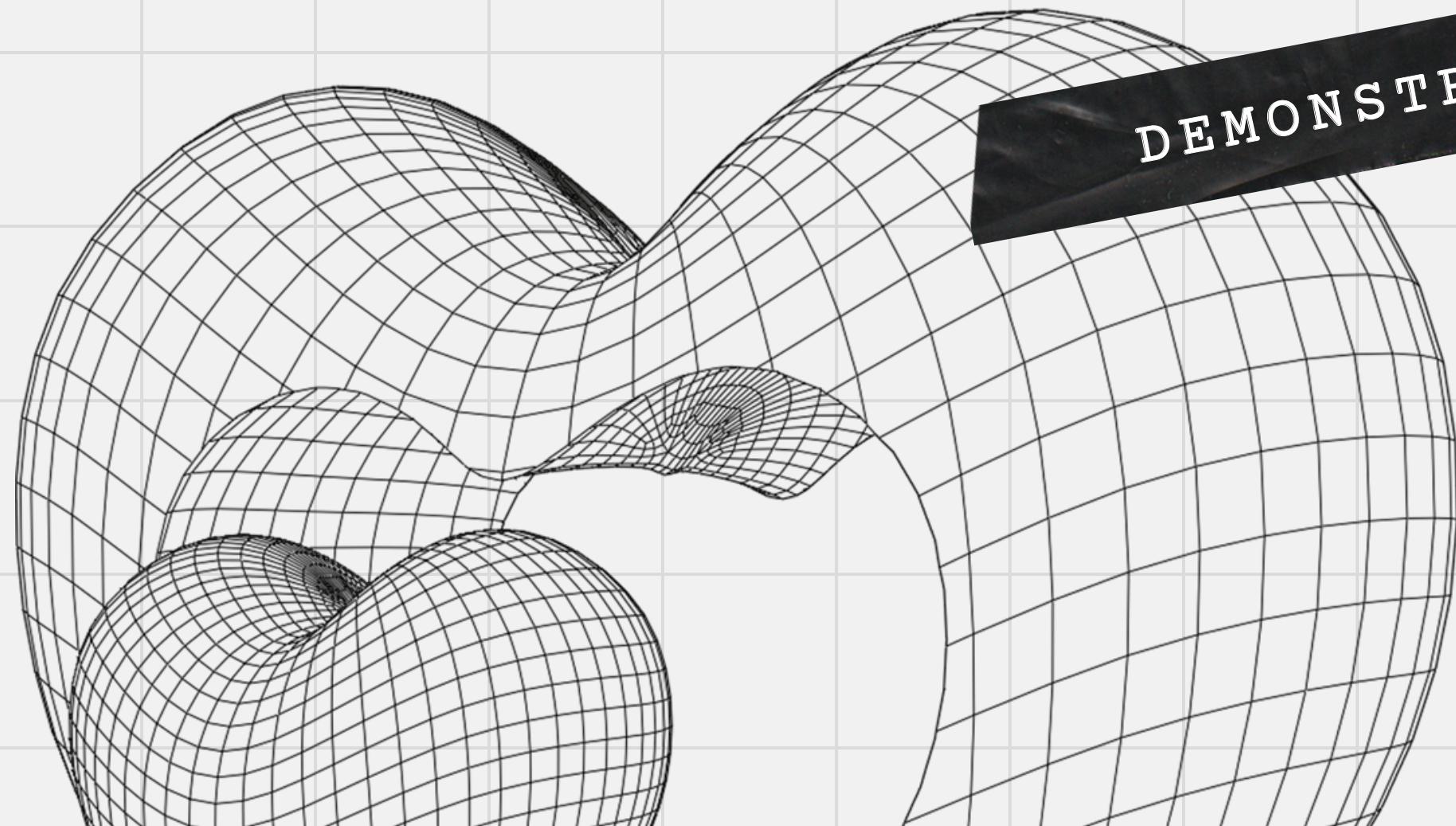


MIKHAIL BIN YASSIN
A21EC0058

GROUP 4

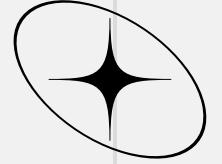
LOW-CODE

DEMONSTRATION



GROUP 4





VISUAL MODELLING

Drag-and-drop functionality and an intuitive visual UI

REUSABLE COMPONENT

Build applications with pre-configured modules, logic, templates, connectors, and more.

COLLABORATION TOOLS

Built-in tools for feedback loops, revision tracking, user stories, messaging, and more.

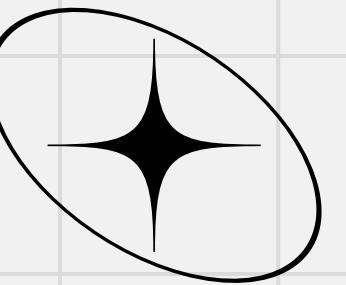
SCALABLE ENVIRONMENTS

Deploy new applications and augment existing applications quickly as customer demands and business needs change.

WHAT IS LOW-CODE

Low-code is an application development method that minimizes traditional hand-coding processes. It operates in a model-driven, drag-and-drop interface, making coding more visual rather than textual. This approach makes development more accessible to users without technical expertise.





DEMONSTRATION



1) Go to <https://www.outsystems.com/> and click on "Start Free" for those who did not create any Outsystems account yet.

The screenshot shows the OutSystems website homepage. At the top, there is a navigation bar with the OutSystems logo, a banner about AI Agent Builder, a 'Read the release' link, and user account options (Log in, Contact Sales, Support, EN). A red circle with the number '1' is positioned above the 'Support' link. Below the navigation is a main menu with links to Platform, Solutions, For Developers, and About OutSystems. To the right of the menu are a search icon, a 'Schedule demo' button, and a prominent red 'Start free' button, which is also highlighted with a red box. The central content area features a large headline: 'The low-code platform for your high-stakes software in insurance'. To the left of the headline is a quote from Frank Schmid, CIO of Gen Re, stating: "'With low-code, we can develop applications that don't develop into technical debt. We can develop applications that are essentially living organisms and can adapt to changing business needs.'" Below the quote are two buttons: 'Explore the Platform' (red) and 'Watch the Gen Re story' (white). At the bottom, there are four numbered circular icons (1, 2, 3, 4) and three small gray rectangular images.

2) Complete the form and click on "Agree and start free".
Then, you need to confirm your email to activate your account.



Try OutSystems Free

→ Build better

Use AI-assisted development, packaged integrations, and best-practice guidance to build better apps than ever before.

→ Ship faster

Deliver more quickly with pre-built UI patterns, app templates, and code modules for development up to 10x faster than traditional code.

→ Manage painlessly

Take the headache out of SDLC by automating testing, security, publishing, and monitoring.

→ Evolve effortlessly

Get to version 100 just as easily as you got to version 1, with future-proof apps that are easy to adjust for changing business or technology needs.

No minimum purchase. You can view the full details of what's included in Free [here](#).

Create your free account

My name is Fikri Sharunazim

I'm not trying OutSystems for my company

My email is muhdfikri619@gmail.com

I've set a strong password

Yes, I would like to receive the latest news and insights about low code, OutSystems products and services.

We have sent the terms and conditions to your email. By clicking Agree and start free, you agree to the OutSystems [Trial Agreement](#) and [Privacy Policy](#)

2

Agree and start free

Already have an account? [Log in](#)

3) Click on “Create Environment”.

The screenshot shows the OutSystems.com homepage. At the top, there is a navigation bar with links for "OutSystems.com", "My Platform", "Community", "Support", and "Contact us". The "outsystems My Platform" logo is on the left, and a search bar with a magnifying glass icon is on the right. A prominent white callout box in the center says "Download and install Service Studio" with a "Download" button. Below it, a blue box contains the text "Complete your account with a personal environment and start building apps with the OutSystems development tool." with a "Create environment" button. To the right, a large card titled "Build a fully functional app in Service Studio" shows a mobile application interface. To the right of that is another card titled "Your infrastructure" with a "Create environment" button, which is circled in red with the number "3" above it. At the bottom, there is a section titled "Development how-tos" with links to "Where to start", "Overview of OutSystems development", "Get to know Service Studio", and "DevOps in OutSystems".

Download and install Service Studio

Download our low-code development tool to build web and native mobile apps.

Download

Complete your account with a personal environment and start building apps with the OutSystems development tool.

Create environment

Build a fully functional app in Service Studio

Your infrastructure

Development environment
Please create your environment

Create environment

3

Development how-tos

Where to start

Overview of OutSystems development

Get to know Service Studio

DevOps in OutSystems

Guided paths

4) Scroll down and download the “Outsystems Service Studio”.

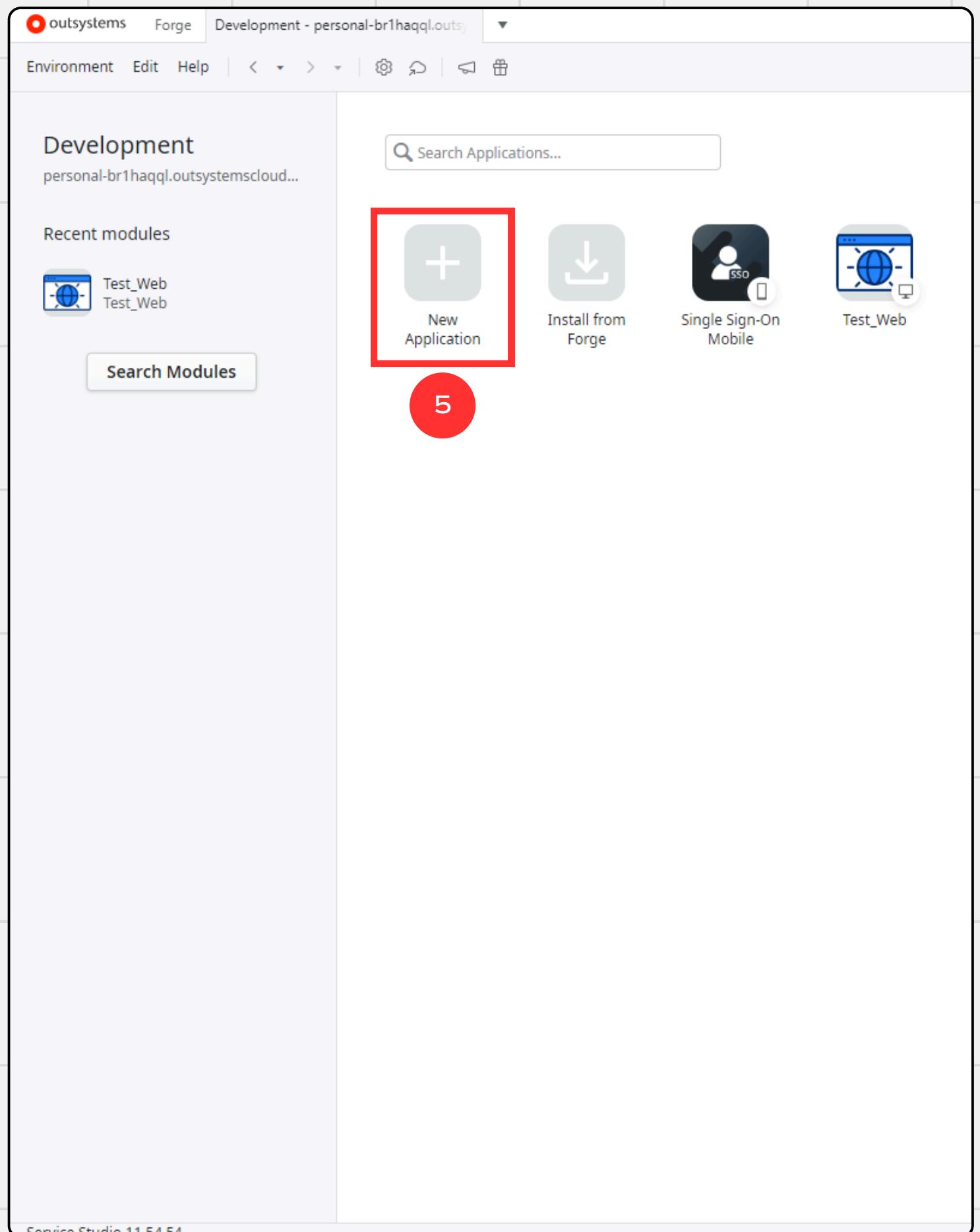
The screenshot shows the OutSystems.com homepage. At the top, there is a navigation bar with links for "OutSystems.com", "My Platform", and "Community". On the right side of the top bar are "Support" and "Contact us" links, along with a search icon and a user profile icon. Below the top bar, the OutSystems logo and "My Platform" text are displayed. A large white box labeled "Tools" contains six items: "Service Studio", "Integration Builder", "LifeTime", "Service Center", "Users", and "App Feedback". The "Service Studio" item is highlighted with a red box around its "Download" button, which has a red circle with the number "4" above it. To the right of the tools is a blue box titled "Your Tasks" with the text "0 of 6 completed".

Tools

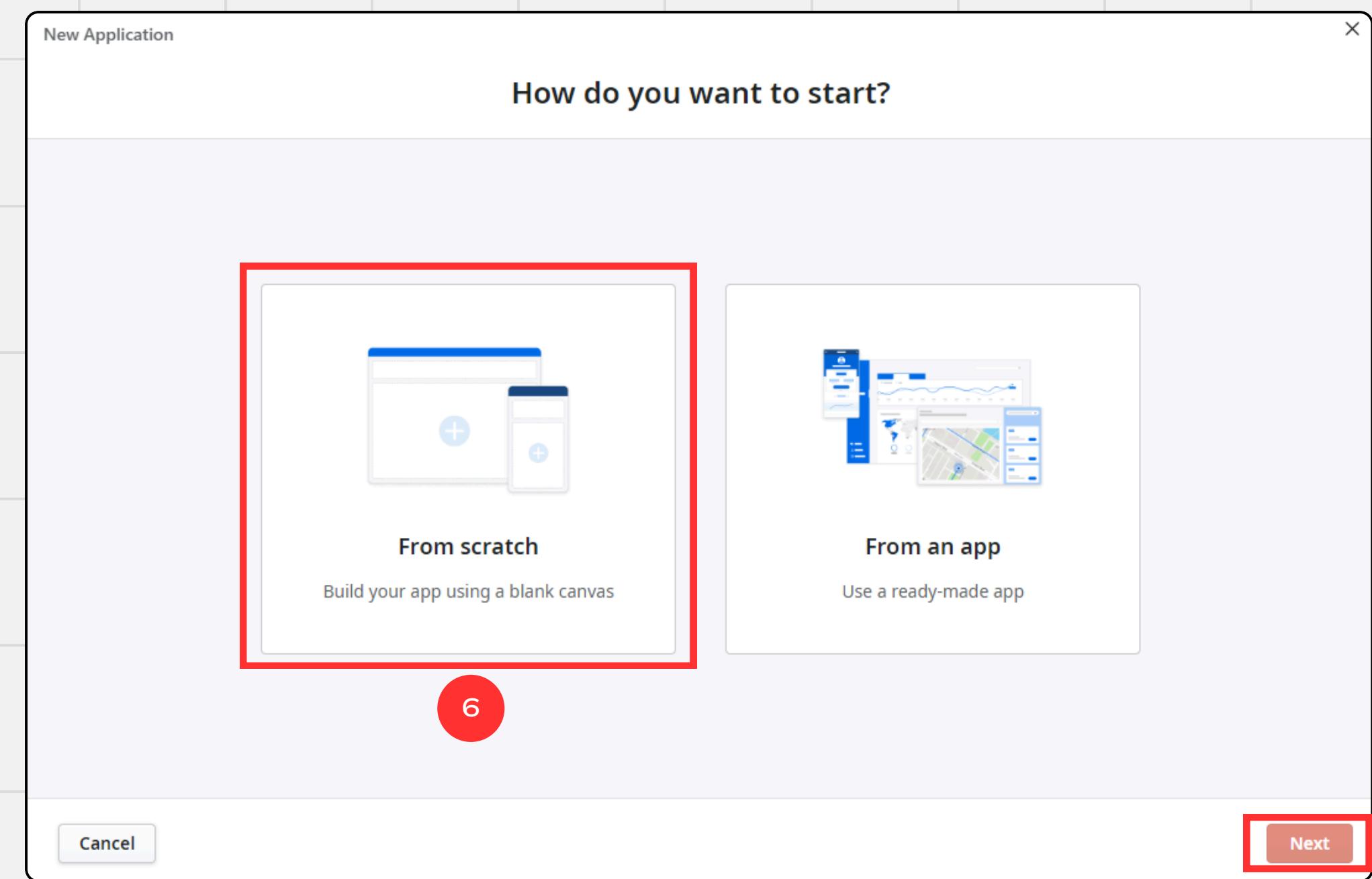
- Service Studio**
Build enterprise-grade web and mobile apps with our low-code visual development tool.
[Open](#) [Download](#) 4
- Integration Builder**
Build connectors and integrate your apps with external data sources.
[Log in](#)
- LifeTime**
Manage the entire app lifecycle from development to deployment, IT users, environment settings and security.
[Deploy](#) | [Manage IT Users](#) | [Analytics](#)
- Service Center**
Manage the apps within each environment, monitor error logs, and handle web services and timers.
[Development](#)
- Users**
View, update or delete the end users of your apps, and manage their permission roles.
[Development](#)
- App Feedback**
Enable in-app feedback from users to collect suggestions or bug reports.
[Development](#)

Your Tasks
0 of 6 completed

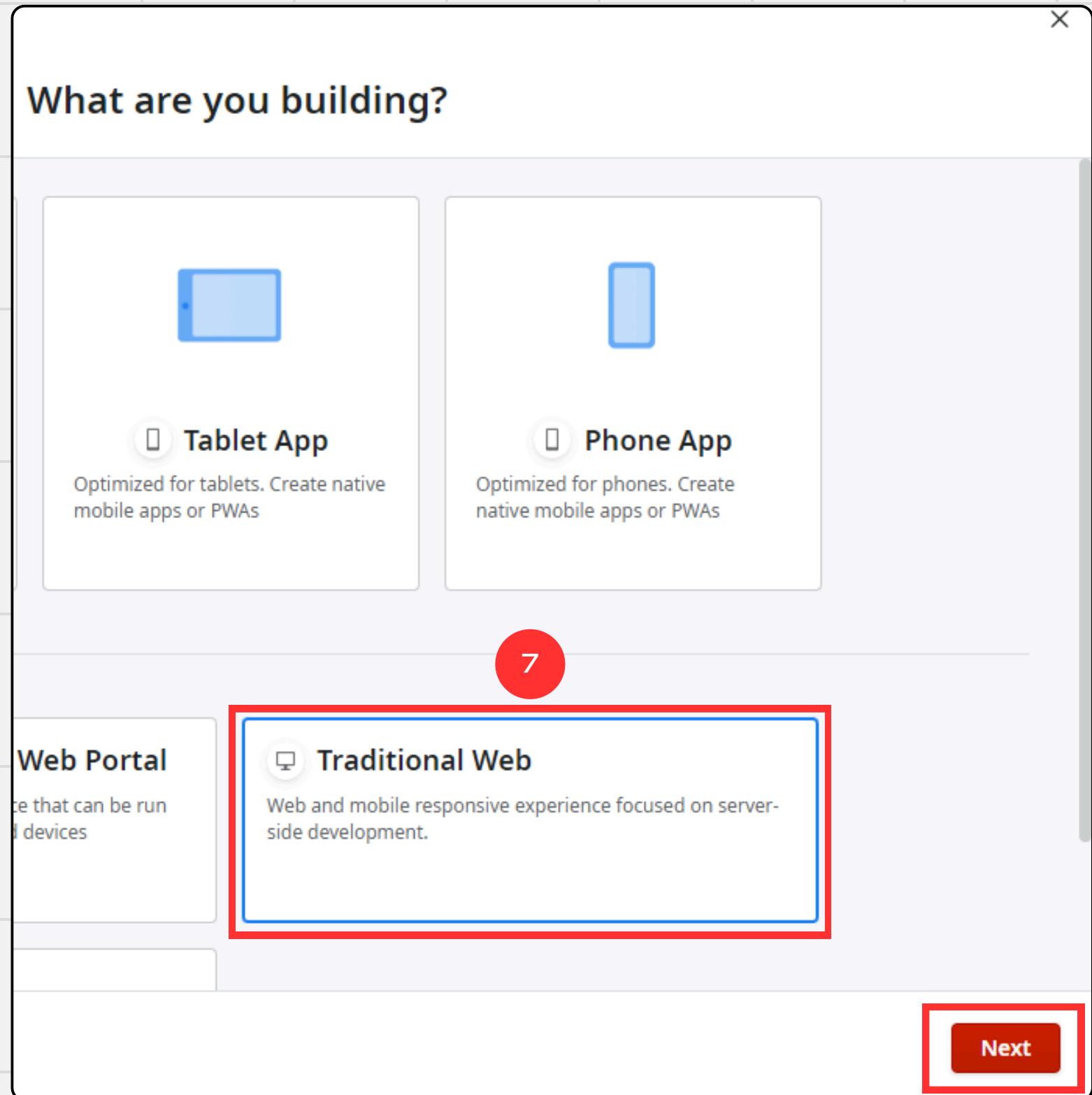
5) Click on “New Application”.



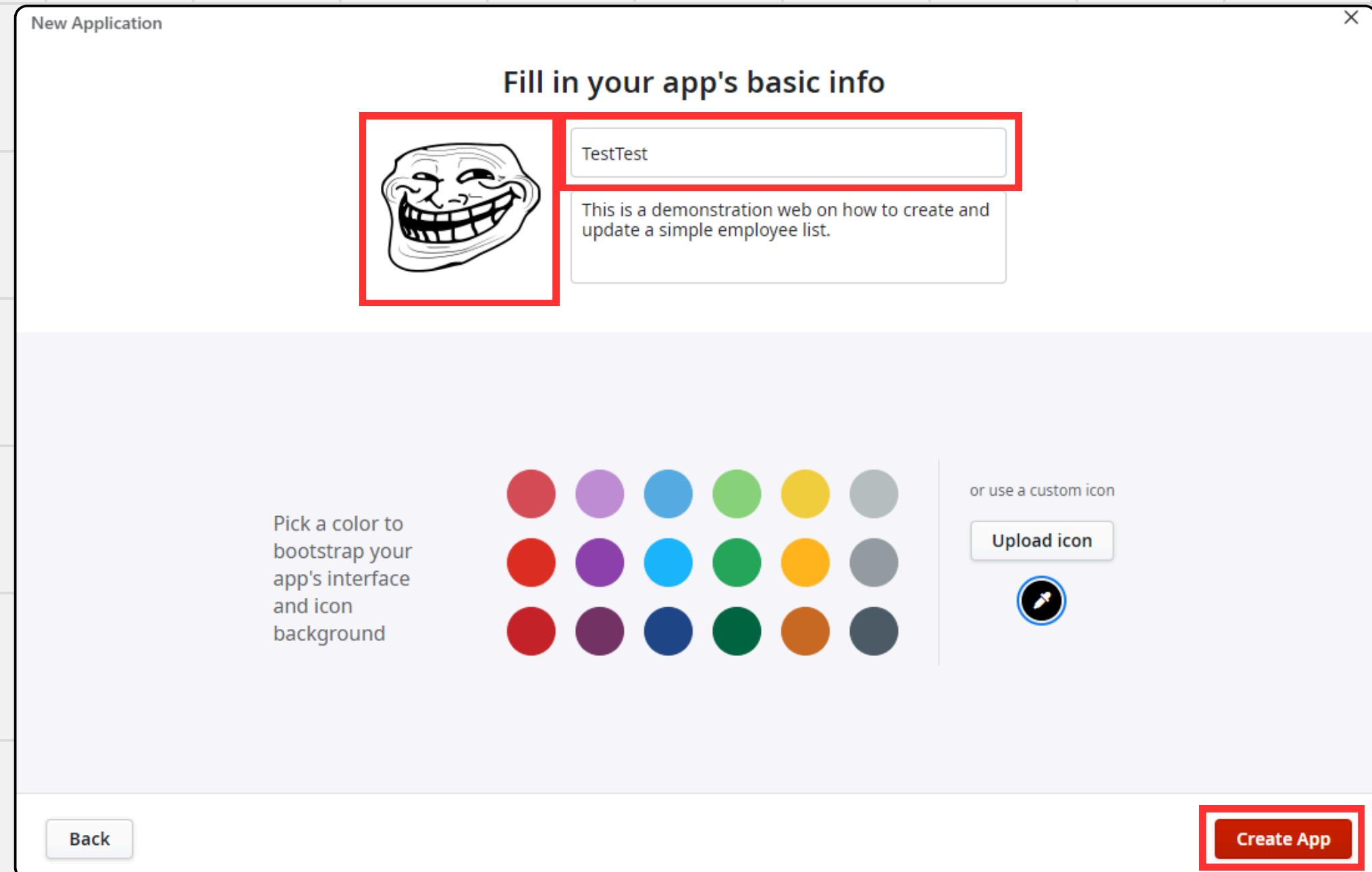
6) Click on “From scratch” and click the “Next” button.



7) In this demonstration, we are going to build a traditional web app. Then, click on "Next" button.



8) Set your app Title and its icon and click on "Create App" to proceed.



9) Click on "Create Module".

Environment Edit Help | < > | ⚙️ ⏪ | 🔍 🎤 🎁

[Back to applications](#)



TestTest

This is a demonstration web on how to create and update a simple employee list.

[Edit](#) [Delete](#) [Download](#) [Convert To Service](#) [Open In Browser](#)

Develop

Modules

Modules allow you to structure your application into several pieces, each piece implementing a specific purpose.

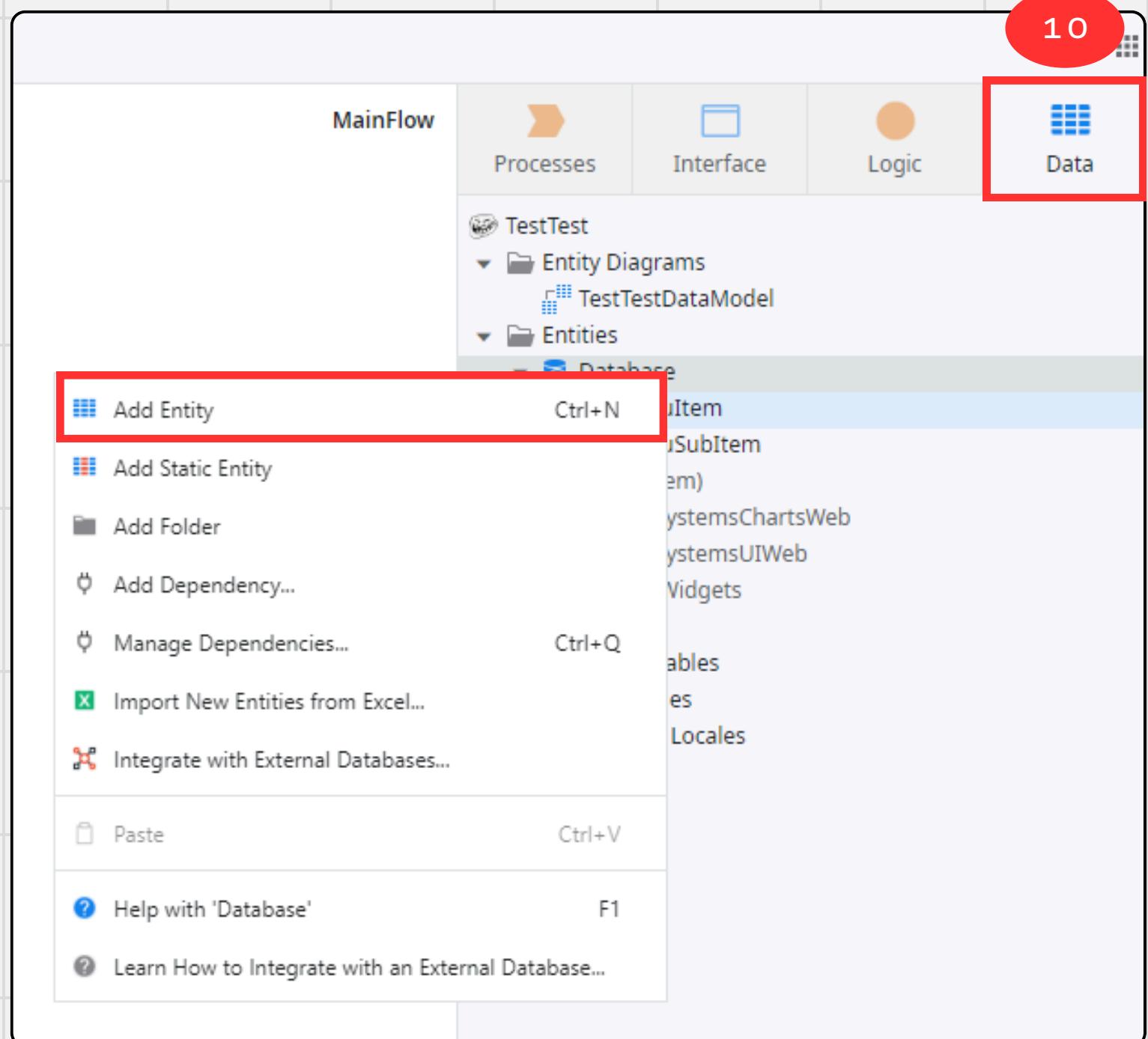
Module name

Choose module type

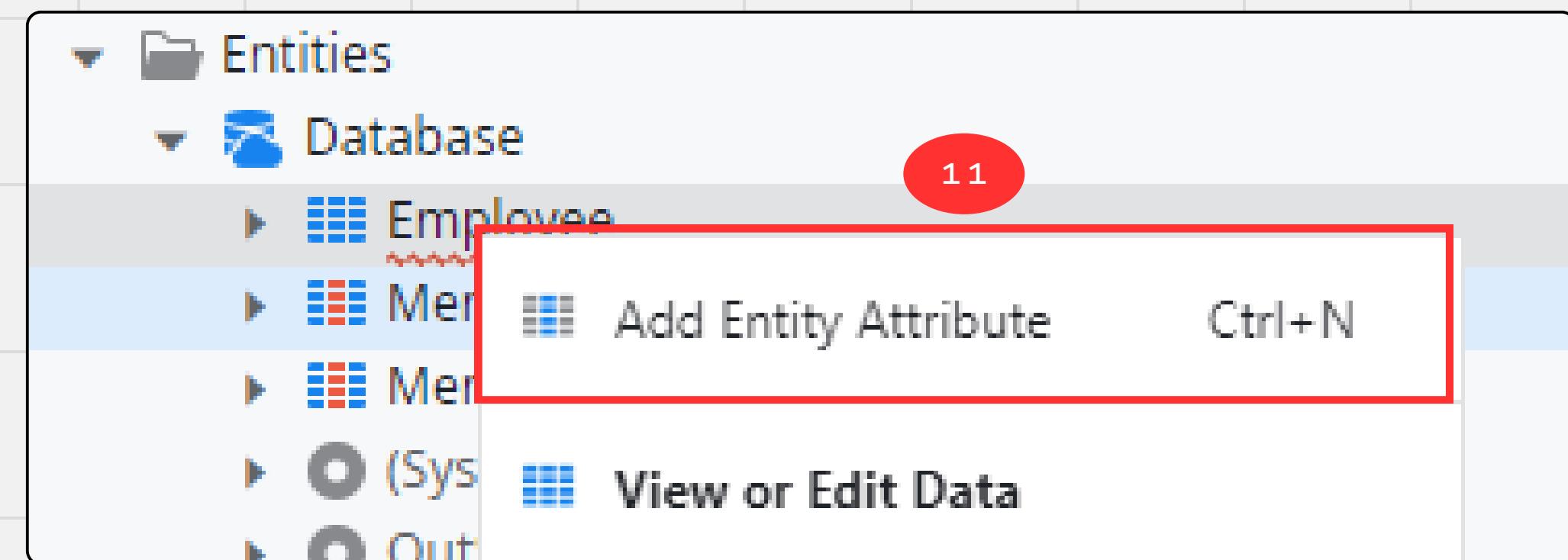
Traditional Web

Create Module 9 Cancel

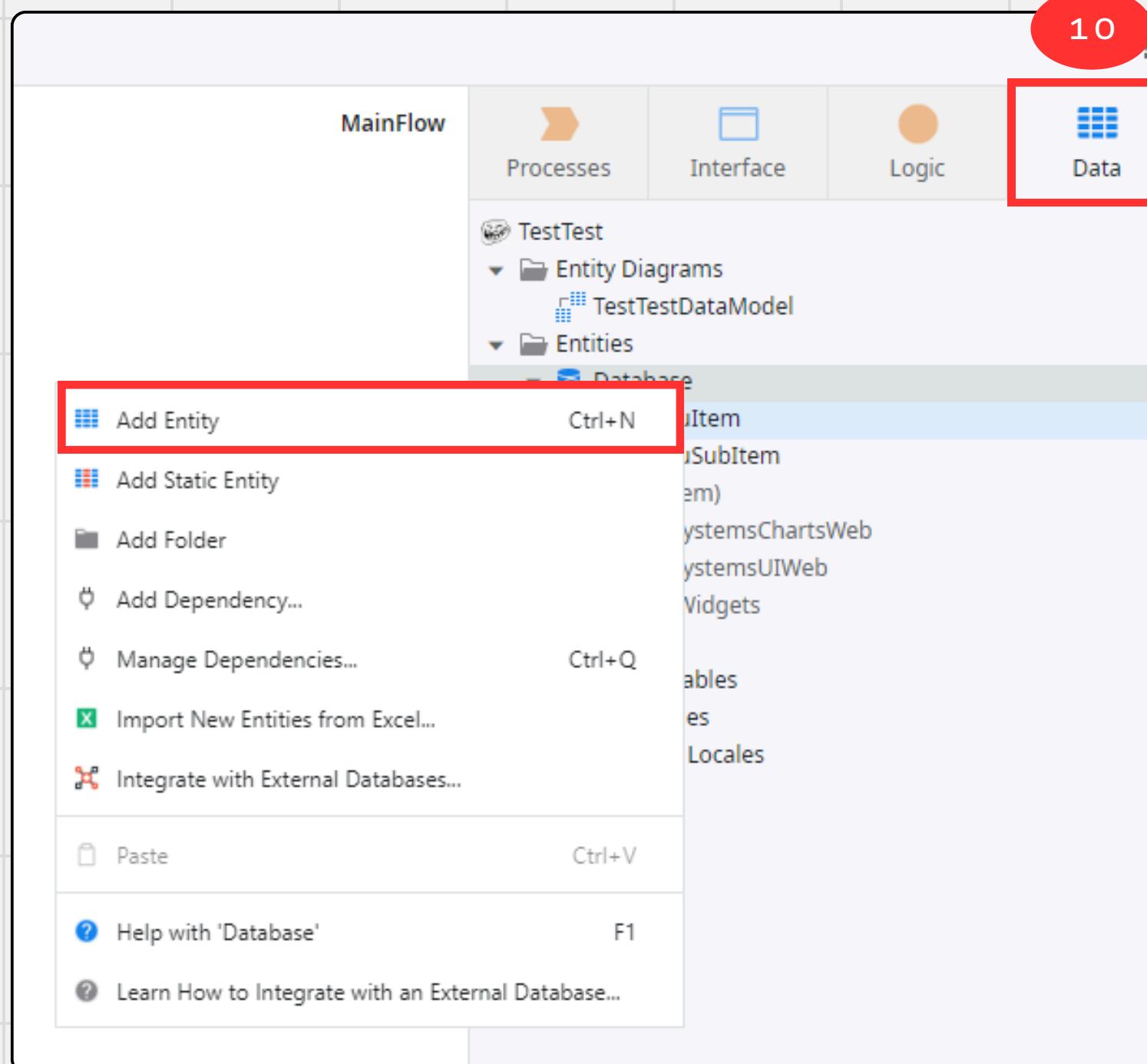
10) Click on "Data" section. Then, right click on the "Database" and select "Add Entity". Name it as "Employee".



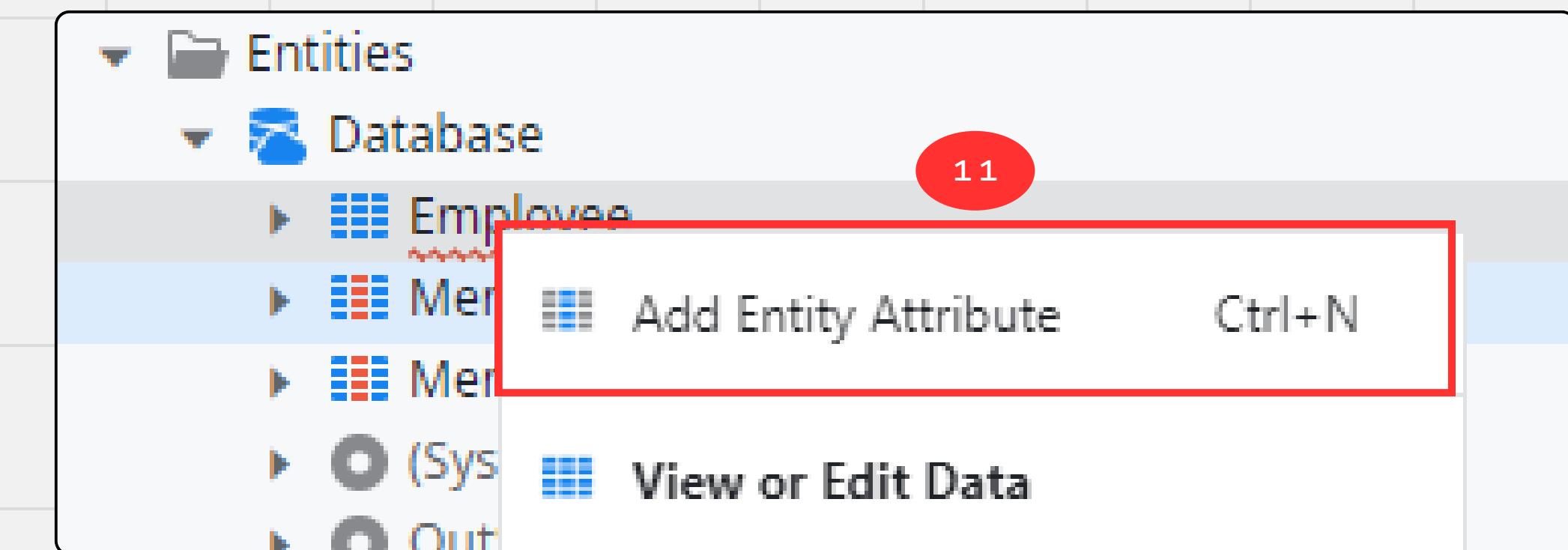
11) Right click on the Employee entity and select "Add Entity Attribute".



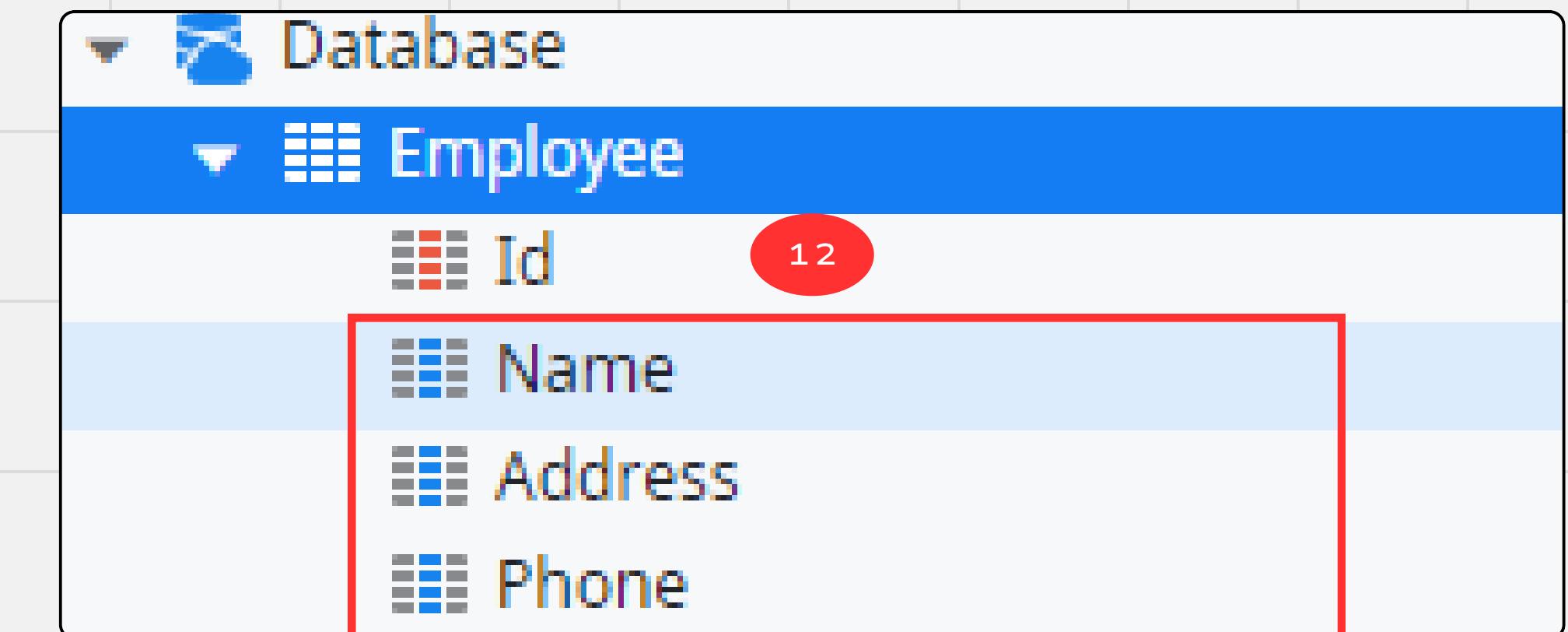
10) Click on "Data" section. Then, right click on the "Database" and select "Add Entity". Name it as "Employee".



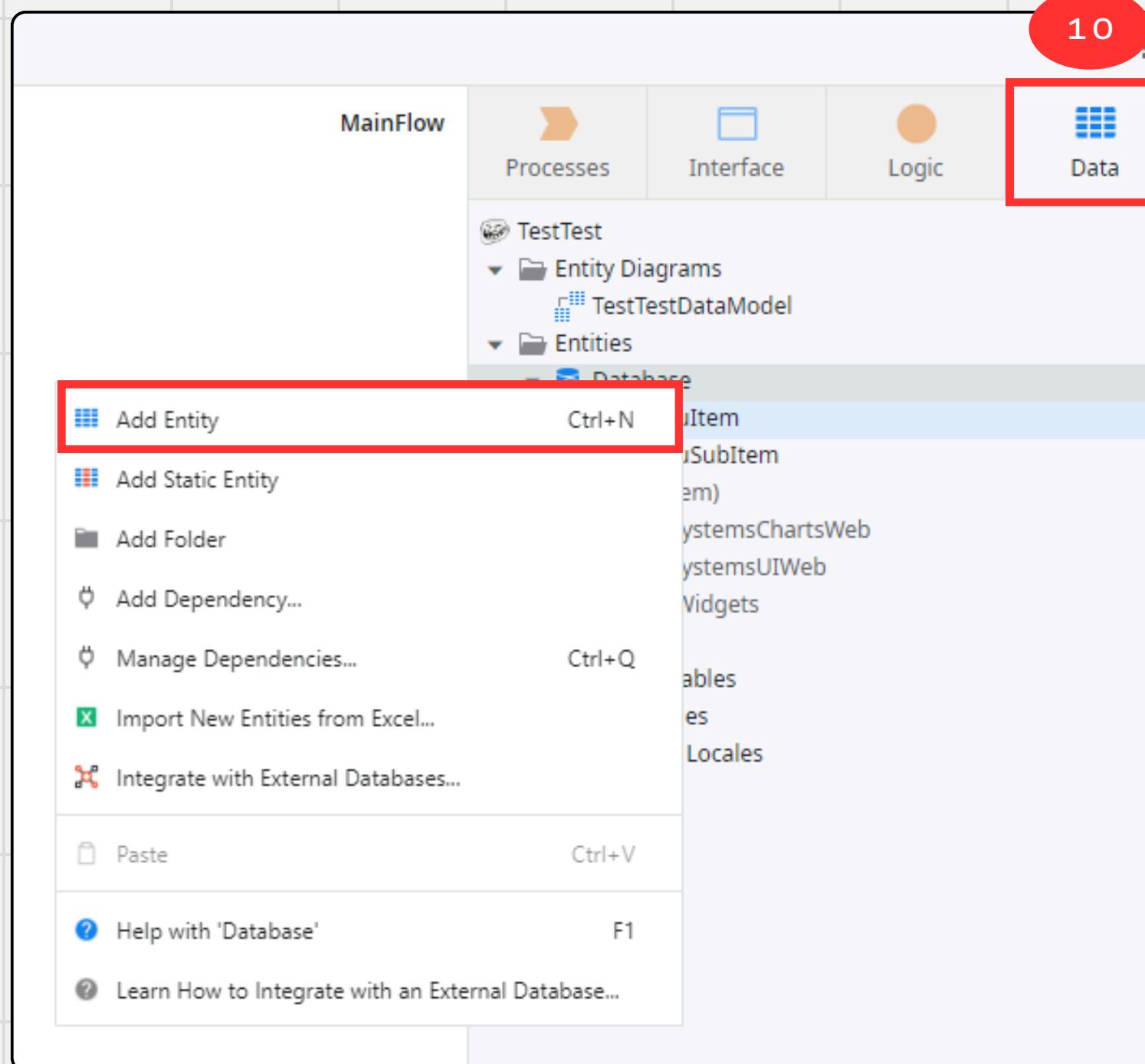
11) Right click on the Employee entity and select "Add Entity Attribute".



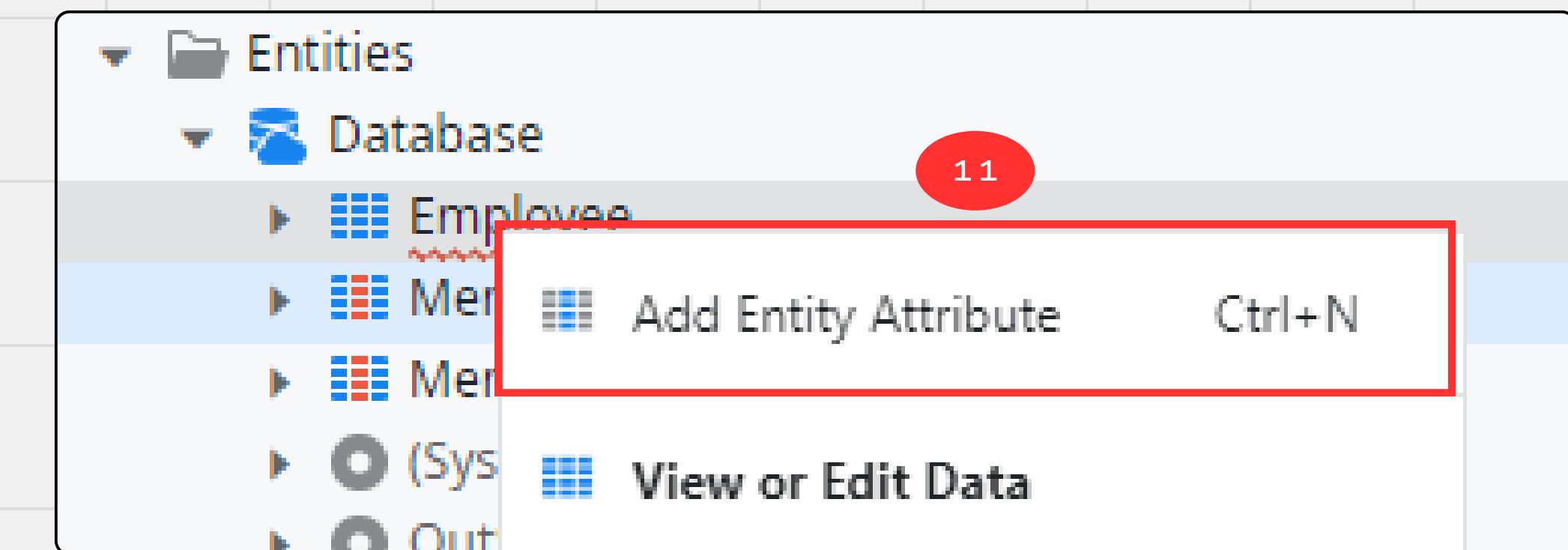
12) Add entity attribute for "Name", "Address" and "Phone".



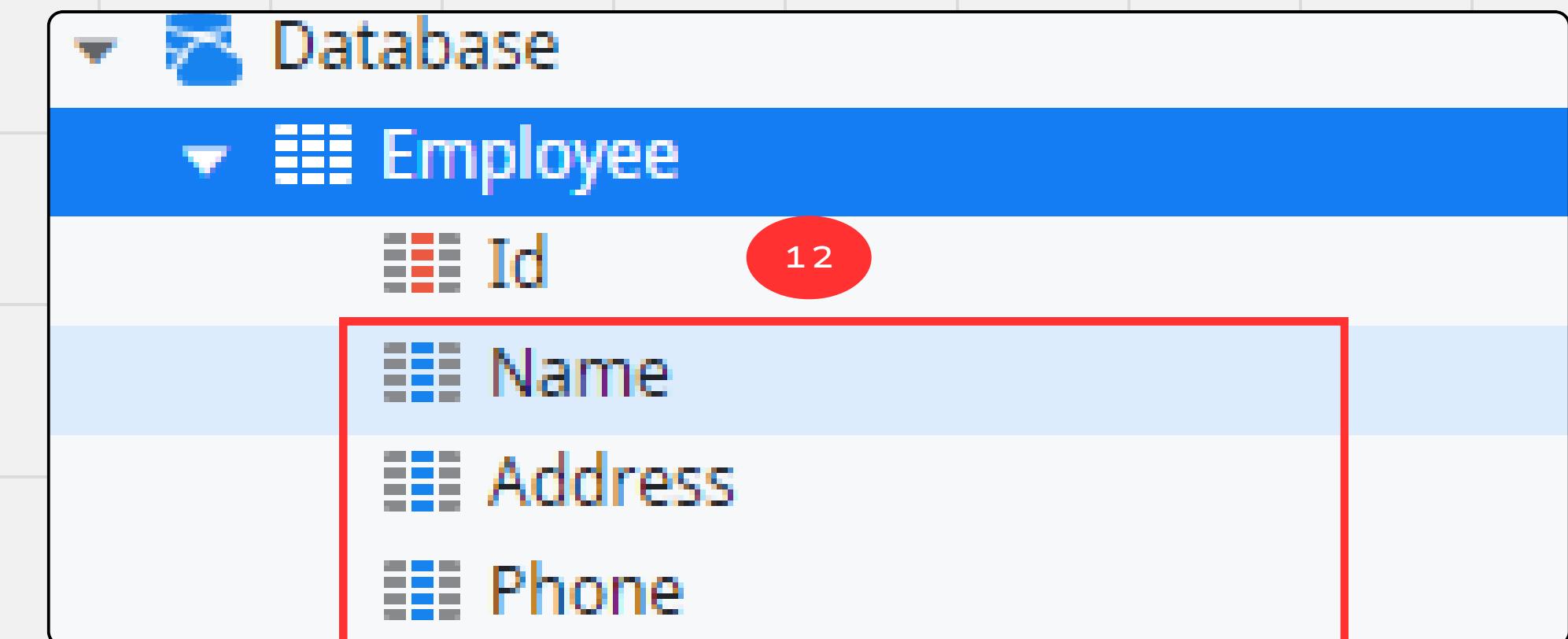
10) Click on "Data" section. Then, right click on the "Database" and select "Add Entity". Name it as "Employee".



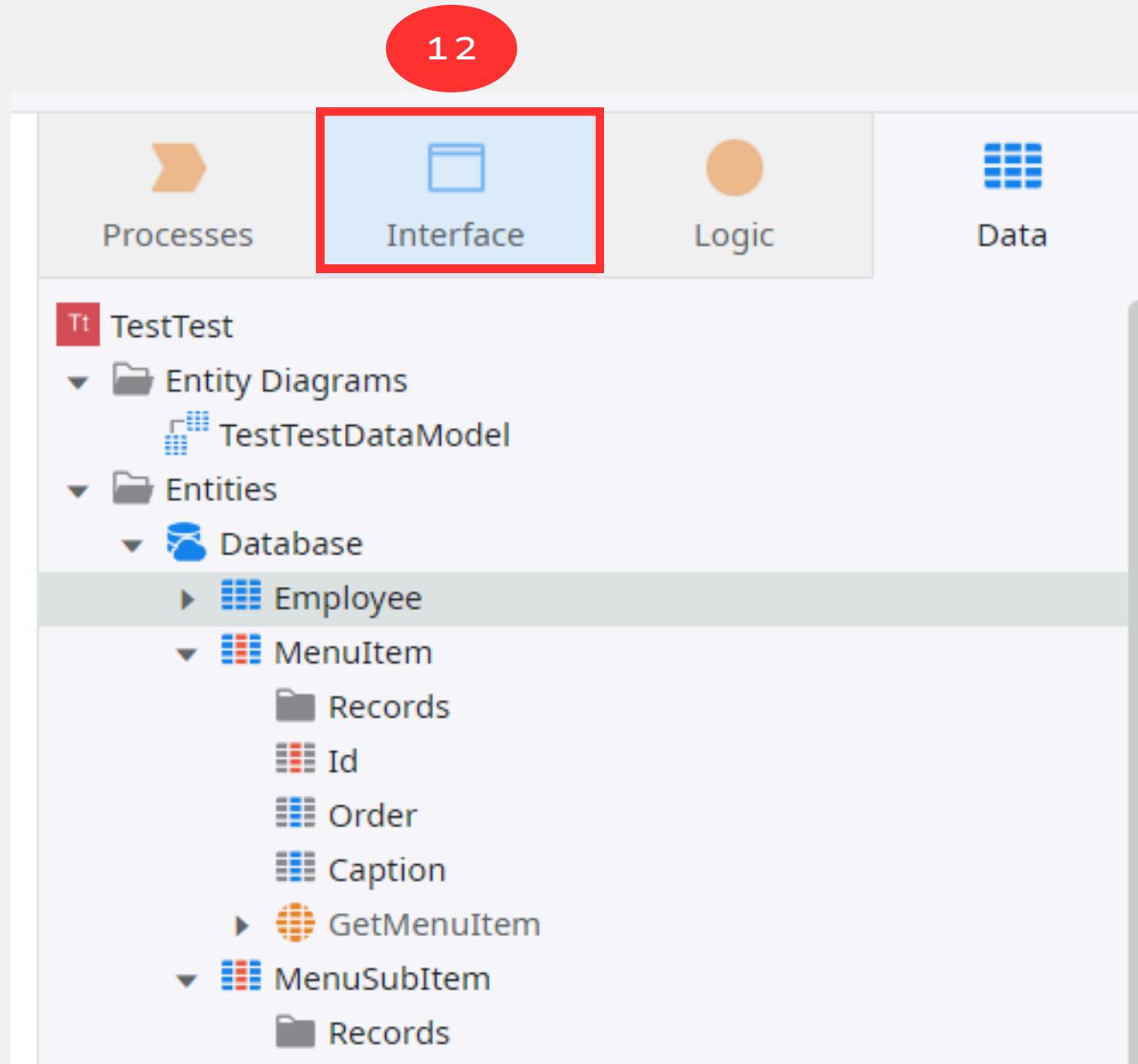
11) Right click on the Employee entity and select "Add Entity Attribute".



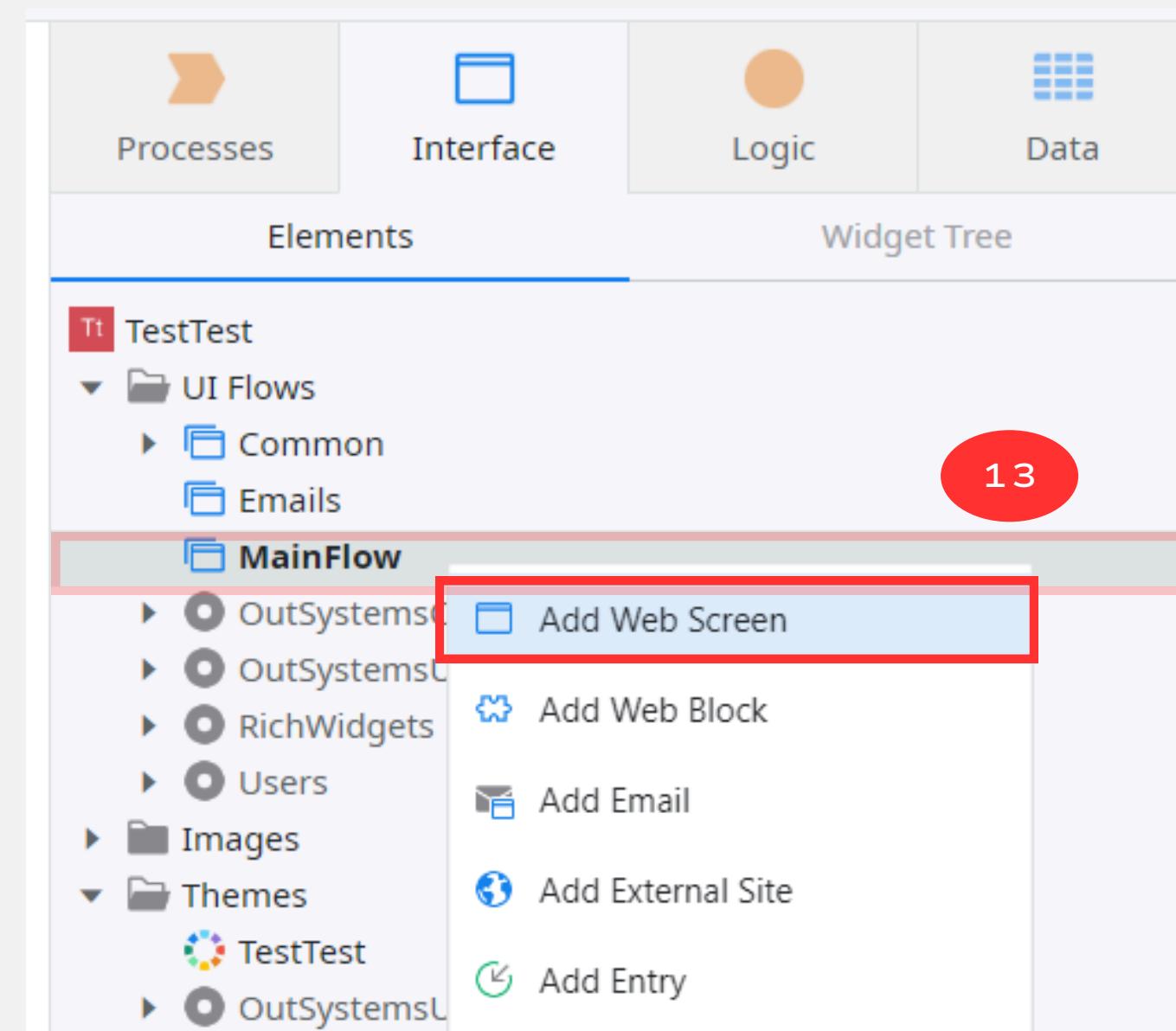
12) Add entity attributes for "Name", "Address" and "Phone".



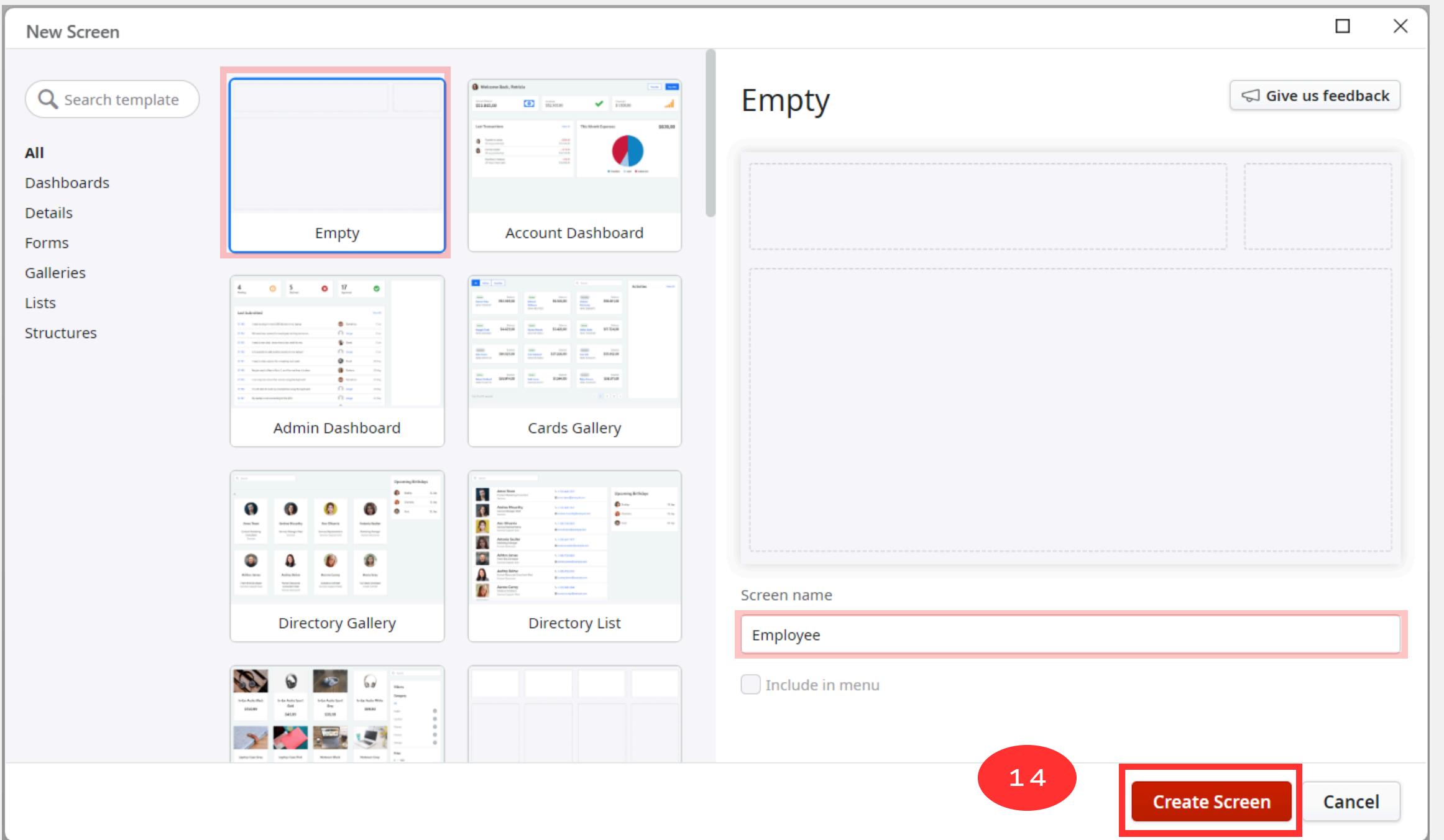
12) Click the 'Interface' panel on the left.



13) Right click on 'MainFlow', then select 'Add Web Screen'.



14) Select the 'Empty', name it into 'Employee' and click 'Create Screen'



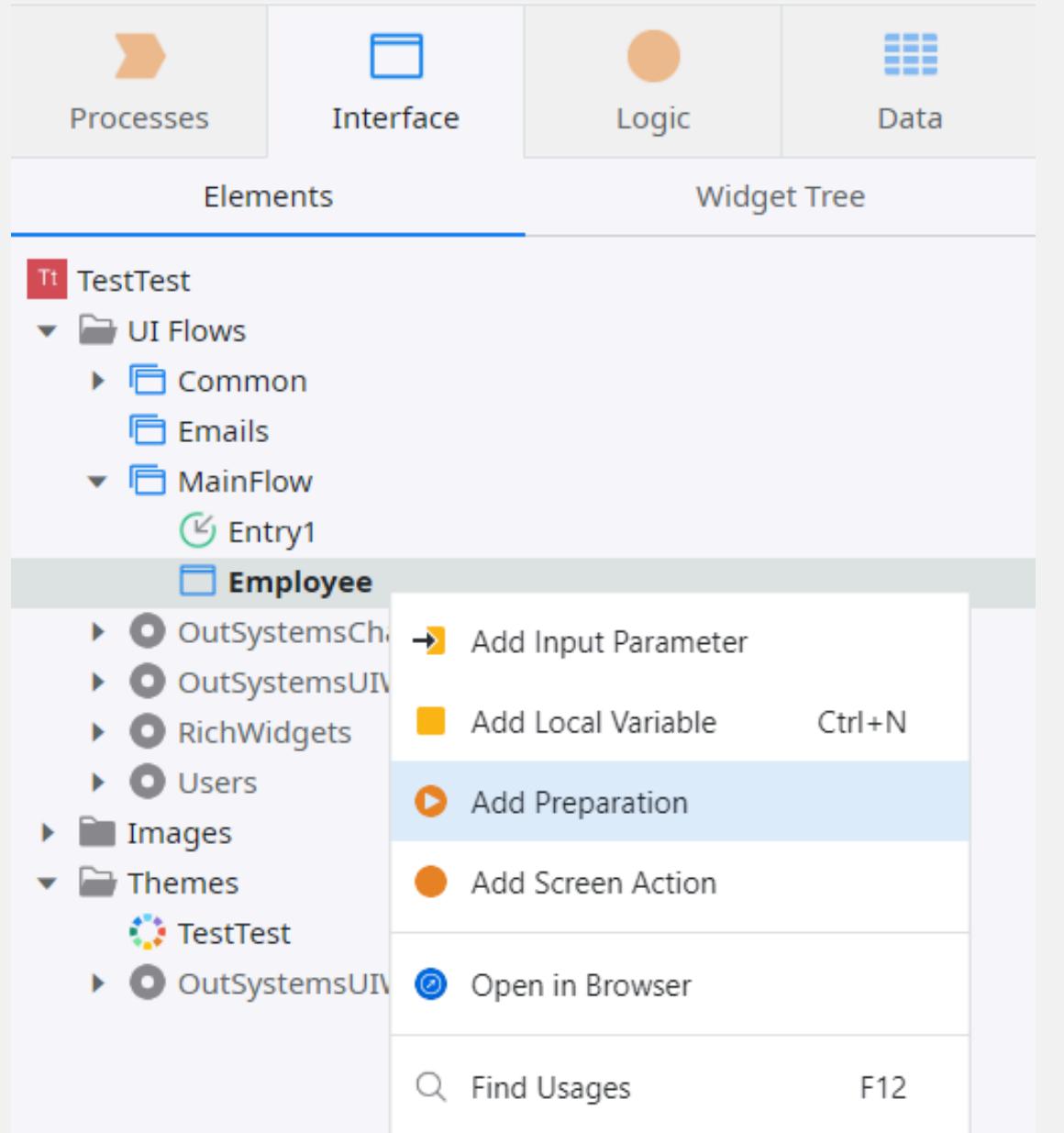
Checkpoint 1: You should have result as below.

The screenshot shows the OutSystems development interface. The top bar displays the project name "personal-ypnqlfy6.outsystems" and the module "TestTest (TestTest)". A green "Publish" button is visible in the top right. The main workspace contains a screen titled "Test Test" with several placeholder areas: "Header content placeholder", "Click to add Breadcrumbs", "Click to add Title", "Click to add Actions", "Click to add MainContent", and "Click to add Footer". To the left is a toolbar with various UI element icons like Container, If, Text, Expression, Table Records, List Records, Form, Editable Table, Link, Button, Label, Input, Check Box, Radio Button, Combo Box, Image, List Box, Upload, Edit Record, Show Record, Web Block, Table, Input Password, Comment, Area Chart, and Bar Chart. On the right, the "Elements" tab is selected, showing the "Employee" screen definition. The "Employee" screen has the following properties:

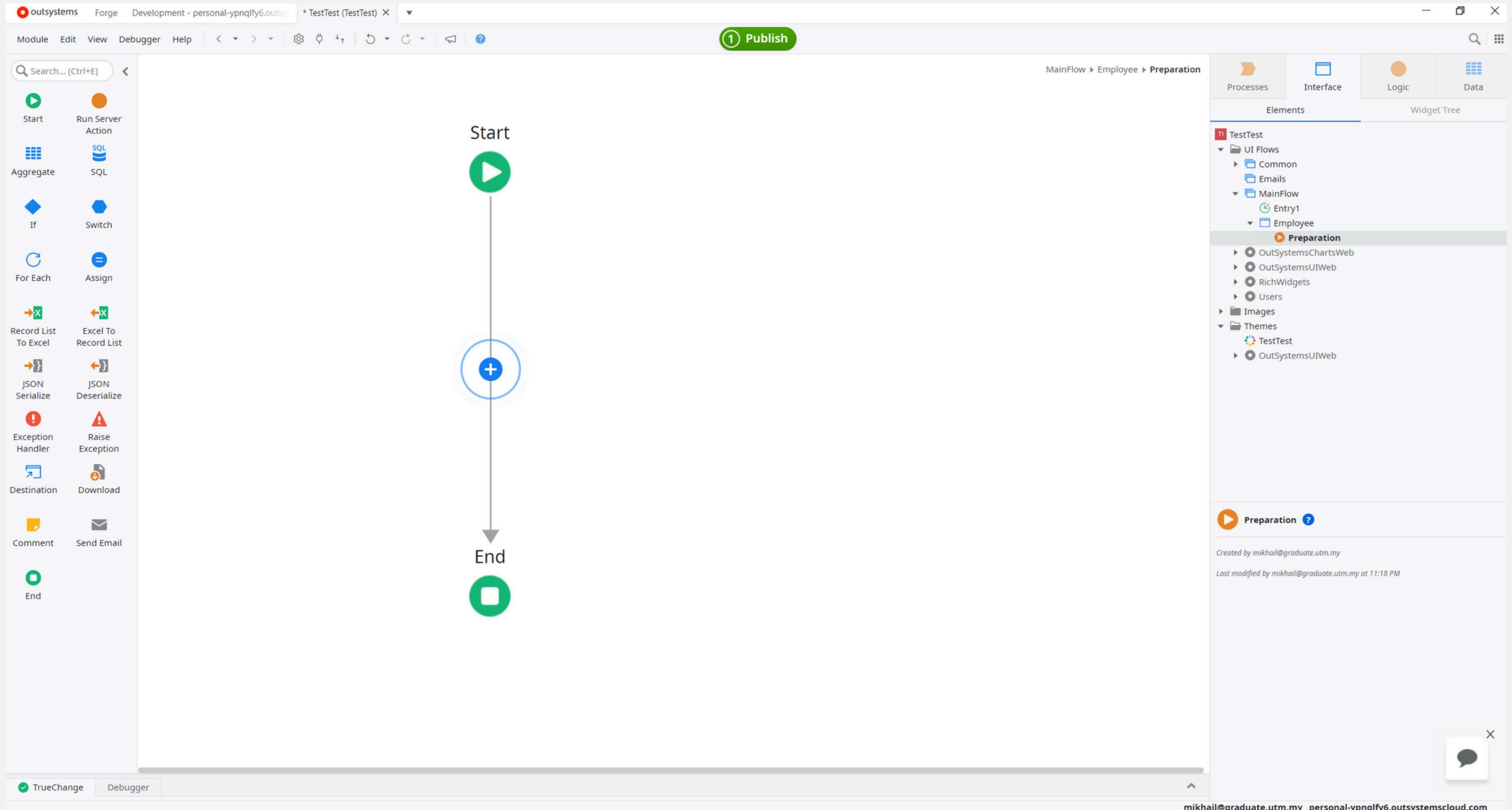
Name	Employee
Description	
Public	No
Title	
Roles	Anonymous (unchecked), Registered (checked)
Advanced	HTTP Security, Integrated Authentica..., Cache in Minutes, Is Frequent Destination, Style Sheet

Below the properties, there is a "Widget Tree" section showing the structure of the screen.

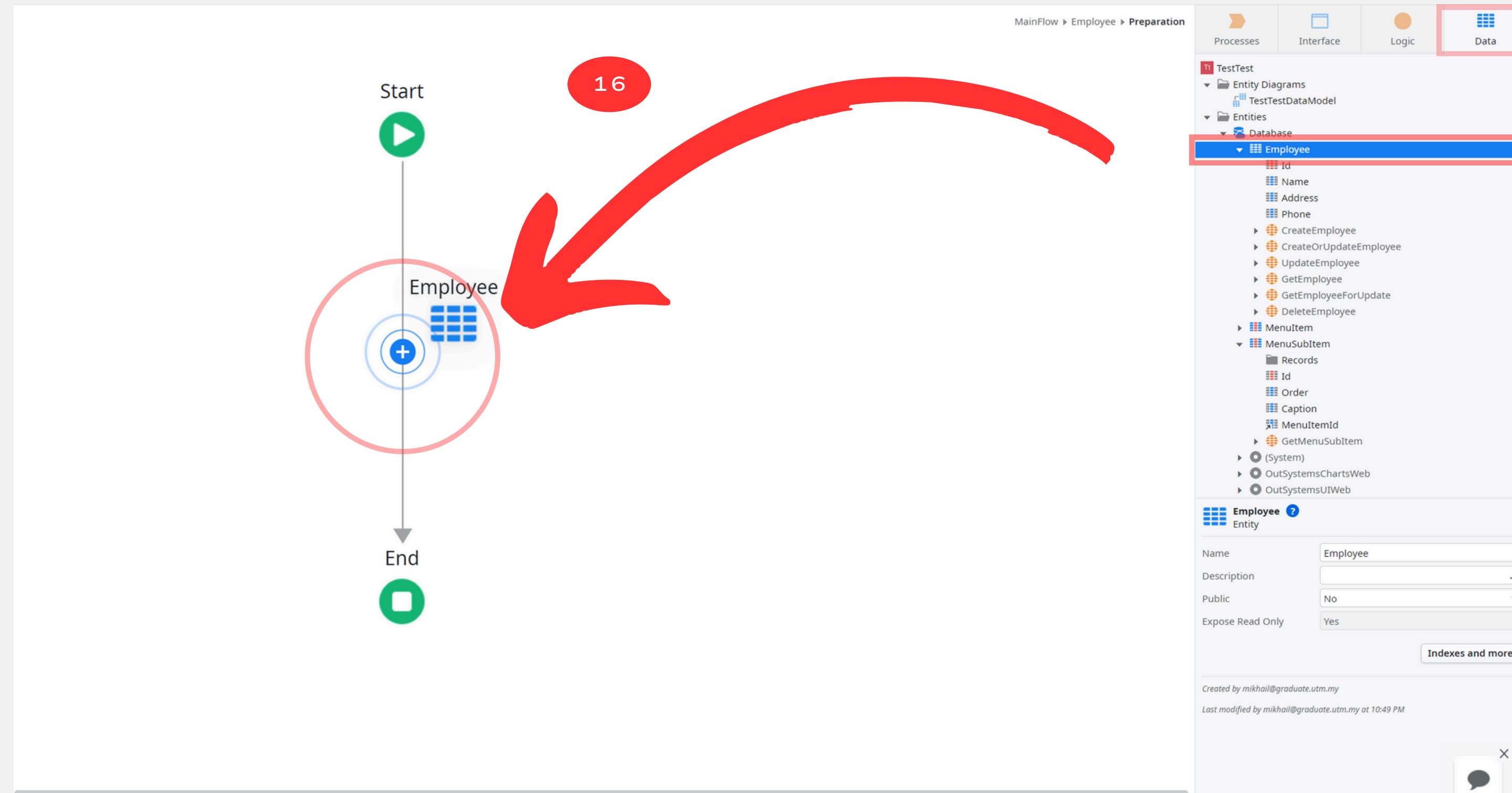
15) Now on the **Interface** panel on the right. Right Click under **MainFlow**, '**Employee**' and click on '**Add Preparation**'



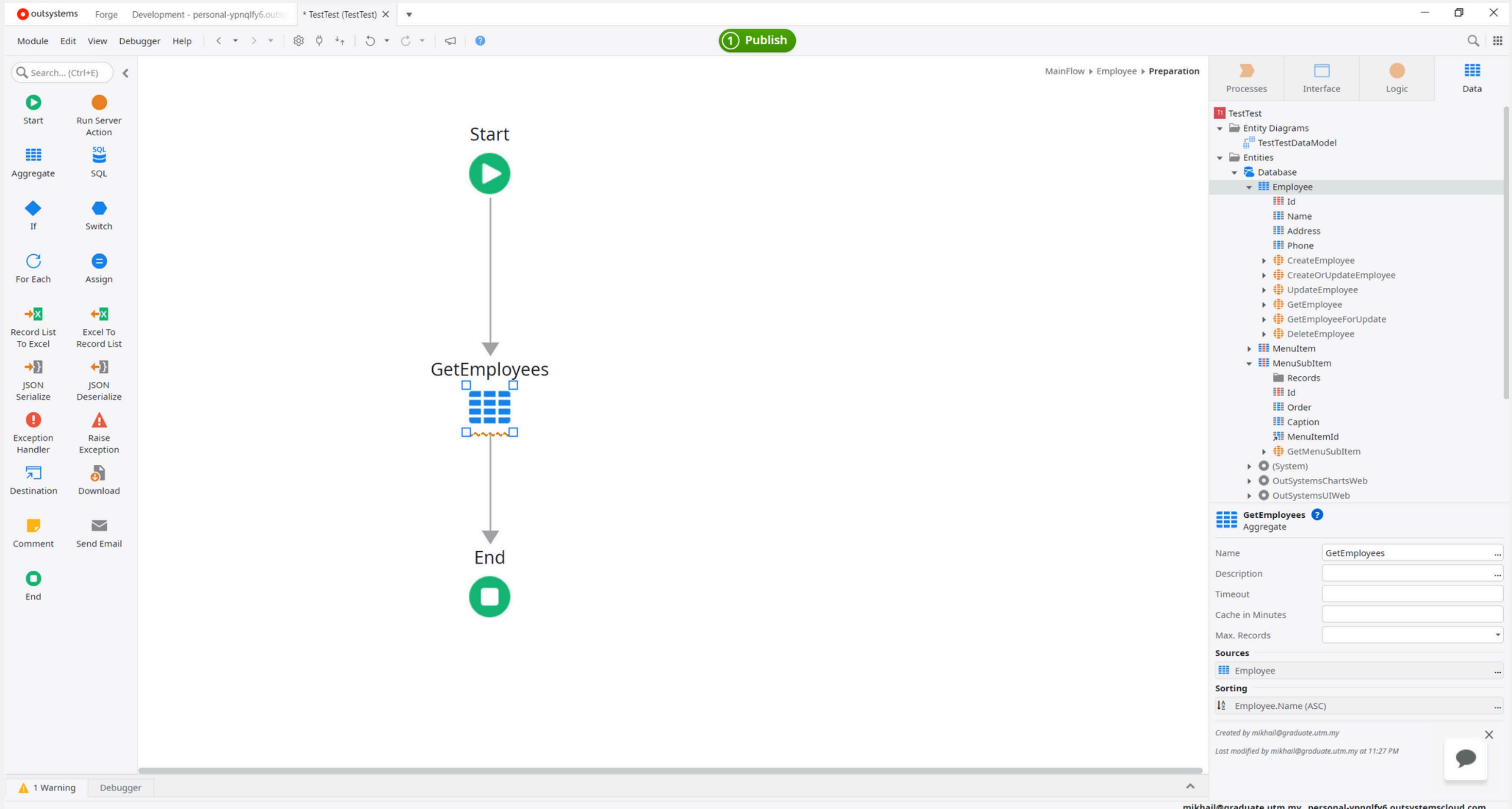
Checkpoint 2: You should have result as below.



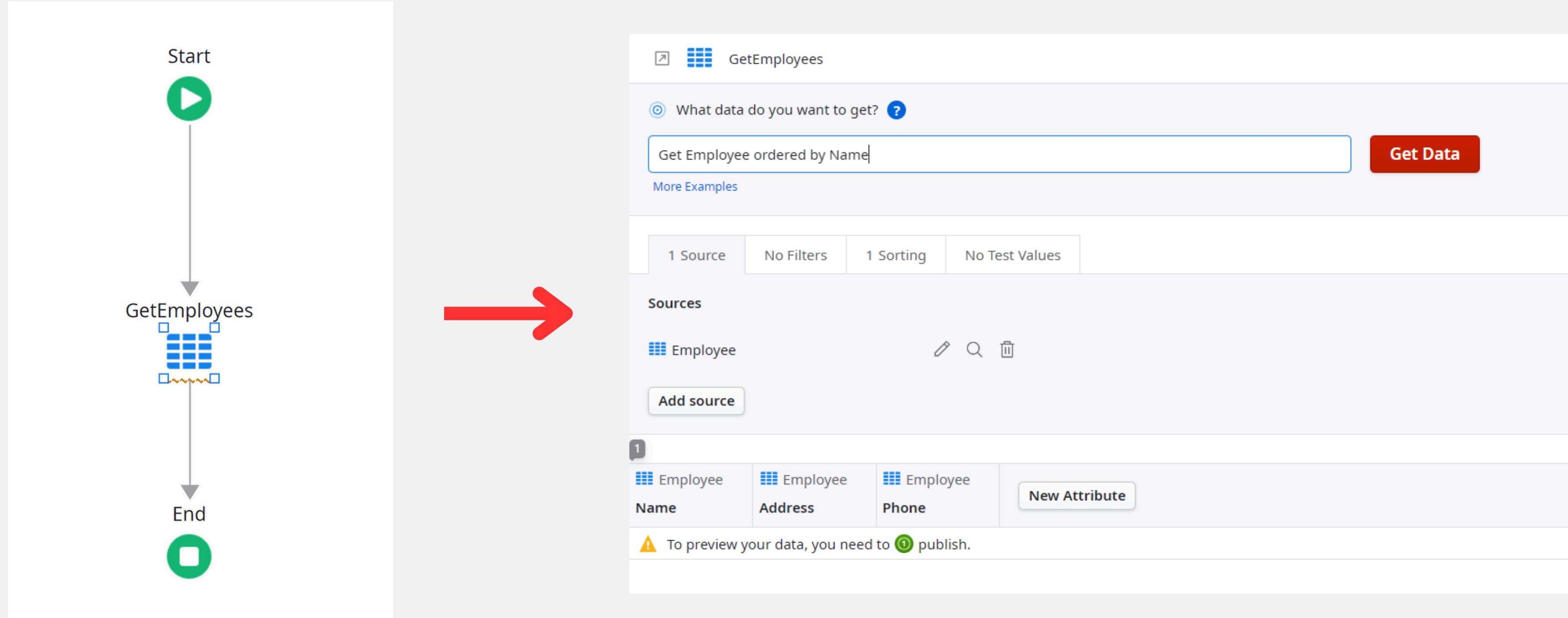
16) Now, go to the **Data** panel on the right. Click and drag the **Employee** data onto the middle + icon between Start and End on the middle screen.



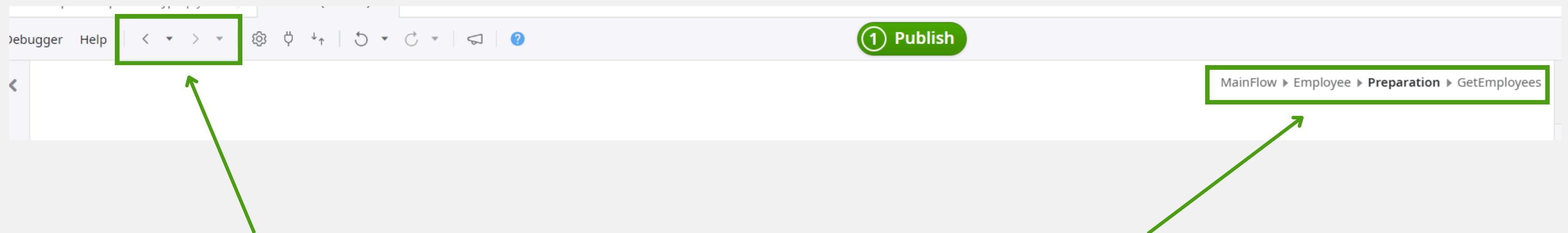
Checkpoint 3: You should have result as below.



You can double click on the **GetEmployees** to see all of you data.
But for now it's empty since we haven't insert any.



Tips 1: You can use 2 method to go back and forth between the interface.



First is the back and forth arrow on upper left middle part of the toolbar

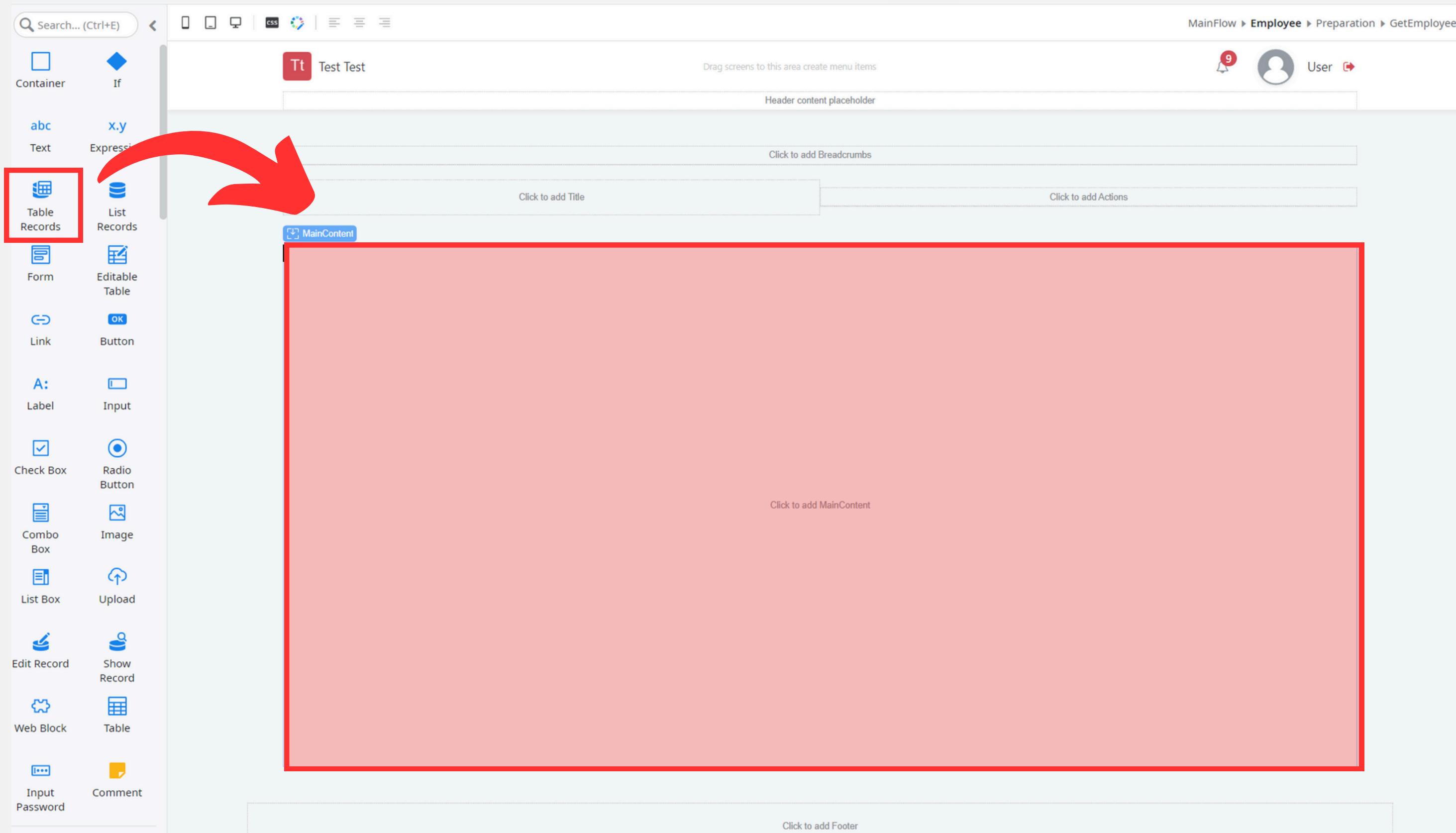
Second is to click on the directory screen that we want to go.

Use the **Screen Directory** on the right topmost of these slides to navigate.

Screen Directory

MainFlow ▶ Employee ▶ Preparation ▶ GetEmployees

- 18) Now, on the 'Employee' screen. Click and drag **Table Records** from the widget panel on the left and put it on the **MainContent** section of the screen.



CHECKPOINT 4: You should have result as below.

The screenshot shows a user interface builder with a toolbar at the top containing search, refresh, and file operations. The main area displays a screen titled "Tt Test Test". The screen has several placeholder sections: "Header content placeholder", "Click to add Breadcrumbs", "Click to add Title", and "Click to add Actions". A "TableRecords1" component is inserted into the main content area. The left sidebar lists various UI components with their icons:

- Container
- If
- Text
- x.y Expression
- Table Records
- List Records
- Form
- Editable Table
- Link
- Button
- A: Label
- Input
- Check Box
- Radio Button
- Combo Box
- Image
- List Box
- Upload
- Edit Record
- Show Record
- Web Block
- Table

The "TableRecords1" component is highlighted with a red border. The status bar at the bottom right shows "MainFlow > Employee > Preparation > GetEmployees".

NSTRUCTION AND TIPS TEMPLATE

Make sure the **TableRecords1** is highlighted as below. if not just click on the red border around the table. On the bottom right of the pannel under **Source Record List** select **GetEmployee.list**

Screen Directory (FOR INSTRUCTION SLIDE, TIPS SLIDE NOT NEEDED IG)

MainFlow ► Employee ► Preparation ► GetEmployees

The border is lock. just click and drag/highlight the template photo to remove it and resize your **Screen Directory** photo here.

MainFlow > Employee > Preparation > GetEmployees

Test Test

Drag screens to this area create menu items

9 User

TableRecords1

Drag entities or attributes here

TableRecords1

Properties

Name: TableRecords1

Source Record List: GetEmployee.list

Empty Message: Expression Editor...

Suggestions: GetEmployees.List

Line Count:

Start Index:

Cell Height:

Cell Spacing:

Show Header: Yes

Style Classes: TableRecords

Processes Interface Logic Data

Elements Widget Tree

TestTest

UI Flows

Common

Emails

MainFlow

Entry1

Employee

Preparation

OutSystemsChartsWeb

OutSystemsUIWeb

RichWidgets

Users

Images

Themes

TestTest

OutSystemsUIWeb

CHECKPOINT 5: The **TableRecords1** should changed its color to **yellow** if done correctly.

The screenshot shows the OutSystems Studio interface. The top bar includes 'Module', 'Edit', 'View', 'Debugger', 'Help' menus, and various tool icons. A green 'Publish' button is visible. The main area displays a screen titled 'Test Test' with a placeholder for header content. Below it are sections for 'Breadcrumbs', 'Title', and 'Actions'. A 'TableRecords1' control is present in the content area. The right side features a navigation tree under 'MainFlow > Employee > Preparation > GetEmployees' and a 'Widget Tree' panel. The 'Elements' tab is selected in the Widget Tree. A detailed properties panel for 'TableRecords1' is open, showing settings like Name (TableRecords1), Source Record List (GetEmployees.List), Line Count (50), and Start Index (0). The 'Properties' tab is active, and the 'Header Style' dropdown is set to 'TableRecords_Header'.

Module Edit View Debugger Help | Publish | MainFlow > Employee > Preparation > GetEmployees | Processes | Interface | Logic | Data | Elements | Widget Tree

Search... (Ctrl+E) | Container If | abc x.y Text Expression | Table Records Form Editable Table Link Button | A: Label Input | Check Box Radio Button | Combo Box Image | List Box Upload | Edit Record Show Record | Web Block Table | Input Password | Comment | Area Chart Bar Chart

Drag screens to this area create menu items | Header content placeholder | Click to add Breadcrumbs | Click to add Title | Click to add Actions | Drag entities or attributes here | Click to add Footer

1 Publish

MainFlow > Employee > Preparation > GetEmployees

TestTest

- UI Flows
 - Common
 - Emails
- MainFlow
 - Entry1
 - Employee
 - Preparation
- OutSystemsChartsWeb
- OutSystemsUIWeb
- RichWidgets
- Users
- Images
- Themes
 - TestTest
- OutSystemsUIWeb

TableRecords1

Properties

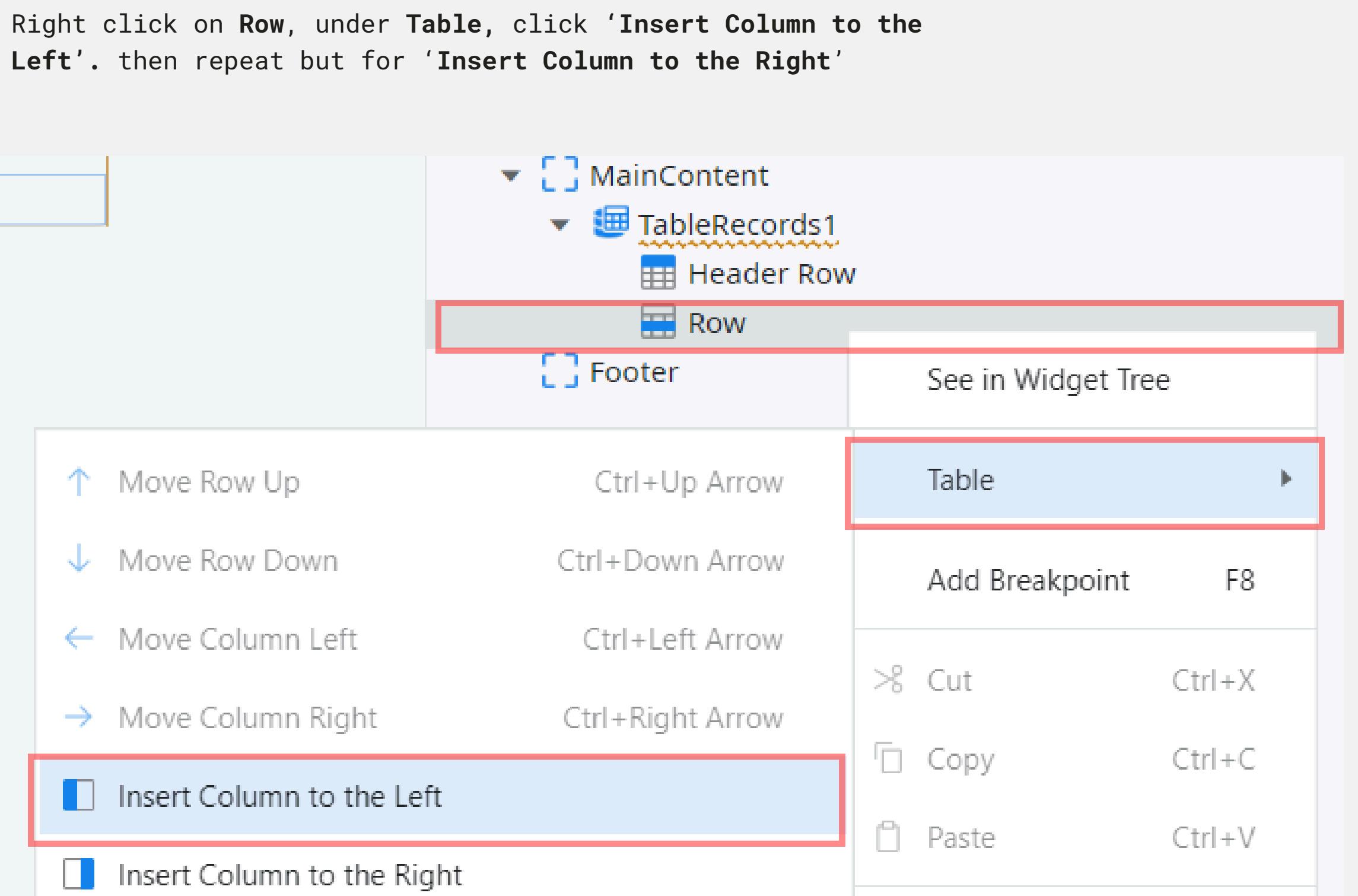
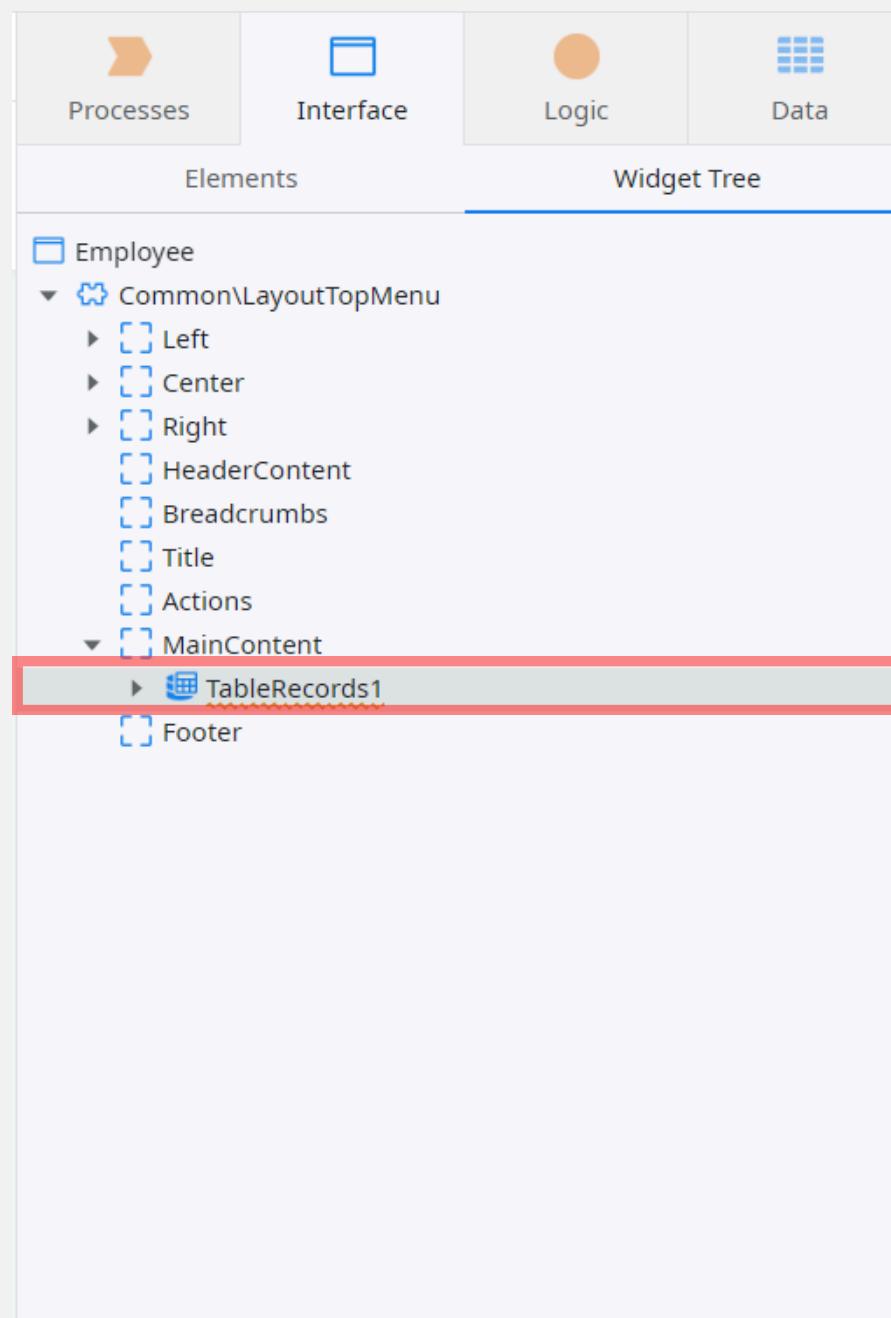
Name	TableRecords1
Source Record List	GetEmployees.List
Empty Message	"No items to show..."
Line Count	50
Start Index	0
Cell Height	
Cell Spacing	
Show Header	Yes
Style Classes	TableRecords
Header Style	TableRecords_Header

Screen Directory

INSTRUCTION AND TIPS TEMPLATE

Go to the right panel, and click on **Widget Tree** and expand the **TableRecords1**.

MainFlow ▶ Employee ▶ Preparation ▶ GetEmployees



CHECKPOINT 6: You should have result as below. A table with 2 Columns

The screenshot shows a user interface builder interface with the following details:

- Header:** "MainFlow > Employee > Preparation > GetEmployees".
- User Profile:** "User" with a notification badge (9).
- Toolbar:** Includes icons for file operations (New, Open, Save, Print, etc.) and CSS/JavaScript tools.
- Content Area:**
 - "Header content placeholder".
 - "Click to add Breadcrumbs".
 - "Click to add Title" and "Click to add Actions".
 - A large "Cell" placeholder occupies the main content area.
- Widget Tree (Right Panel):**
 - Employee**:
 - Common\LayoutTopMenu**:
 - Left
 - Center
 - Right
 - HeaderContent
 - Breadcrumbs
 - Title
 - Actions
 - MainContent**:
 - TableRecords1**:
 - Header Row**:
 - Cell
 - Cell
 - Row**:
 - Cell
 - Cell
 - Footer

Screen Directory

MainFlow ▶ Employee ▶ Preparation ▶ GetEmployees

INSTRUCTION AND TIPS TEMPLATE

Now click on the first row, and type **Name**. Do the same on the next column but type **Address**.

Click to add Breadcrumbs

Click to add Title Click to add Actions

Cell

This screenshot shows a wireframe-style interface for a screen template. At the top, there's a header section with placeholder text "Click to add Breadcrumbs", "Click to add Title", and "Click to add Actions". Below this is a large main content area outlined in red, labeled "Cell". This main content area is divided into two columns by a vertical line. A red arrow points downwards from the top of this main content area towards the second screenshot below.

Click to add Title Click to add Actions

MainContent

Name	Address
------	---------

This screenshot shows the "MainContent" area of the template. It contains two input fields: one labeled "Name" and one labeled "Address", both enclosed in a red border. A red arrow points from the top screenshot down to this area, indicating where to click.

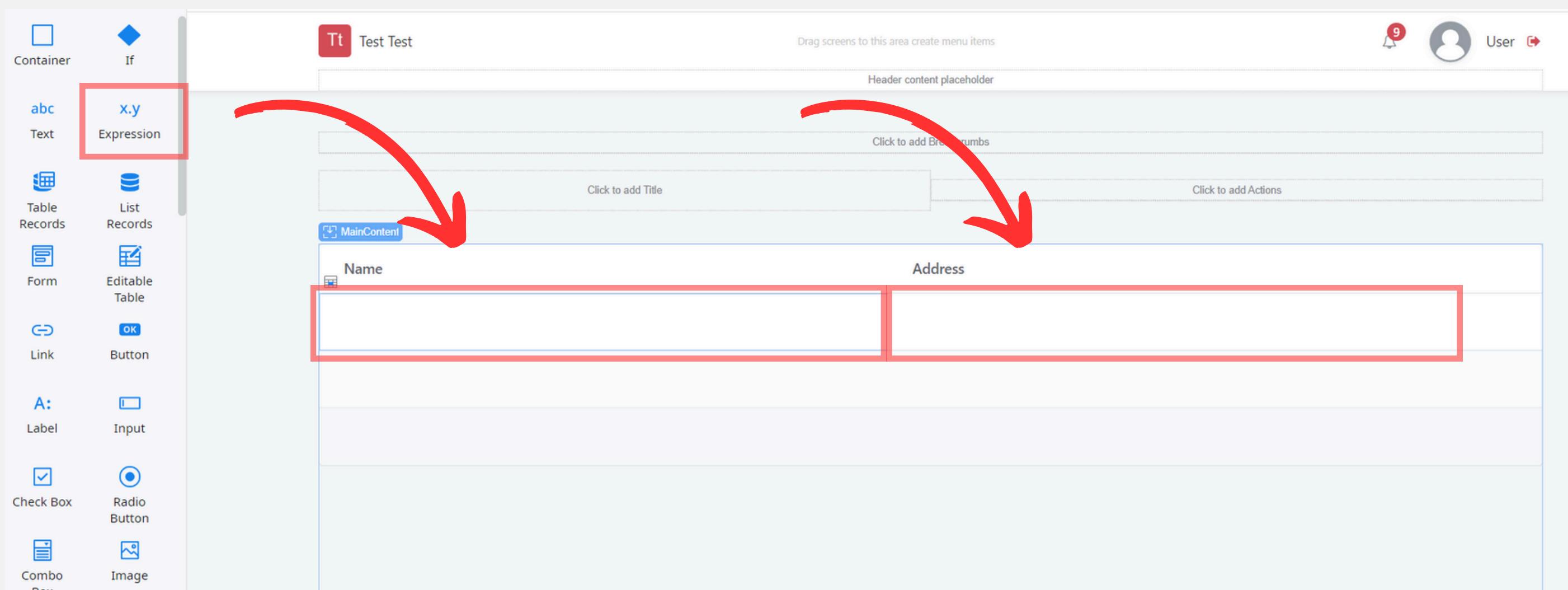
Screen Directory (FOR INSTRUCTION SLIDE, TIPS)

SLIDE NOT NEEDED IG)

MainFlow ▶ Employee ▶ Preparation ▶ GetEmployees

INSTRUCTION AND TIPS TEMPLATE

Search on the **Widget Panel** on the left for **Expression** and drag and drop it into the second row.



CHECKPOINT 7: You should have result as below.

The screenshot shows a user interface builder with the following details:

- Header:** MainFlow > Employee > Preparation > GetEmployees
- Header Content Placeholder:** Test Test
- Header Actions:** User (with a notification badge showing 9) and other icons.
- Breadcrumbs Placeholder:** Click to add Breadcrumbs
- Title Placeholder:** Click to add Title
- Actions Placeholder:** Click to add Actions
- Main Content Area:** Contains a table structure with three rows.
 - Name Column:** Contains three rows with "Expression" placeholder text.
 - Address Column:** Contains three rows with "Expression" placeholder text.
- Table Structure:** The table has one header row and three data rows. The first data row has two cells: "abc Name" and "abc Address". The second data row has one cell with "x.y Expression" placeholder text. The third data row has two cells: "x.y Expression" and "x.y Expression".
- Elements Panel:** Shows the hierarchical structure of the screen elements, including sections like Common\LayoutTopMenu, Left, Center, Right, HeaderContent, Breadcrumbs, Title, Actions, and MainContent, with TableRecords1 and its rows and cells.

Screen Directory

INSTRUCTION AND TIPS TEMPLATE

Now on the **Interface** panel, click on the first **Expression**; under **MainContent/TableRecords1/Row/Cell**

The screenshot shows the 'Interface' panel with several tabs at the top: Processes, Interface, Logic, and Data. Below these tabs are two buttons: 'Elements' and 'Widget Tree'. The 'Widget Tree' button is highlighted with a blue underline. The tree view shows a hierarchical structure of interface elements. At the top level, there is an 'Employee' node. Below it is a 'CommonLayoutTopMenu' node, which contains 'Left', 'Center', 'Right', 'HeaderContent', 'Breadcrumbs', 'Title', and 'Actions' nodes. Under 'MainContent', there is a 'TableRecords1' node, which contains a 'Header Row' node. The 'Header Row' node has two 'Cell' children: one labeled 'abc Name' and another labeled 'abc Address'. Below 'Header Row' is a 'Row' node, which also has two 'Cell' children, both labeled 'x.y Expression'. At the bottom of the tree is a 'Footer' node.

MainFlow ▶ Employee ▶ Preparation ▶ GetEmployees

Now the **x.y Expression** panel will open under it. Then click on **Value** and choose the **Name** data. Next, do the same for the **Address** data for the Address cell..

The screenshot shows the 'x.y Expression' panel. At the top, there are 'Properties' and 'Styles' tabs. Below them are fields for 'Name' and 'Value'. The 'Value' field is currently empty and has a red border around it. To its right is a dropdown menu titled 'x.y Expression Editor...' containing suggestions: 'TableRecords1.List.Current.Employee.Name' and 'TableRecords1.List.Current.Employee.Address'. Below the dropdown are fields for 'Example' (containing 'x.y Expression Editor...') and 'Style Classes'. At the bottom, there are sections for 'Extended Properties' (with a 'Property' dropdown), 'Value' (with a 'Value' dropdown), and a 'Help' section.

Screen Directory

INSTRUCTION AND TIPS TEMPLATE

MainFlow ▶ Employee ▶ Preparation ▶ GetEmployees

Click on the **Expression**, go to **Cell properties** on the bottom left panel. In the Value section, choose **TableRecords1.List.Employee.Name**. Now, do the same for the **Address** expression.

The screenshot shows a screen editor interface with a table structure. The table has three rows. The first row contains two columns labeled 'Name' and 'Address'. The second and third rows also contain 'Name' and 'Address' columns. The 'Name' cell in the first row is currently selected, indicated by a red border around its text box. On the left side of the screen, there's a panel for 'Entity Attribute usages' with a search bar containing 'Id'. On the right side, there's a detailed view of the selected cell's properties. The 'Properties' tab is active, showing the 'Name' field set to 'TableRecords1.List.Current.Employee'. Below this, the 'Suggestions' list shows several options, with 'TableRecords1.List.Current.Employee.Name' highlighted by a blue box. Other visible options include 'TableRecords1.List.Current.Employee.Address' and 'TableRecords1.List.Current.Employee'. The overall interface is designed for configuring data displays or reports.

CHECKPOINT 8: The Expression cells should be highlighted in blue indicating the expression is valid.

Module Edit View Debugger Help | < > < > | ⚙️ ⚙️ ⚙️ | ⚙️ ⚙️ | ?

① Publish MainFlow > Employee

Search... (Ctrl+E) Container If abc Text x.y Table Records List Records Form Editable Table Link Button A: Label Input Check Box Radio Button Combo Box Image List Box Upload Edit Record Show

MainContent

Name Address Name Address Name Address Name Address

Header content placeholder Click to add Breadcrumbs Click to add Actions Click to add Footer

Processes Interface Logic Data

Widget Tree

Right HeaderContent Breadcrumbs Title Employee List Actions MainContent TableRecords1 Header Row Cell abc Name Cell abc Address Row Cell x.y Name Cell x.y Address

MainContent Properties Styles Placeholder MainContent

TrueChange Debugger 1-Click Publish 'Id' Entity Attribute usages

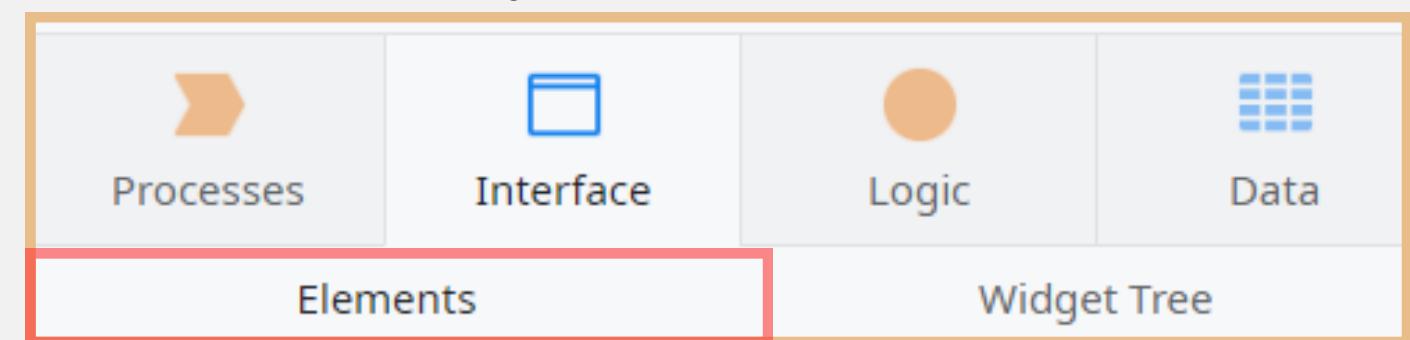
Name	Property	Location	Element
Employee	Identifier Attribute		Entity

1 usage found Close fikri02@graduate.utm.my personal-br1haqq.outsystemscloud.com

Screen Directory

INSTRUCTION AND TIPS TEMPLATE

Now, go back to the **Elements** section on right panel, under **MainFlow**, add another **Web Screen** with the name of **Employee Details**.



New Screen

Search template

All

Dashboards

Details

Forms

Galleries

Lists

Structures

Empty

Account Dashboard

Admin Dashboard

Cards Gallery

Directory Gallery

Directory List

Empty

Give us feedback

Screen name

Employee Details

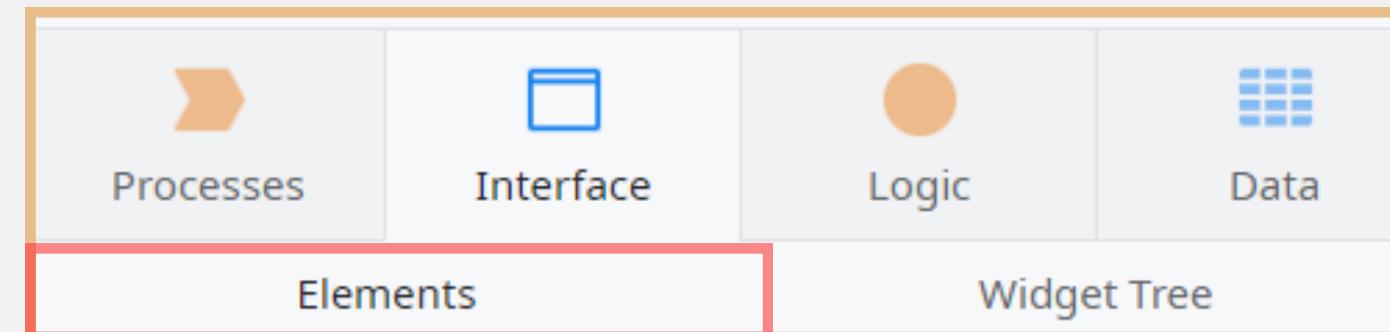
Include in menu

Create Screen

Cancel

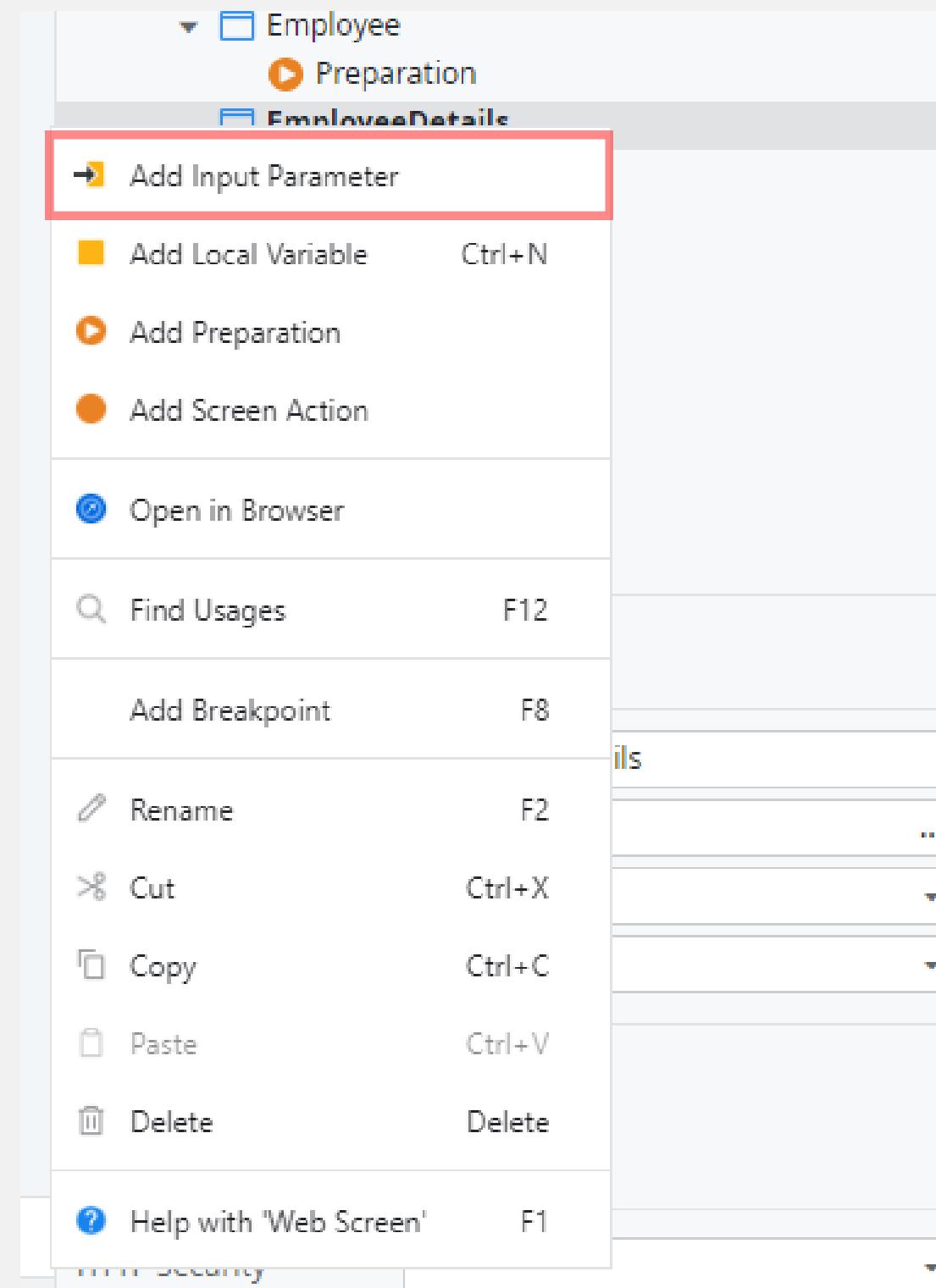
The screenshot shows the "New Screen" dialog box. On the left, there's a sidebar with categories like All, Dashboards, Details, etc. The main area displays several template cards: "Empty" (selected and highlighted with a blue border), "Account Dashboard", "Admin Dashboard", "Cards Gallery", "Directory Gallery", and "Directory List". To the right of these cards is a large, empty rectangular area labeled "Empty". Below this area, there are input fields for "Screen name" (containing "Employee Details") and "Include in menu" (with an unchecked checkbox). At the bottom right are "Create Screen" and "Cancel" buttons.

Screen Directory



INSTRUCTION AND TIPS TEMPLATE

Right click on the newly created **EmployeeDetails** screen and select **Add Input Parameter** and name it as **EmployeeId**



The screenshot shows the 'Elements' tab of the Screen Directory. A red box highlights the 'EmployeeId' input parameter under the 'EmployeeDetails' screen. The parameter configuration details are shown below:

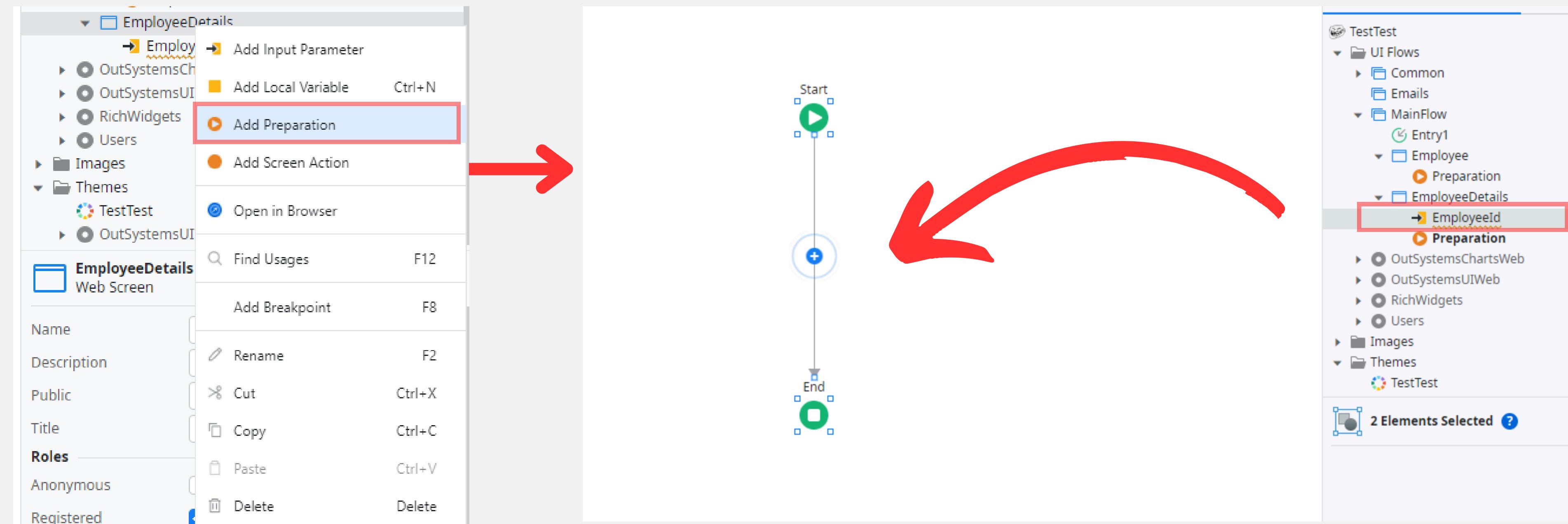
Name	EmployeeId
Description	
Data Type	Employee Identifier
Is Mandatory	Yes
Default Value	

Screen Directory

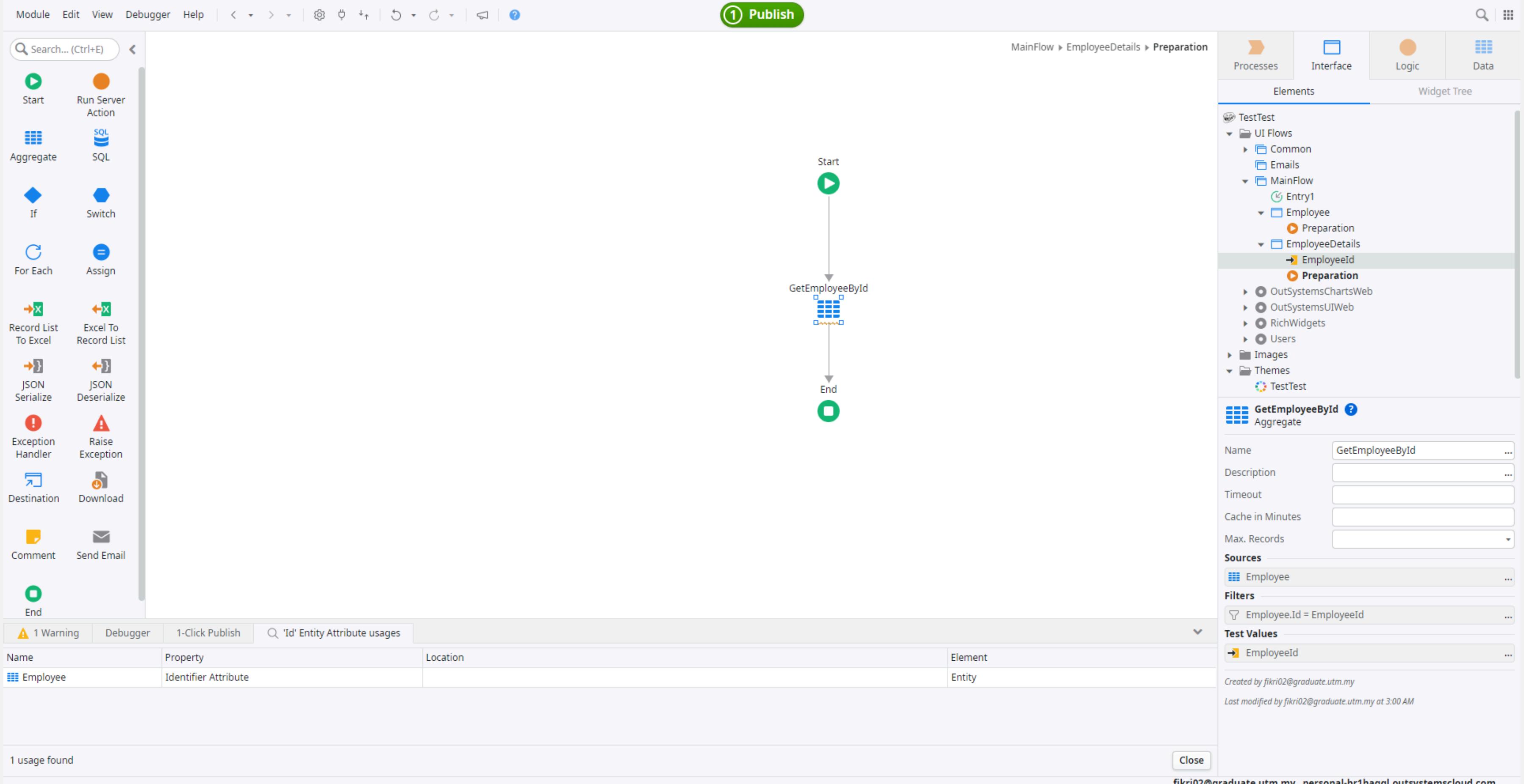
INSTRUCTION AND TIPS TEMPLATE

Under the **EmployeeDetails**, right click on it and select **Add Preparation**. Then, click and drag the **EmployeeId** data onto the middle + icon between **Start** and **End** on the middle screen.

MainFlow ► EmployeeDetails ► Preparation



CHECKPOINT 10: You should have result as below.



Screen Directory

TIPS

Click on the **GetEmployeeById** in the **Preparation** section. Next, go to the **Filter** section on the bottom right panel and click on it. Then, click on the **Employee.Id = EmployeeId** and you will be redirected to a **Condition Editor**.

Basically, we want to show you that the **Employee.Id** is already referring to the **EmployeeId**. So, there is no need to do that manually. Which indicates the benefits of low-code development.

MainFlow ▶ EmployeeDetails ▶ Preparation ▶ GetEmployeeById

What data do you want to get? ?

Get Employee by EmployeeId

More Examples

1 Source 1 Filter No Sorts 1 Test Value

⋮ 1 Employee.Id = EmployeeId

Add filter

Employee Name Employee Address Employee Phone New Attribute

To preview your data, you need to publish.

Employee.Id = EmployeeId Condition

Employee.Id = EmployeeId

The expression is ok (Type: Boolean)

+ - * / and or not like True False = <> < > <= >= () [] null

Scope

- Attributes
 - Employee
- Locals
- Entities
- Session
- Site
- Roles
- User Functions

Description

Close

Processes Interface Logic Widget Tree

Elements

TestTest

UI Flows

- Common
- Emails

MainFlow

- Entry1
- Employee
- Preparation

EmployeeDetails

- EmployeeId
- Preparation

OutSystemsChartsWeb

OutSystemsUIWeb

RichWidgets

Users

Images

Themes

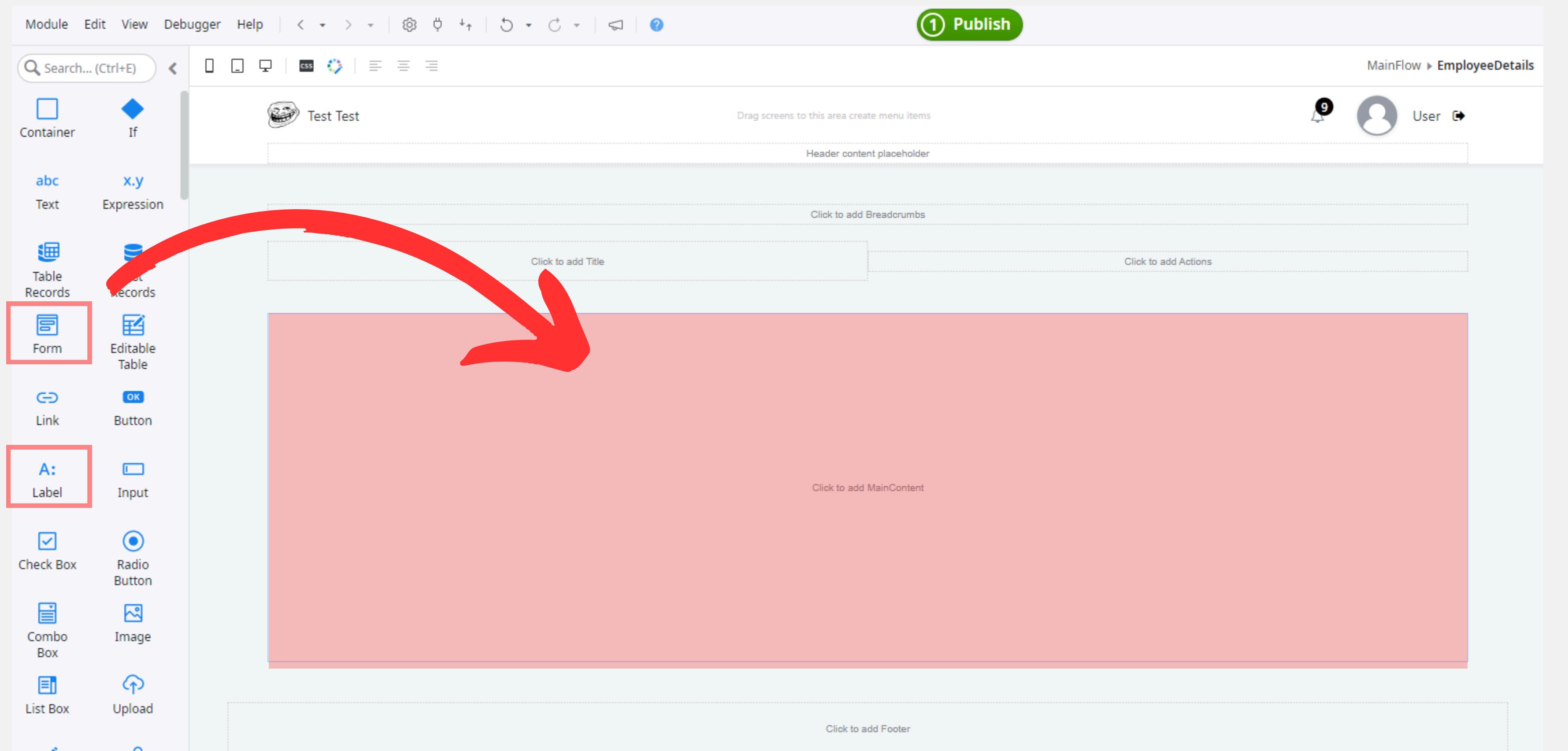
TestTest

INSTRUCTION AND TIPS TEMPLATE

In the **EmployeeDetails** direction, drag the **Form** tool to the main content section. Once you've done that, drag the **Label** tool at the same place as you drop the **Form** tool.

Screen Directory (FOR INSTRUCTION SLIDE, TIPS
SLIDE NOT NEEDED IG)

MainFlow ▶ EmployeeDetails

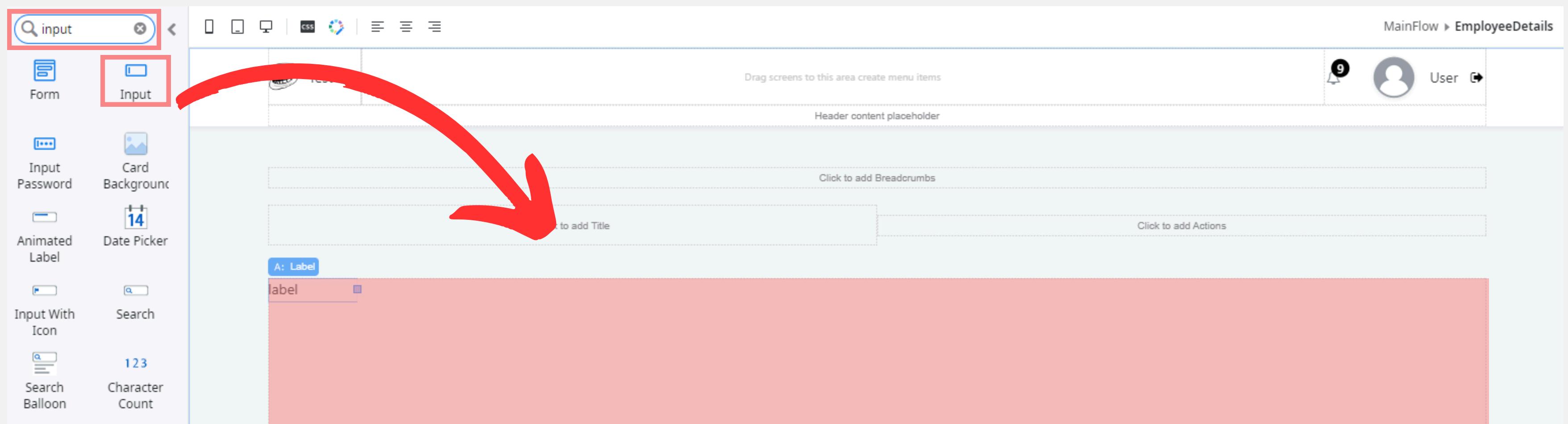


Screen Directory

INSTRUCTION AND TIPS TEMPLATE

Then, search for input parameter and drag the **Input** tool into the **Forms** that you had placed before.

MainFlow ▶ EmployeeDetails



CHECKPOINT 11: You should have result as below.

The screenshot shows the OutSystems development interface. The top bar indicates the project is 'outsystems' and the module is 'Development - personal-ypnqlfy6.outsys'. A red banner at the top right says '(x) Errors found'. The main workspace displays a screen titled 'Test Test'. On the left, a sidebar lists various UI components like Form, Input, Password, etc. A central toolbar has icons for file operations, CSS, and other development tools. The right side features a navigation tree for 'TestTest' and a detailed properties panel for an 'Input' widget. The properties panel includes fields for Name, Variable, Validation Parent, Mandatory, Null Value, Max. Length, Text Lines, Style Classes, Visible, Enabled, Type, Prompt, and On Change. The variable field is currently empty, highlighted with a red border. The bottom left shows a table of attribute usages, and the bottom right shows extended properties for the selected input.

Module Edit View Debugger Help | < > <> << >> ? |

(x) Errors found

MainFlow > EmployeeDetails

Processes Interface Logic Data

Elements Widget Tree

TestTest

- UI Flows
- Common
- Emails
- MainFlow
 - Entry1
 - Employee
 - Preparation
 - EmployeeDetails
 - EmployeeId
 - Preparation
 - OutSystemsChartsWeb
 - OutSystemsUIWeb
 - RichWidgets
 - Users
- Images
- Themes
- TestTest

Input

Properties Styles

Name	Variable
Employee	

1 Error, 1 Warning Debugger 1-Click Publish

'Id' Entity Attribute usages

Name	Property	Location	Element
Employee	Identifier Attribute		Entity

1 usage found

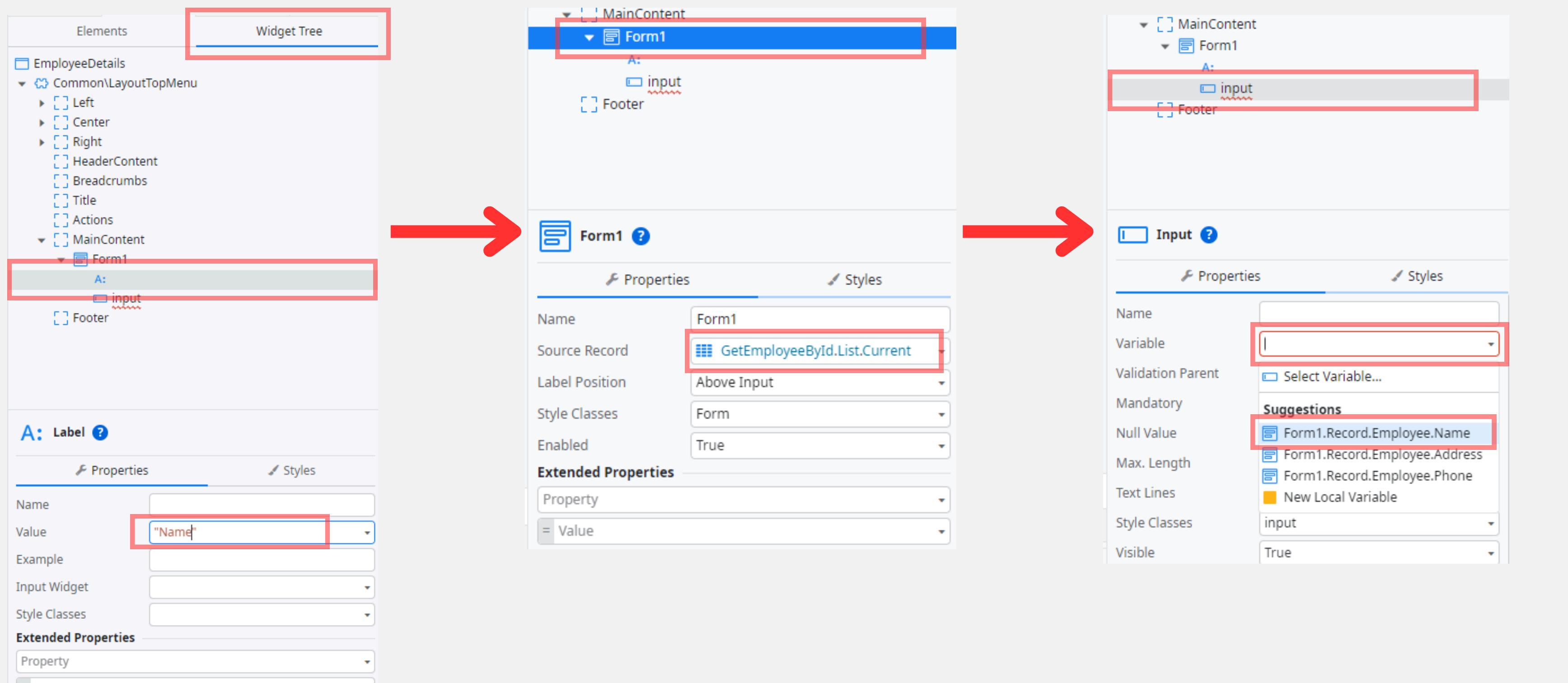
Close Extended Properties

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Screen Directory

INSTRUCTION AND TIPS TEMPLATE

Go to the **Widget Tree** section on the right panel, click on the label and change from “**label**” to “**Name**”. Next, click on **Form1** and select “**GetEmployeeById.List.Current**” as the **Source Record**. Then, click on the input and click on the **Variable** section. A dropdown will be listed and select “**Form1.Record.Employee.Name**”. Now repeat the same way for the **Address** and **Phone**.



MainFlow ▶ EmployeeDetails

CHECKPOINT 12: You should have result as below.

The screenshot shows a user interface with a top navigation bar and a main content area. The top navigation bar includes a user icon with a '9' notification, the text 'User', and a right-pointing arrow. To the left of the main content, there is another user icon with the text 'Test Test'. A central instruction 'Drag screens to this area create menu items' is displayed above the main content area. The main content area contains a form titled 'EmployeeForm' with three fields: 'Name', 'Address', and 'Phone', each represented by a text input field.

Drag screens to this area create menu items

9 User ➡

Test Test

EmployeeForm

Name

Address

Phone

Screen Directory (FOR INSTRUCTION SLIDE, TIPS)

SLIDE NOT NEEDED IG)

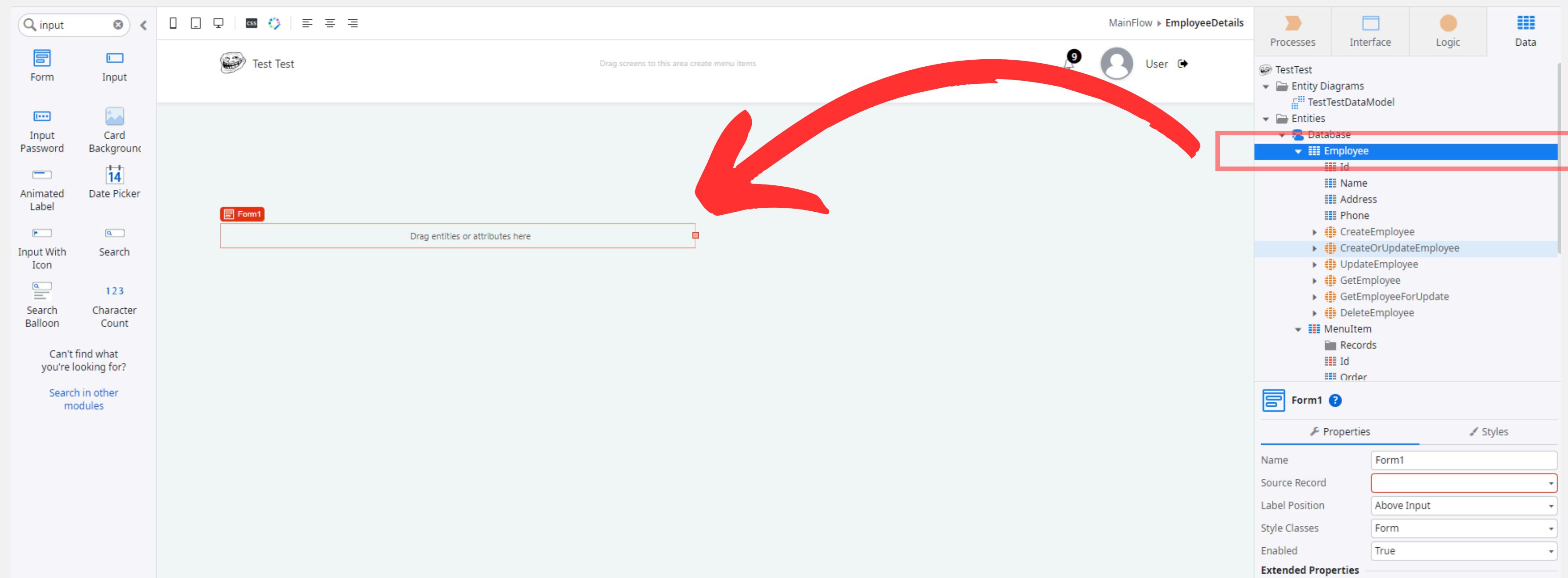
MainFlow ▶ Employee ▶ Preparation ▶ GetEmployees

INSTRUCTION AND TIPS TEMPLATE

Other Alternative:

Once you've added the **Form** tool, you can just drag the **Employee** database to the **Form**. Then, it will also shows the same result.

The border is lock. just click and drag/highlight the template photo to remove it and resize your **Screen Directory** photo here.



CHECKPOINT 12(Other Alternative): You should have result as below.

Module Edit View Debugger Help | < > < > | ⚙️ 🔍 ⏪ ⏫ | ① Publish

MainFlow > EmployeeDetails > Preparation > GetEmployeeById

Processes Interface Logic Data

Test Test

Header content placeholder

Click to add Breadcrumbs

Click to add Title Click to add Actions

EmployeeForm

Name

Address

Phone

Click to add Footer

Container If abc x.y Text Expression Table Records List Records Form Editable Table Link Button Label Input Check Box Radio Button Combo Box Image List Box Upload Edit Record Show Record Web Block Table Input Password Comment

Processes Interface Logic Data

TestTest Entity Diagrams TestTestDataModel Entities Database Employee Id Name Address Phone CreateEmployee CreateOrUpdateEmployee UpdateEmployee GetEmployee GetEmployeeForUpdate DeleteEmployee MenuItem MenuSubItem (System) OutSystemsChartsWeb OutSystemsUIWeb RichWidgets

EmployeeForm

Properties Styles

Name EmployeeForm Source Record GetEmployeeById.List.Current Label Position Above Input Style Classes Form Enabled True Extended Properties Property Value

1 Warning Debugger

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The screenshot shows the OutSystems development interface. On the left is a toolbar with various icons for creating UI elements like containers, tables, forms, and buttons. The main workspace displays a screen titled 'EmployeeForm' containing three input fields: 'Name', 'Address', and 'Phone'. To the right of the workspace is a navigation pane showing the project structure: 'Test Test' > 'Entity Diagrams' > 'TestTestDataModel' > 'Entities' > 'Database' > 'Employee'. The 'Employee' entity is currently selected, and its properties are listed in a details panel on the far right. At the top, there's a green 'Publish' button with a circled '1'. The bottom status bar indicates '1 Warning' and has a 'Debugger' button.

Screen Directory

INSTRUCTION AND TIPS TEMPLATE

Search for **Button** tool and drag it next to the **Phone** section. Next go to the **Label** section on the bottom right panel and change it from "Ok" to "Submit". Do the same for the "Cancel" button and place it next to "Submit" button

button

OK

Button

Radio
Button

Modal

Button
Group

Button
Group...

File Upload

Sidebar

Button
Loading

Can't find what you're looking for?

Test Test

Name

Address

Phone

ok

MainFlow ▶ Employee ▶ Preparation ▶ GetEmployees

OK Button ?

Properties Styles

Name

Label "Cancel"

Example

Validation Parent

Style Classes Button

Visible True

Enabled True

Is Default No

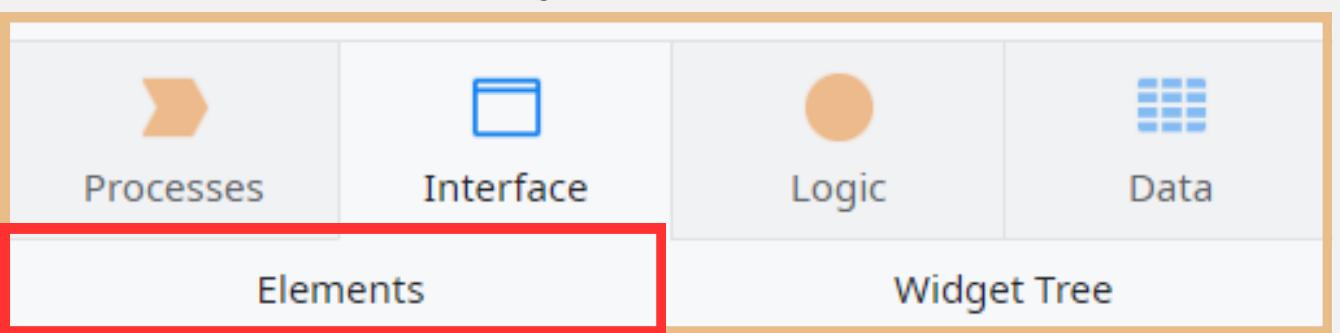
On Click

Method Submit

Validation Server

Confirmation Message

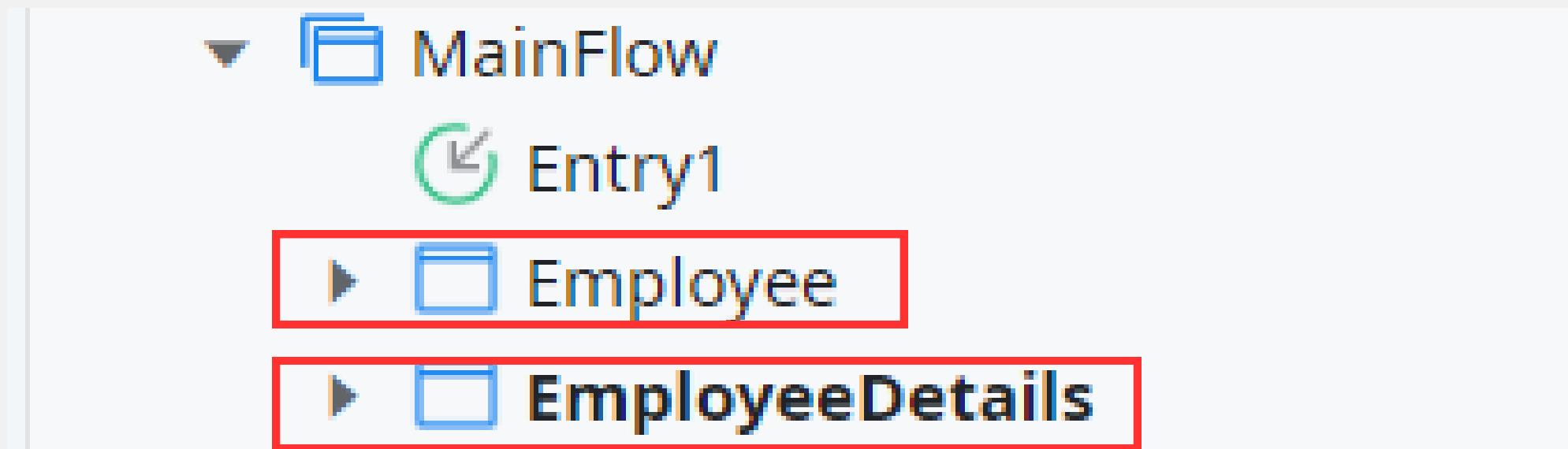
Screen Directory



THINGS TO NOTE

Now we have created 2 pages, **Employee** and **EmployeeDetails**.

Just think **MainFlow** as our Folder and under it is our screen pages. The **MainFlow**, can be easily accessed on the **Elements** tab under **Interface** panel.

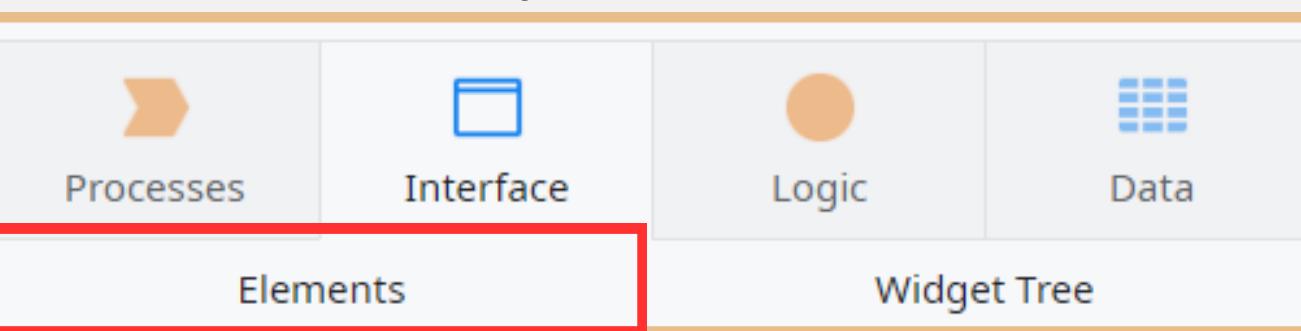


CHECKPOINT 13: You should have result as below.

The interface consists of several main sections:

- Header:** On the left is a user icon labeled "Test Test". On the right is another user icon with a notification badge showing the number "9", labeled "User".
- Header Content Placeholder:** A large dashed rectangular area for header content.
- Breadcrumbs Placeholder:** A dashed rectangular area for adding Breadcrumbs.
- Title Placeholder:** A dashed rectangular area for adding a Title.
- Actions Placeholder:** A dashed rectangular area for adding Actions.
- Form Fields:** A red-bordered form containing three input fields:
 - Name:** An input field with a blue file icon.
 - Address:** An input field.
 - Phone:** An input field.
- Action Buttons:** A row of buttons at the bottom of the form:
 - A black button labeled "Submit" with a blue "OK" icon.
 - A red button labeled "Cancel" with a red "OK" icon.
- Footer Placeholder:** A large dashed rectangular area for footer content.

Screen Directory



INSTRUCTION

Now click on the **Cancel** button on the **MainContent**. Go to the **Properties** tab at bottom left corner and scroll until you see the **Destination** cell.

Click on it and select '**Select Destination**' and choose **Employee** under MainFlow. For the Submit Button, select the "**New Screen Action**".

This screenshot shows the 'Button' properties dialog. The 'On Click' section is expanded, showing the 'Select Destination...' button highlighted with a red box. Below it is a 'Suggestions' list containing: '(Current Screen)', 'Common\ExternalURL', 'Common>Login', 'New Screen Action' (which is orange), and 'New Web Screen'. The 'Destination' field below is empty and has a red border. The 'OK' button is visible at the top left.

This screenshot shows the 'Select On Click Destination' dialog. It features a search bar at the top and a tree view of destinations. The tree structure includes: TestTest > UI Flows > Common > MainFlow > Employee (which is highlighted with a blue bar) > EmployeeDetails. At the bottom are buttons for '?', 'New Screen Action', 'Select' (highlighted with a red box), and 'Cancel'.

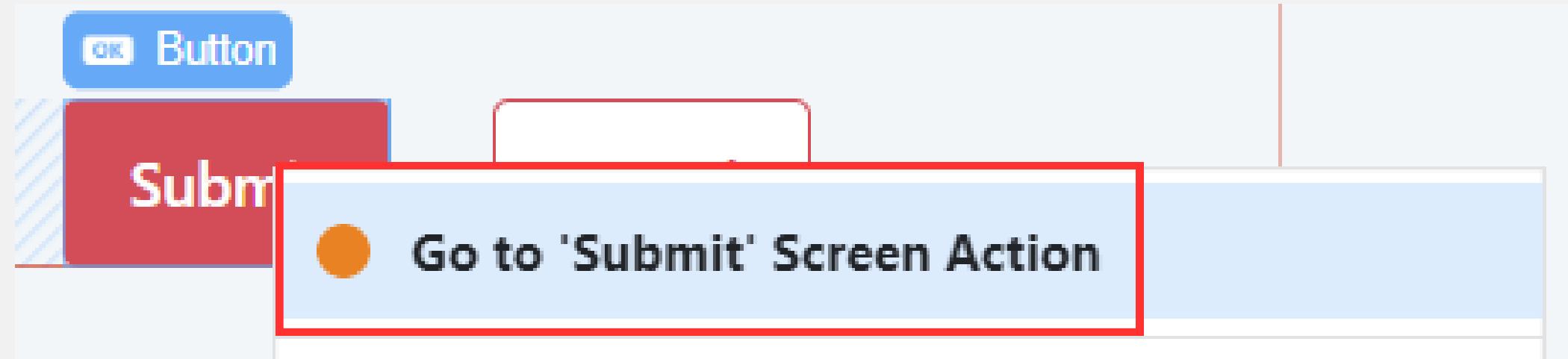
Screen Directory

ALTERNATIVE - FLOW METHOD? ADVANCED METHOD? MORE THINGS WE CAN

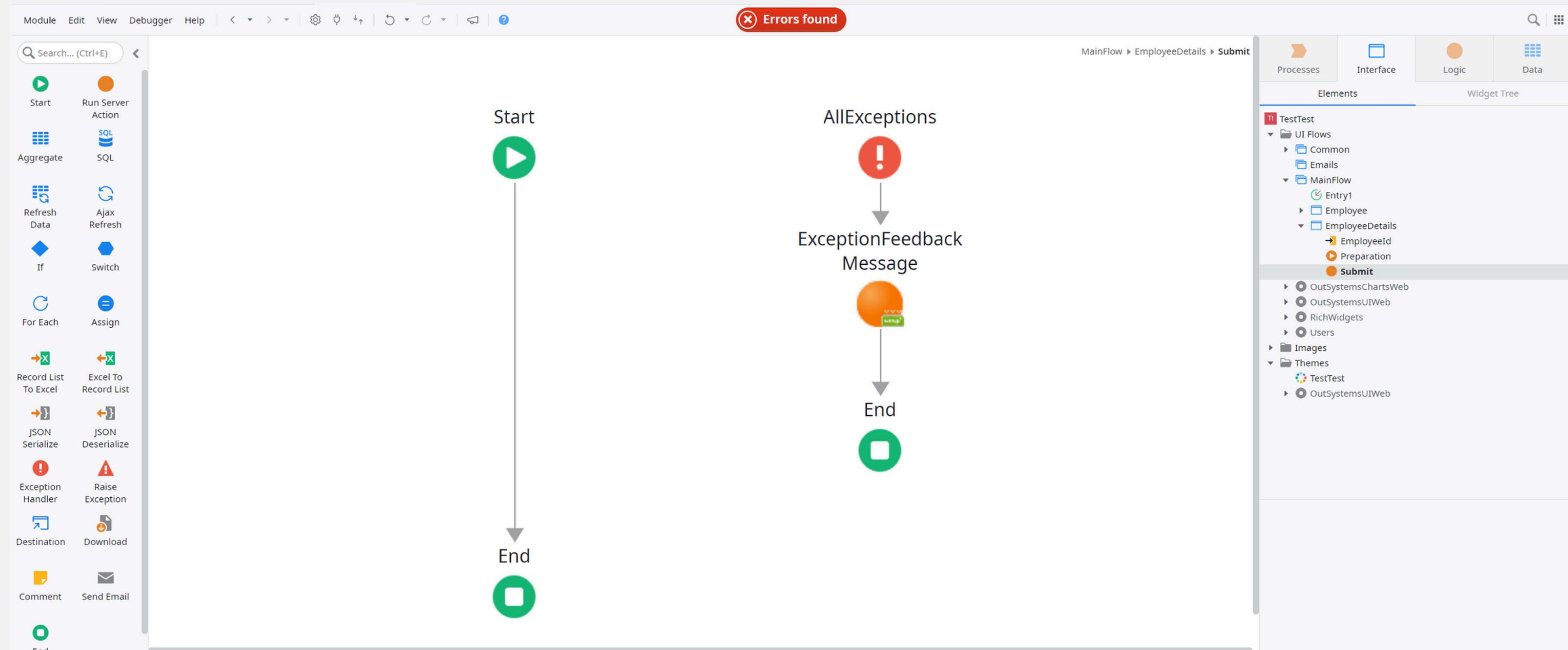
DO

Right click on the **Submit** button and click 'Go to Submit
Screen Action'

MainFlow ▶ EmployeeDetails ▶ Submit



CHECKPOINT TEMPLATE: There should be a new Submit Action Screen appeared.



Screen Directory

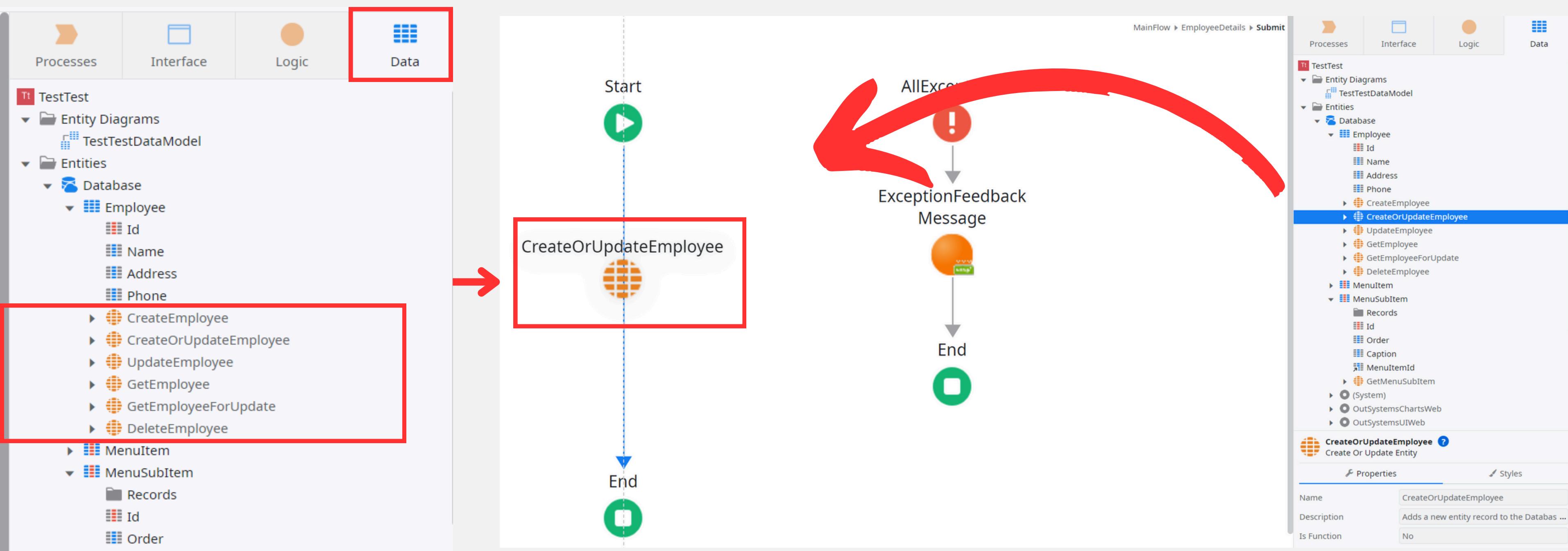
INSTRUCTION # - Action Screen

Click on the **Data** panel on the right.

Now you can see under **Employee**, there are premade **CRUD** action we can choose from. Now **drag and drop the CreateOrUpdateEmployee** onto the **Submit** canvas.

Feel free to explore the other action later.

MainFlow ▶ EmployeeDetails ▶ Submit



Screen Directory

INSTRUCTION # - Action Screen

Now go to the **Properties** tab, and select **EmployeeForm.Record** as the **Source** data.

Just think **MainFlow** as our Folder and under it is our screen pages. The **MainFlow**, can be easily accessed on the **Elements** tab under **Interface** panel.

MainFlow ▶ EmployeeDetails ▶ Submit

The screenshot shows the 'CreateOrUpdateEmployee' Run Server Action properties. The 'Properties' tab is selected. The 'Name' field contains 'CreateOrUpdateEmployee'. The 'Action' dropdown also contains 'CreateOrUpdateEmployee'. The 'Source' dropdown is highlighted with a red border and contains the value 'EmployeeForm.Record', which is also highlighted with a red border in the 'Suggestions' list below. The 'Styles' tab is visible but not selected.

Name	CreateOrUpdateEmployee
Action	CreateOrUpdateEmployee
Source	EmployeeForm.Record

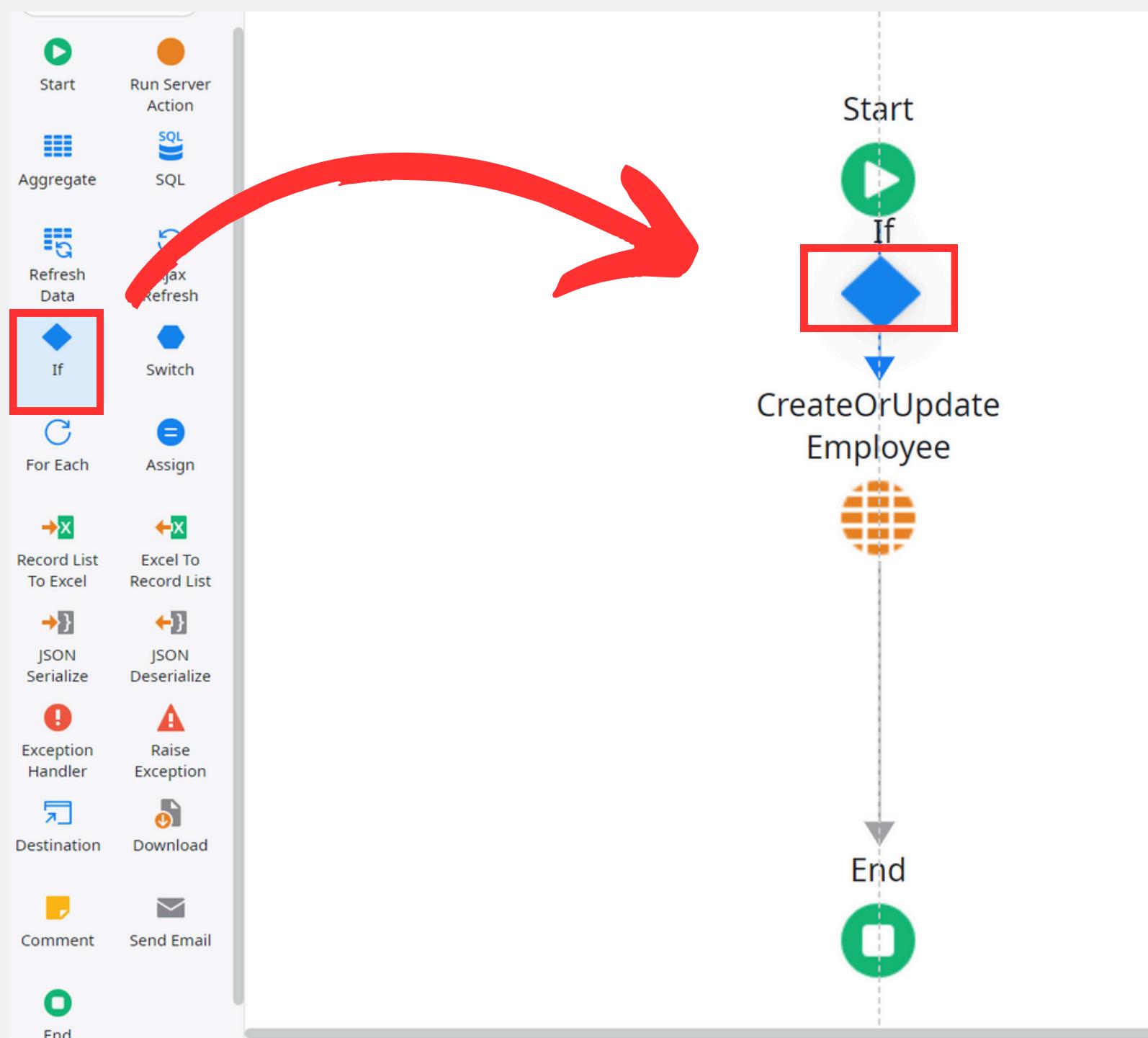
Screen Directory

INSTRUCTION # - Action Screen - CONDITION

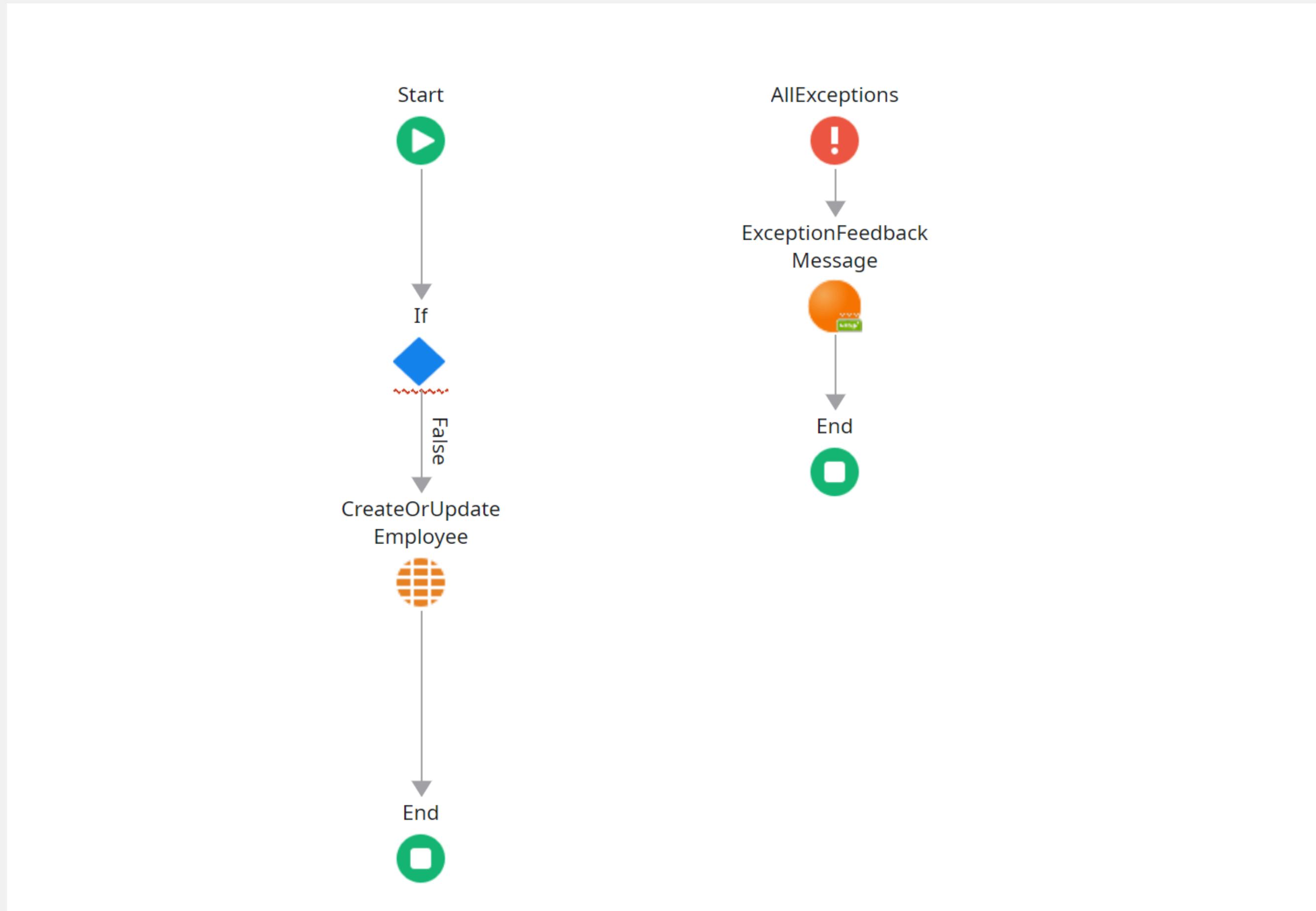
Now we will use the **If** tool on the tool panel on the left and drag it in between the **Start** and **CreateOrUpdate** action.

Just think **MainFlow** as our Folder and under it is our screen pages. The **MainFlow**, can be easily accessed on the **Elements** tab under **Interface** panel.

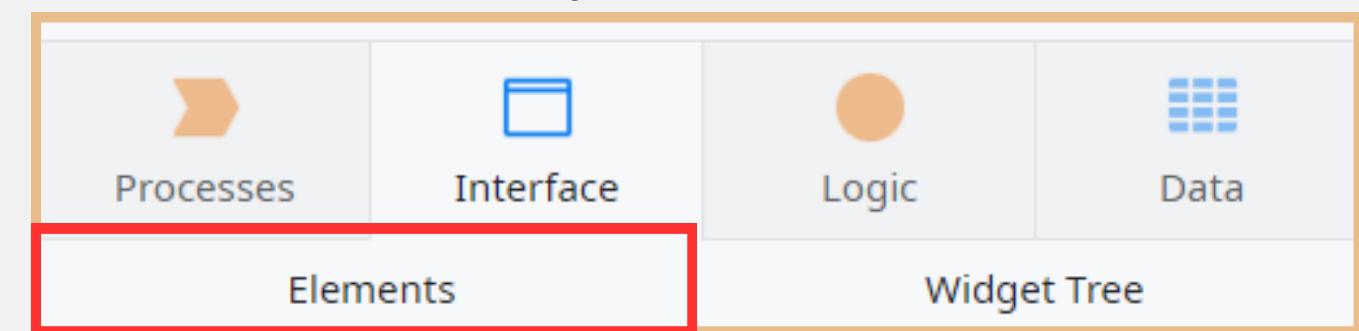
MainFlow ► EmployeeDetails ► Submit



CHECKPOINT TEMPLATE: You should have result as below.



Screen Directory

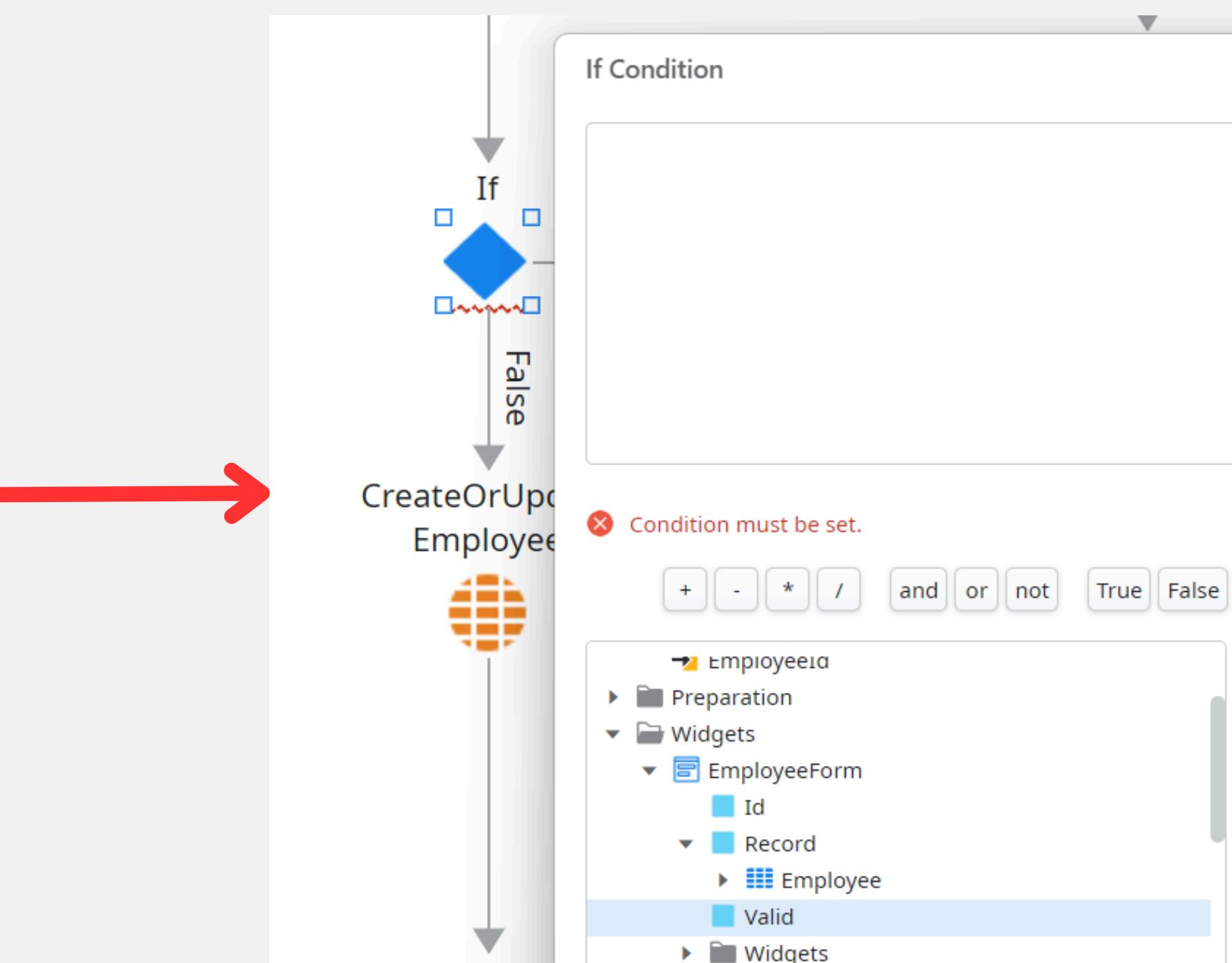
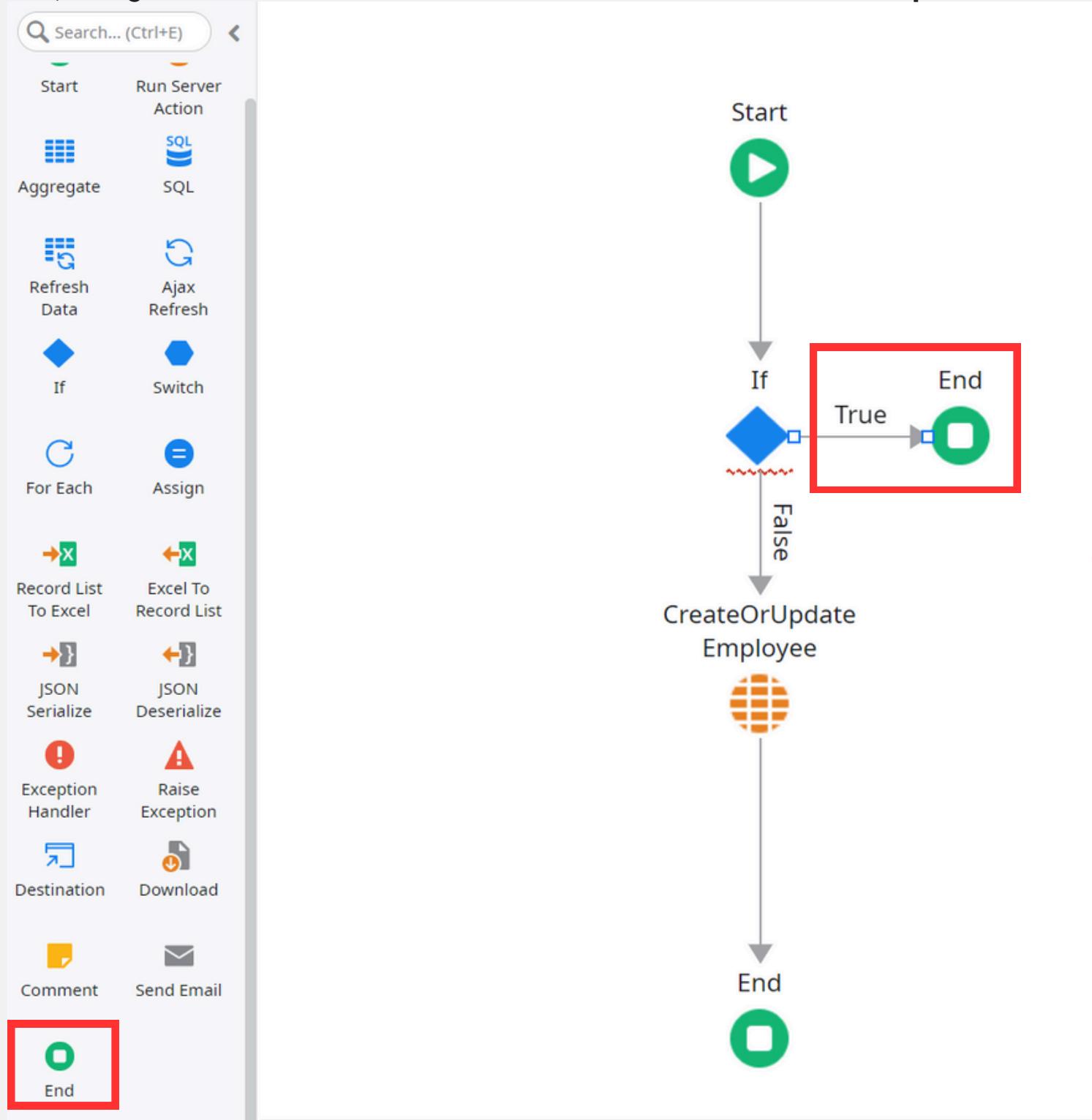


TIPS / REVISED WHAT WE LEARNED SO FAR.

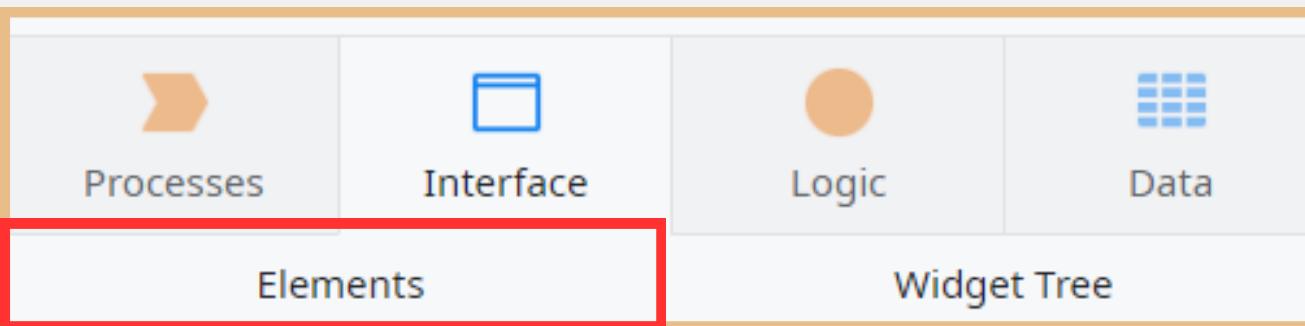
Now drag and drop the **End** tool on the right of the **If** tool and connect them together as shows below.

Now double click on the **If** tool and double click on **Valid** under **EmployeeForm**. then close the panel.

Next, right click on the **If** tool then click on **Swap Connectors**



Screen Directory



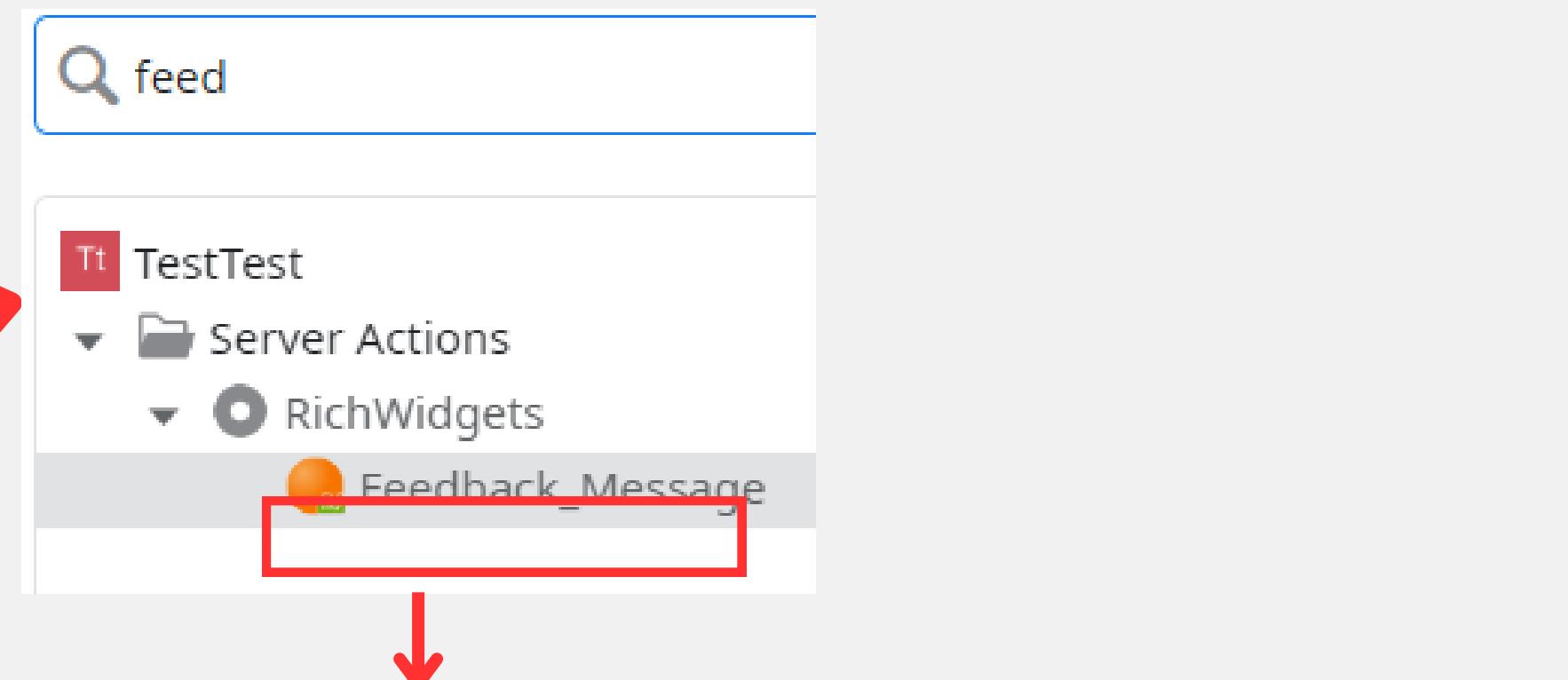
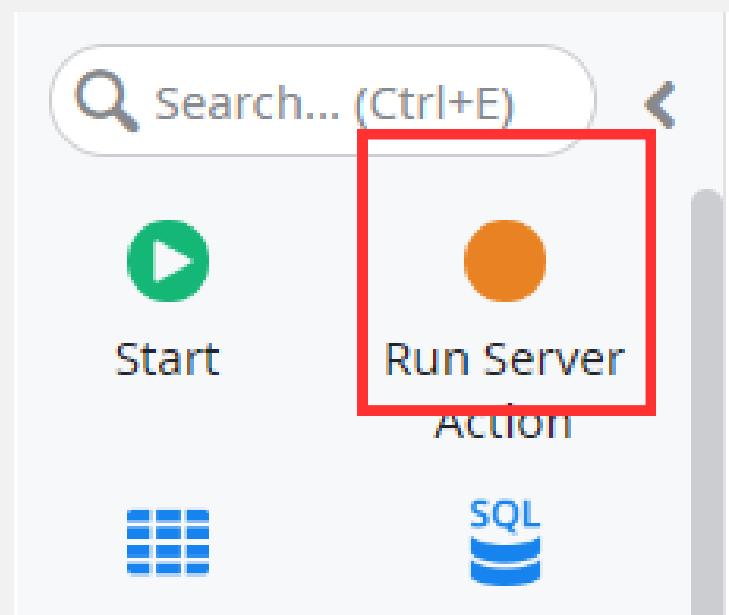
TIPS / REVISED WHAT WE LEARNED SO FAR.

Now drag the Run Server Action into the False action and search for **Feedback_Message** on the popup menu.

Then go to **Properties**, and enter the following:

MessageText= "Not Valid Form Data"

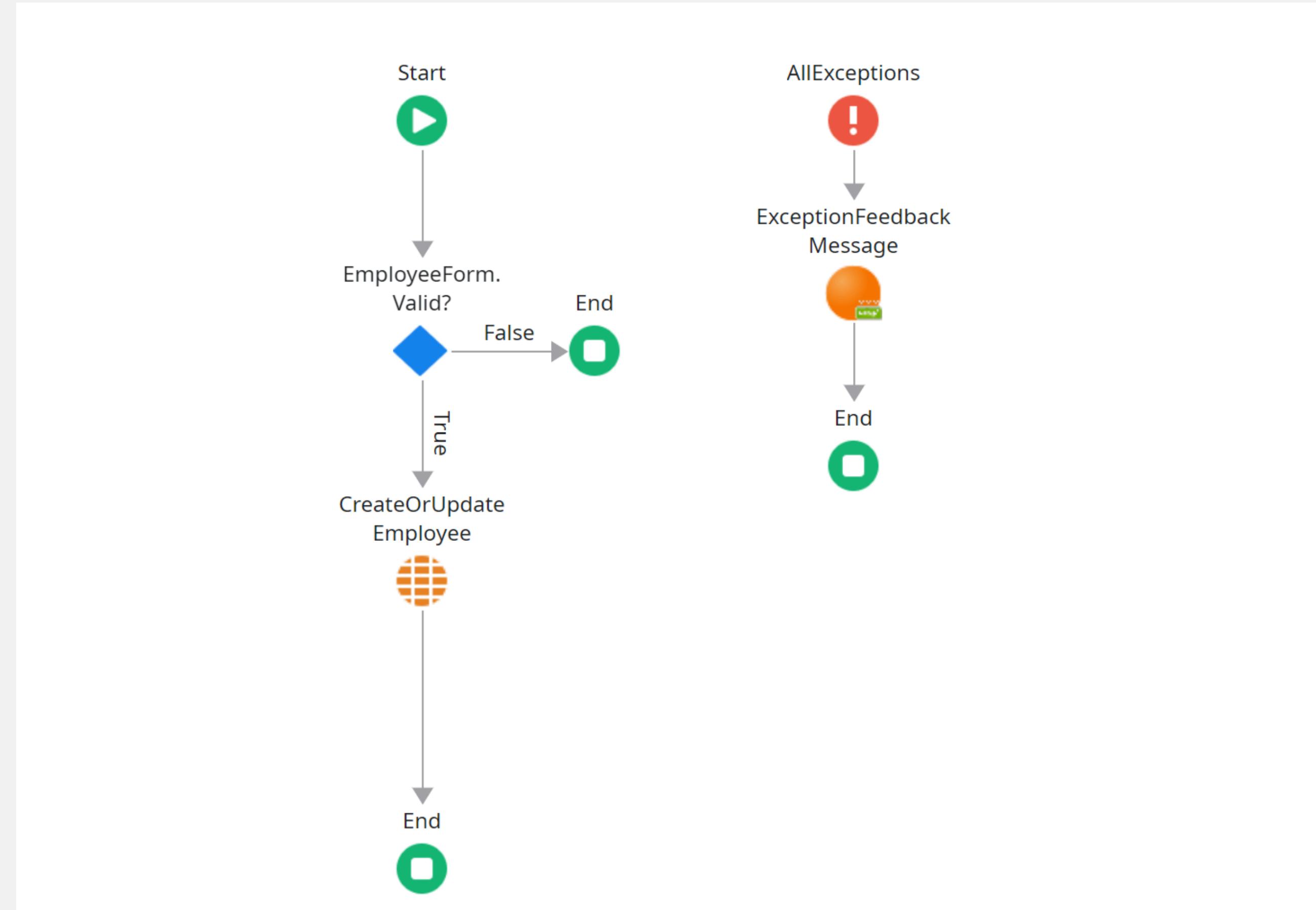
MessageType= Error



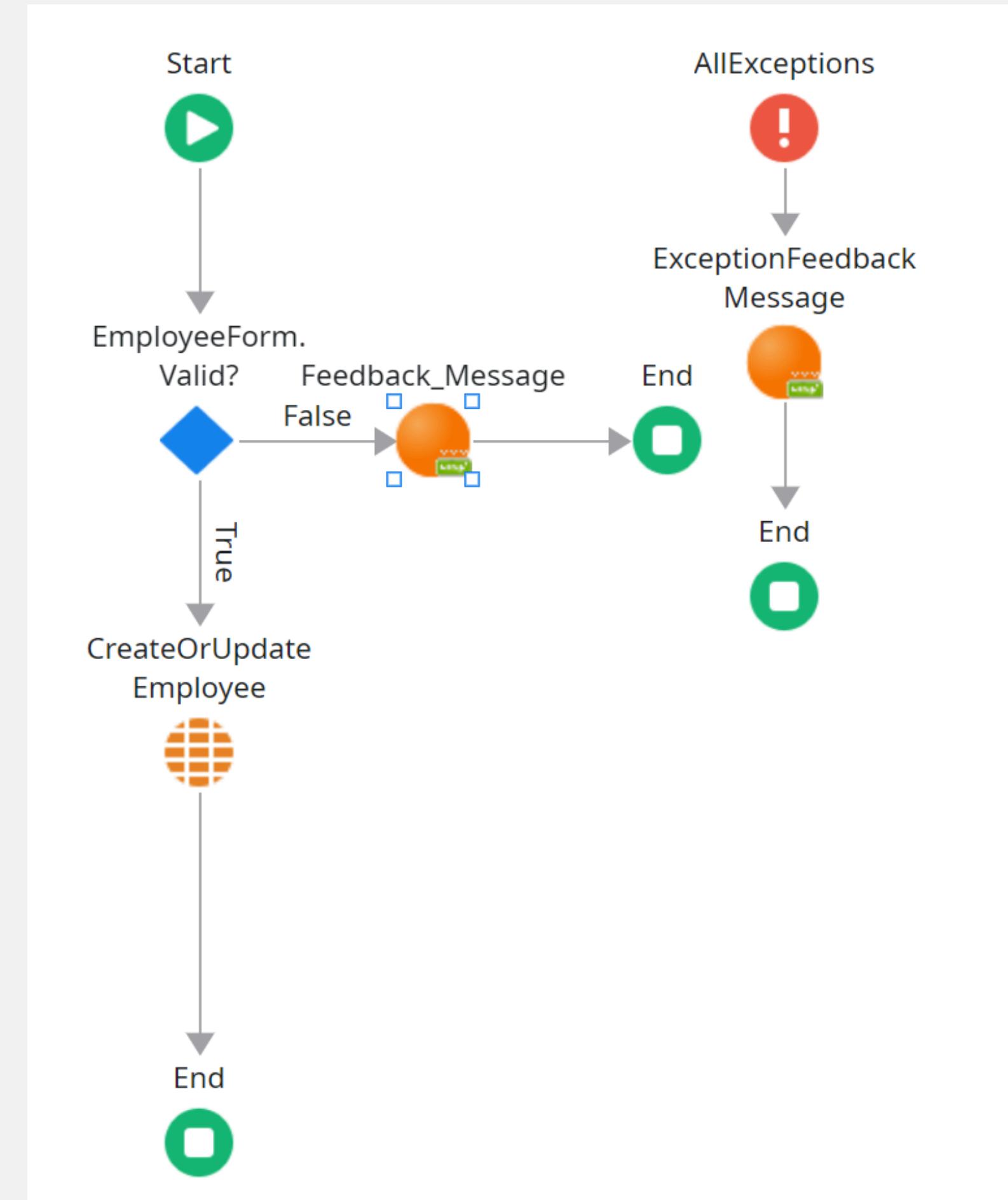
This screenshot shows the properties screen for the 'Feedback_Message' item. The title bar says 'Feedback_Message ?' and 'Run Server Action'. The 'Properties' tab is selected. The configuration fields are as follows:

Name	Feedback_Message
Action	Feedback_Message
MessageText	"Not valid form data"
MessageType	Entities.MessageType.Error

CHECKPOINT TEMPLATE: The condition below state that it only accept **Valid** EmployeeForm **inputs**, else it will **End** the session.



CHECKPOINT TEMPLATE: You should have result as below.



Screen Directory

TIPS / REVISED WHAT WE LEARNED SO FAR.

Now, go back to EmployeeDetails screen.

In the form section, click on **Name** area and set the **Mandatory** in the **Properties** section from **False** to **True**.

Then, repeat the same step for **Address** and **Phone**.

MainFlow ➔ EmployeeDetails

The screenshot shows the OutSystems Studio interface. On the left is the EmployeeDetails screen, which contains three input fields: 'Name' (highlighted with a red border), 'Address', and 'Phone'. Below these are 'Submit' and 'Cancel' buttons. On the right is the Screen Directory, showing the project structure under 'MainFlow' and the properties for the 'Employee_Name' variable. The 'Mandatory' property is highlighted with a red border and set to 'True'.

UI Flows

- Common
- Emails
- MainFlow
 - Entry1
 - Employee
 - Preparation
 - EmployeeDetails
 - EmployeeId
 - Preparation
 - Submit
- OutSystemsChartsWeb
- OutSystemsUIWeb
- RichWidgets
- Users
- Images
- Themes
 - TestTest
 - OutSystemsUIWeb

Employee_Name

Properties	Styles
Name: Employee_Name	
Variable: EmployeeForm.Record.Employee.N...	
Validation Parent:	
Mandatory: True	
Null Value:	
Max. Length: 50	
Text Lines: 1	
Style Classes: input	
Visible: True	
Enabled: True	
Type: Text	
Prompt:	

Screen Directory

TIPS / REVISED WHAT WE LEARNED SO FAR.

Now, go to Employee screen.

MainFlow ➔ Employee

Drag a new button tool on the section on the right of the "Employee List" and type "Create New Employee" as the label of the button.

The image shows a wireframe of a user interface for an "Employee List". At the top left, there is a placeholder text "Click to add Breadcrumbs". On the right side, there is a black rectangular button with a red border containing the text "+ Create New Employee". Below this, there is a table structure with four rows. Each row has two columns: "Name" and "Address". The first three rows have "Name" and "Address" labels in blue. The fourth row has "Name" and "Address" labels in grey. The entire interface is enclosed in a large dashed border.

Name	Address
Name	Address
Name	Address
Name	Address

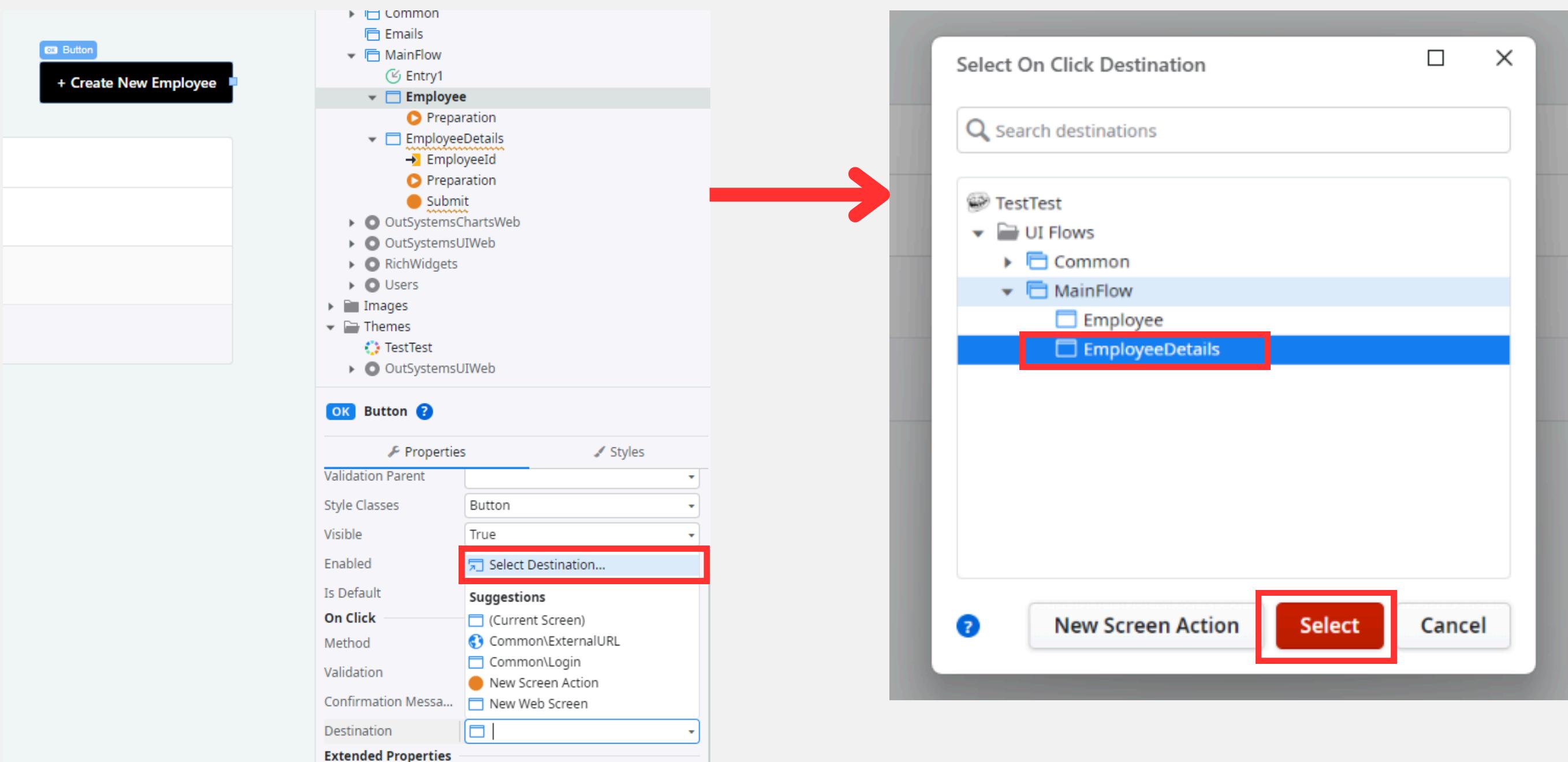
Screen Directory

TIPS / REVISED WHAT WE LEARNED SO FAR.

Now, click on that button and go to the **Properties** section and choose “**Select Destination...**”. A new popup will appear right after that.

MainFlow ➔ Employee

Next, click on the **EmployeeDetails** because we want the users to be navigated to the Employee Details page when they clicked the button.

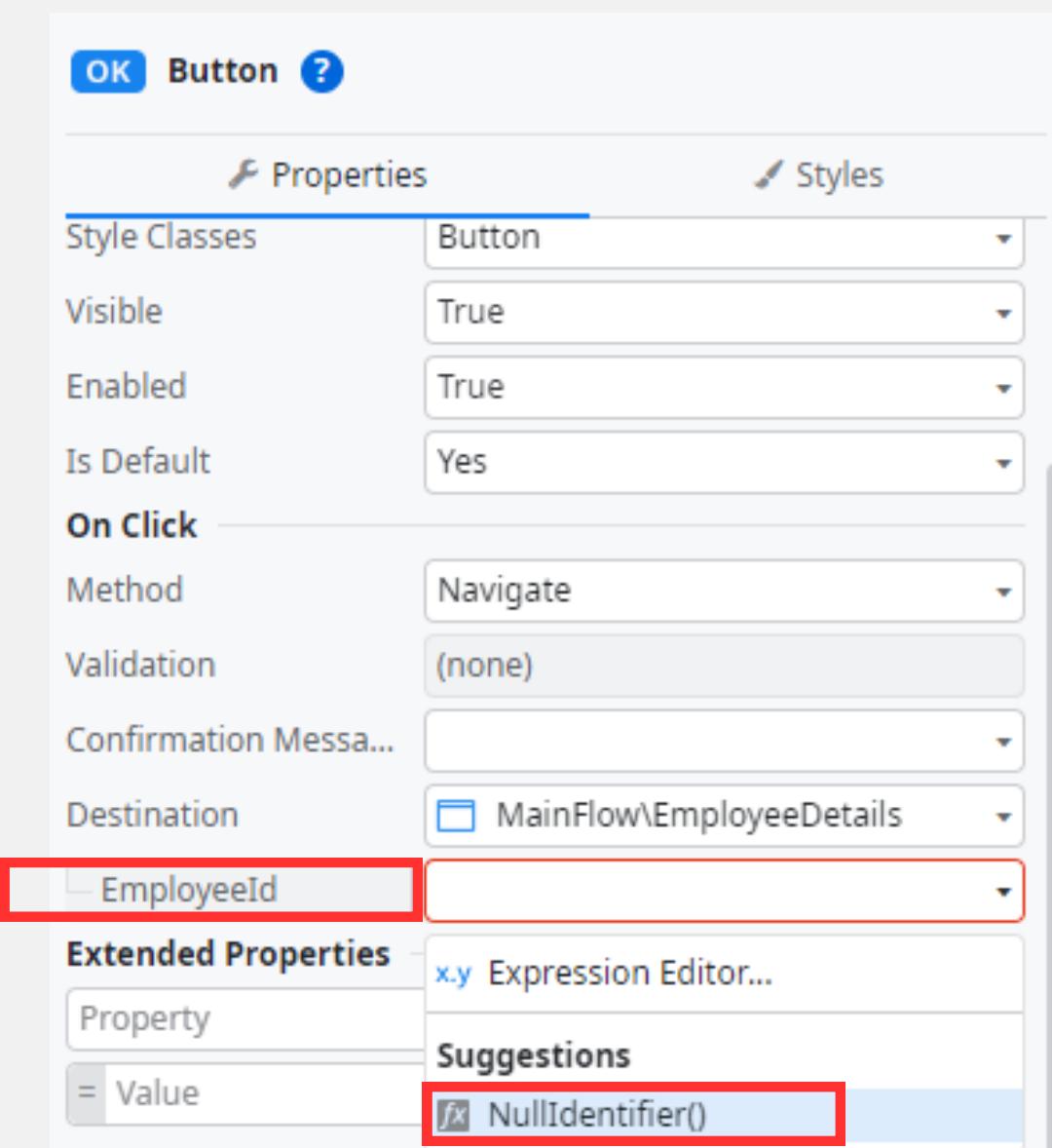


Screen Directory

TIPS / REVISED WHAT WE LEARNED SO FAR.

Under the **Destination** properties, we have **EmployeeId**. Now, set the properties of **EmployeeId** to be **NullIdentifier()**.

Next, click on the **EmployeeDetails** because we want the users to be navigated to the Employee Details page when they clicked the button.



MainFlow ➤ Employee

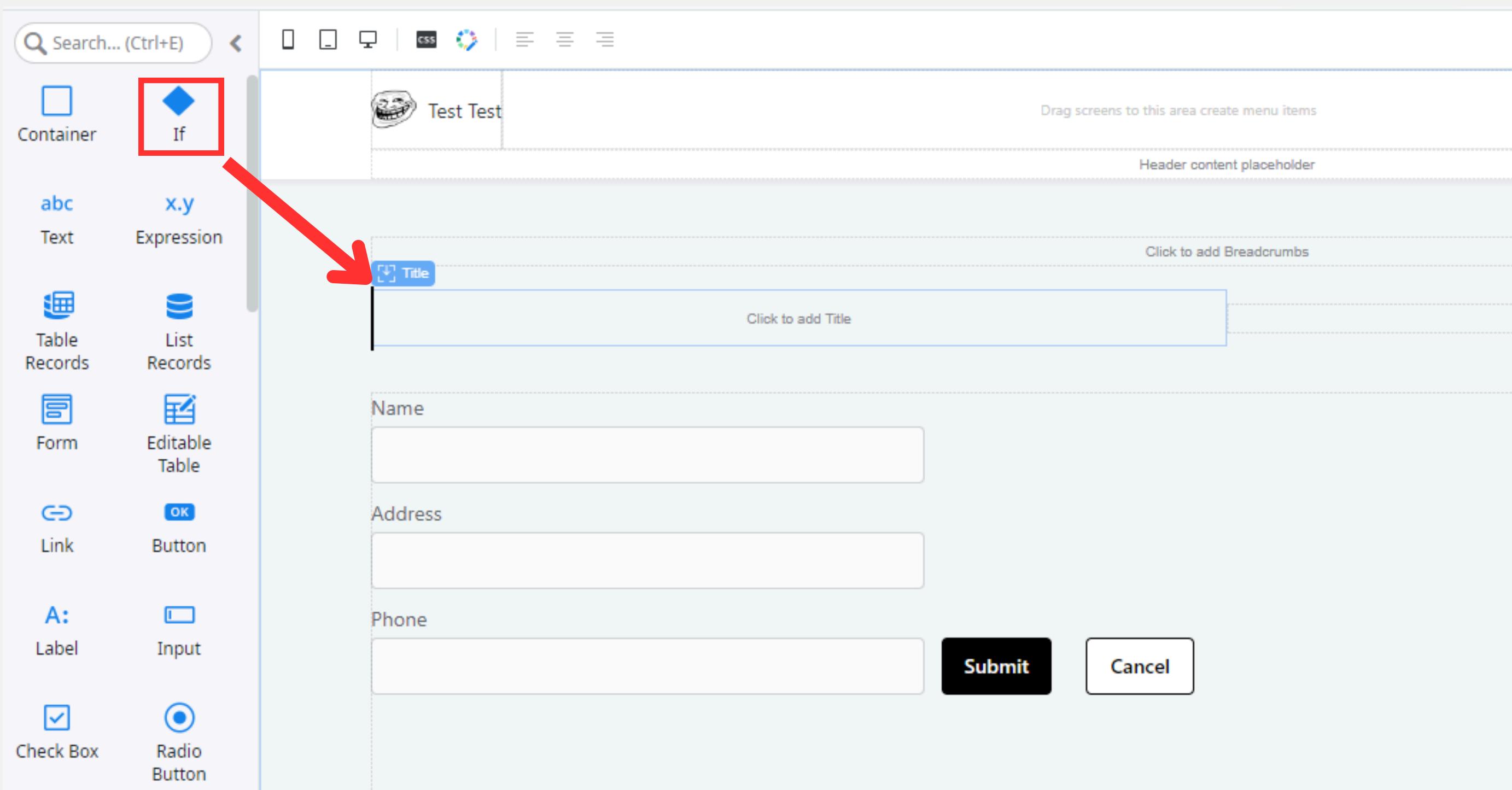
Screen Directory

TIPS / REVISED WHAT WE LEARNED SO FAR.

Now, go back to EmployeeDetails screen.

Drag the **If** tool to the **Title** section.

MainFlow ➔ EmployeeDetails



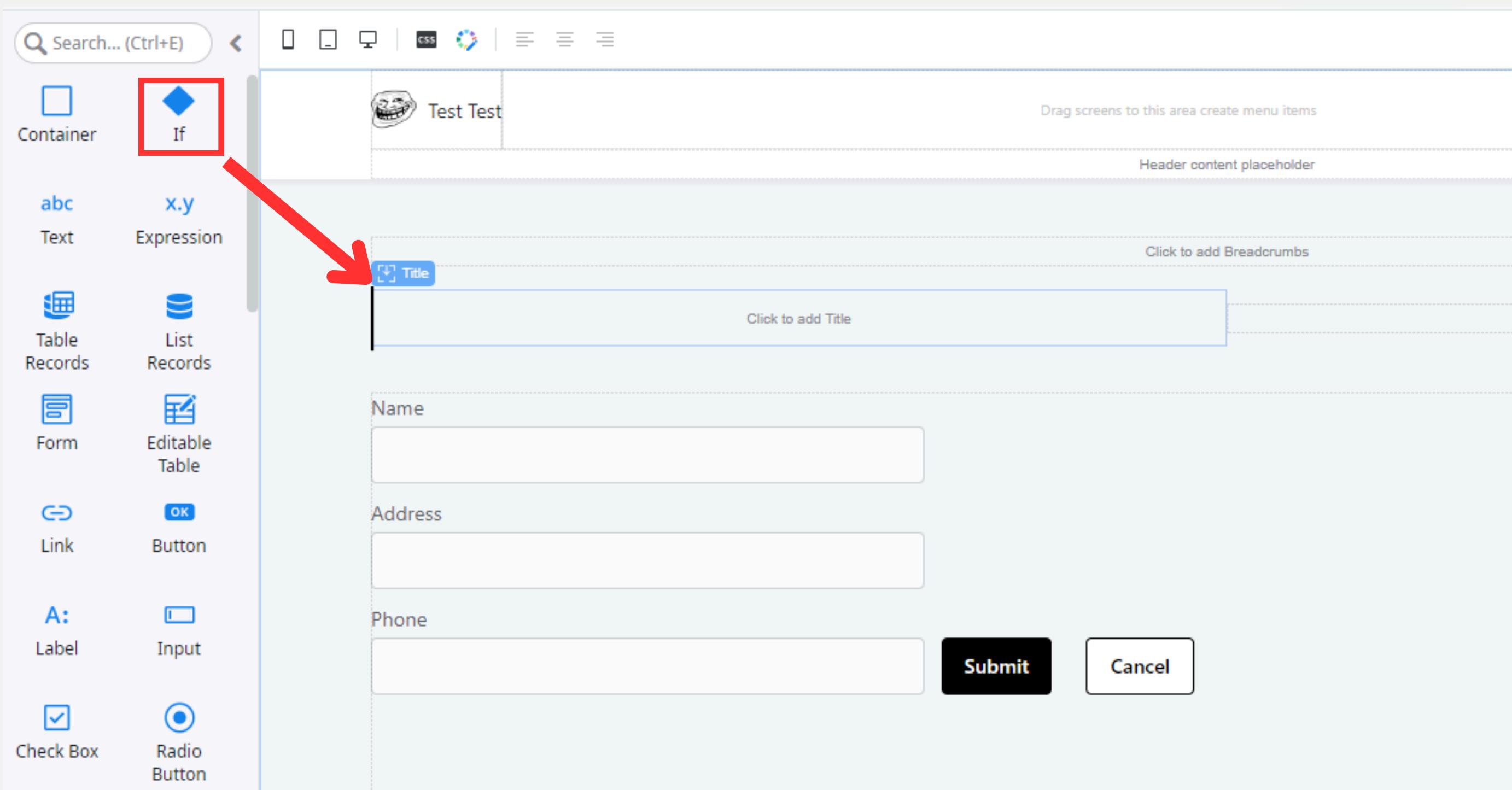
Screen Directory

TIPS / REVISED WHAT WE LEARNED SO FAR.

Now, go back to EmployeeDetails screen.

Drag the **If** tool to the **Title** section.

MainFlow ➔ EmployeeDetails



Screen Directory

TIPS / REVISED WHAT WE LEARNED SO FAR.

Click on the **If** section as shown in the red box and in the **Condition** properties, select “**Expression Editor...**”.

A new popup will appear after that.

The screenshot shows the OutSystems development environment with the following components:

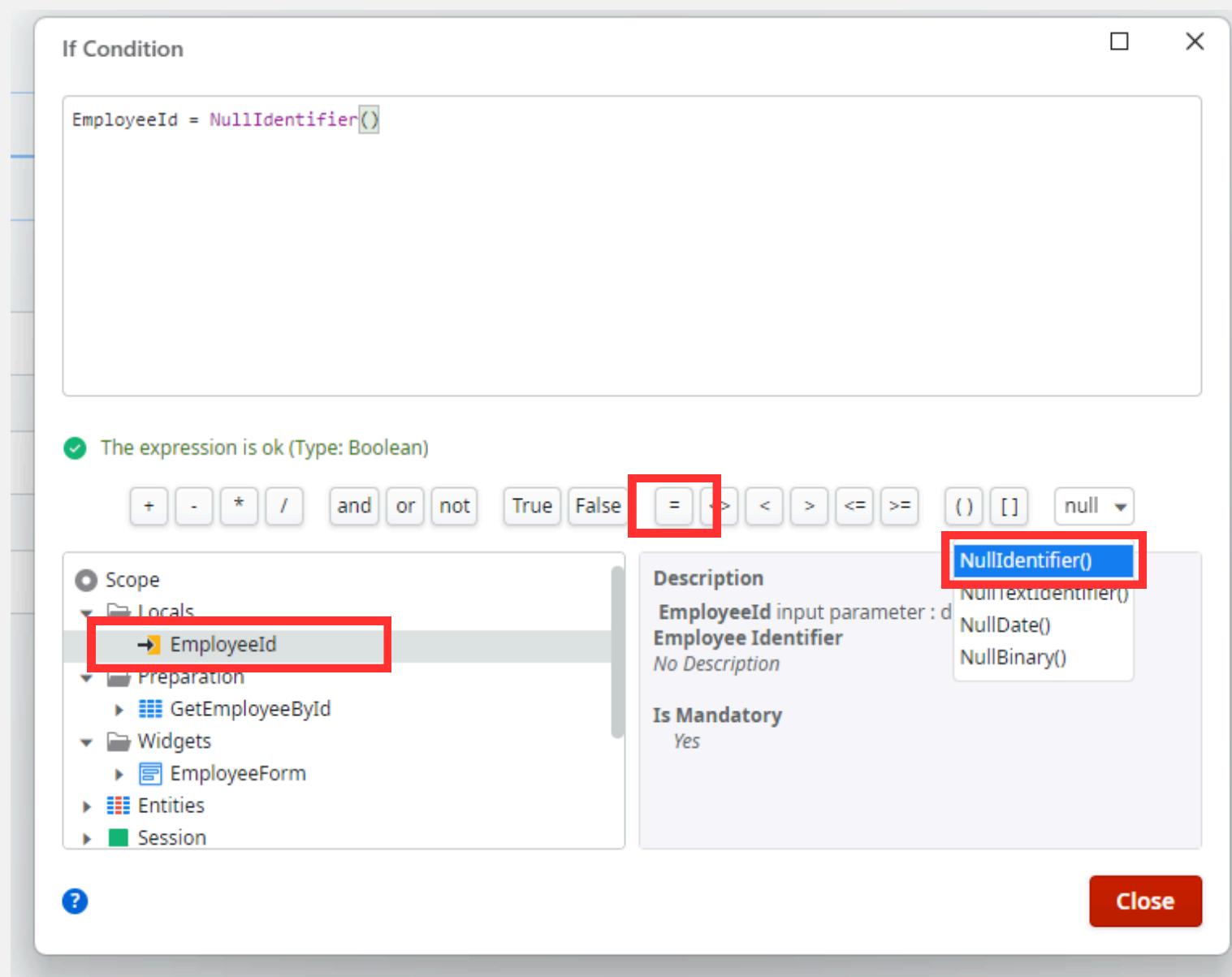
- MainFlow > EmployeeDetails**: The current screen being edited, displayed prominently at the top.
- UI Flows**: A tree view of the application's flowchart, showing nodes like Common, Emails, MainFlow, Employee, Preparation, and EmployeeDetails.
- Properties Panel**: Opened for the **If** condition, showing fields for **Name** and **Condition**. The **Condition** field has a dropdown menu open, with the option **x.y Expression Editor...** highlighted by a red box.
- Screen Content**: The visual representation of the screen, featuring an **If** control with three circles, three input fields (Name, Address, Phone), and two buttons (Submit, Cancel).
- Toolbars and Buttons**: Standard development tools like Debugger and 1-Click Publish are visible at the bottom.

Screen Directory

TIPS / REVISED WHAT WE LEARNED SO FAR.

Now, set the expression to be “`EmployeeId = NullIdentifier()`” and hit the Close button.

Then type “Create New Employee” at the same if section.



The screenshot shows the 'Create New Employee' screen. It features three input fields: 'Name', 'Address', and 'Phone', each with a corresponding text input box. Below the fields are two buttons: 'Submit' and 'Cancel'. At the top left of the screen, there is a blue arrow pointing right with the word 'True' above it, indicating the current condition being applied.

MainFlow ➤ EmployeeDetails

Screen Directory

TIPS / REVISED WHAT WE LEARNED SO FAR.

Drag the **Expression** tool to the other If section. Then, on the **Value** properties, select “**Expression Editor...**”.

MainFlow ➔ EmployeeDetails

The screenshot shows the OutSystems development environment with the following details:

- Left Panel (Toolbox):** Contains various UI element icons such as Container, If, Text, Expression, Table Records, Form, Link, Label, Check Box, Radio Button, Combo Box, List Box, Edit Record, and Web Block.
- Middle Panel (Main View):** Displays the "EmployeeDetails" screen titled "Create New Employee". The screen has three input fields: Name, Address, and Phone, each with a corresponding label. Below the fields are two buttons: "Submit" and "Cancel". A red arrow points from the "Expression" icon in the toolbox to the "Expression" field in the screen's properties panel.
- Right Panel (Properties):** Shows the properties for the selected "Expression" element. The "Value" property is set to "x.y Expression Editor...".
- Top Bar:** Shows the current location as "MainFlow > EmployeeDetails > Submit".
- Header:** Shows the title "MainFlow ➔ EmployeeDetails" and the navigation bar with "Processes", "Interface", "Logic", and "Data".
- Widget Tree:** On the right, it shows the hierarchical structure of the application, including "TestTest", "UI Flows", "MainFlow", "EmployeeDetails", and specific components like "EmployeeId", "Preparation", and "Submit".

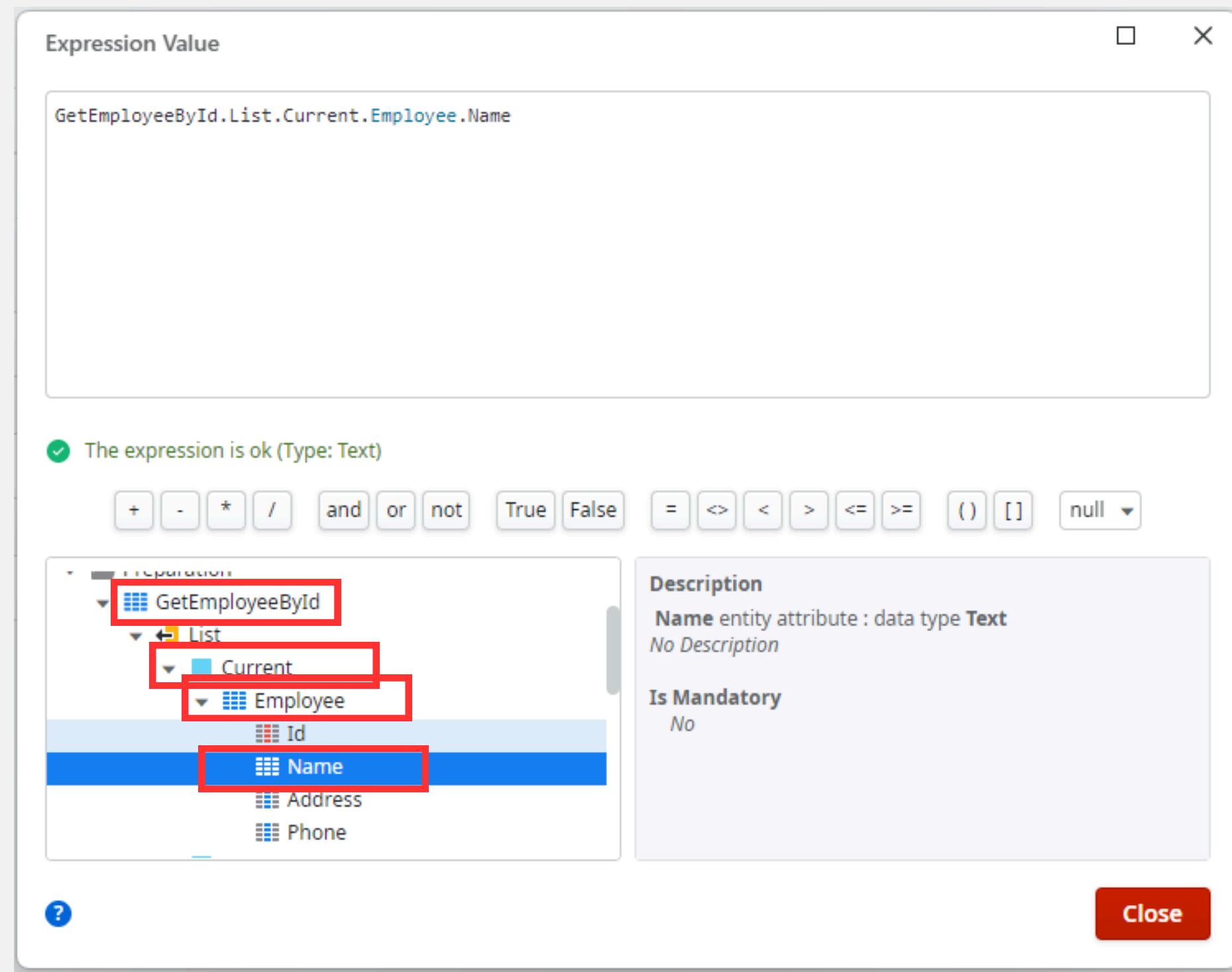
Screen Directory

TIPS / REVISED WHAT WE LEARNED SO FAR.

In the Expression Editor, look for GetEmployeeById -> Current -> Employee -> Name.

Double click on the Name.

MainFlow ➤ EmployeeDetails



CHECKPOINT TEMPLATE: You should have result as below.

The screenshot shows the OutSystems application builder interface. The main workspace displays a screen titled "Create New Employee". The screen has three input fields: "Name", "Address", and "Phone", each with a placeholder label above it. Below the fields are two buttons: "Submit" (black background) and "Cancel". Above the workspace, a green button labeled "1 Publish" is visible. To the left, a toolbar contains various icons for creating UI elements like containers, tables, forms, and buttons. On the right, a sidebar shows the project structure under "EmployeeDetails": "EmployeeId", "Preparation", and "Submit". The "Submit" node is currently selected. At the bottom, there are tabs for "Properties" and "Styles", and a status bar indicating "2 Warnings".

MainFlow > EmployeeDetails > Submit

① Publish

Search... (Ctrl+E)

Container If

Text Expression

Table Records

Form Editable Table

Link Button

Label Input

Check Box Radio Button

Combo Box Image

List Box Upload

Edit Record Show Record

Web Block Table

Input Password Comment

Header content placeholder

Drag screens to this area create menu items

Click to add Breadcrumbs

Click to add Actions

Click to add Footer

Test Test

User

9

Create New Employee

Name

MainContent

Name

Address

Phone

Submit Cancel

MainContent

Properties Styles

Placeholder MainContent

Processes Interface Logic Data

Widget Tree

TestTest

UI Flows

Common Emails

MainFlow

Entry1

Employee Preparation

EmployeeDetails

EmployeeId Preparation Submit

OutSystemsChartsWeb

OutSystemsUIWeb

RichWidgets

Users

Images

Themes

TestTest

OutSystemsUIWeb

MainContent ?

Properties Styles

Placeholder MainContent

2 Warnings Debugger 1-Click Publish

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Screen Directory

TIPS / REVISED WHAT WE LEARNED SO FAR.

Now, go back to Employee page.

Right click on the **Name** expression and go to “Link to” and select “MainFlow\EmployeeDetails”.

Then, set the **EmployeeId** in the **Properties** section to be “TableRecords1.List.Current.Employee.Id”.

The screenshot shows the 'Employee List' screen and its properties panel. A red arrow points from the 'Link to' context menu on the left to the 'Properties' panel on the right.

MainFlow Employee List Screen:

- Shows a list of employees with columns for Name and Address.
- A context menu is open over the first employee's name, with the 'Link to' option highlighted.
- The 'Link to' submenu shows options like '(Current Screen)', 'MainFlow\EmployeeDetails', and 'Common\ExternalURL'.

Properties Panel:

- Link Properties:** Shows settings for the link, including 'Destination' set to 'MainFlow\EmployeeDetails'.
- EmployeeId Property:** The 'Value' field is set to 'TableRecords1.List.Current.Employee.Id'.
- Extended Properties:** Shows suggestions for the 'Property' field, with 'TableRecords1.List.Current.Employee.Id' selected.

Screen Directory

TIPS / REVISED WHAT WE LEARNED SO FAR.

Now, navigate back to the **Employee** page. In the **Properties** section, tick on the **Anonymous** under the **Roles** properties.

Then, do the same for **EmployeeDetails** page.

MainFlow ➔ Employee

The screenshot shows the OutSystems Studio interface with two main panes: 'Elements' and 'Widget Tree'.
In the 'Elements' pane:

- A tree view of the application structure: TestTest > UI Flows > Common, Emails, MainFlow, Entry1, Employee.
- The 'Employee' node is selected and highlighted with a red box.
- Under 'Employee', there is a 'Preparation' step and a 'EmployeeDetails' node, which is expanded to show 'EmployeeId' and 'Submit' steps.
- Nodes like OutSystemsChartsWeb, OutSystemsUIWeb, RichWidgets, and Users are also listed.

In the 'Widget Tree' pane:

- A tree view of the application structure: TestTest > UI Flows > MainFlow > Employee > EmployeeDetails.
- The 'EmployeeDetails' node is selected and highlighted with a red box.
- Under 'EmployeeDetails', there is a 'Preparation' step and a 'Submit' step.
- Nodes like OutSystemsChartsWeb, OutSystemsUIWeb, RichWidgets, and Users are also listed.

A large red arrow points from the 'Employee' node in the Elements pane to the 'EmployeeDetails' node in the Widget Tree pane.

Below the panes, the 'Employee' screen is shown with its properties:

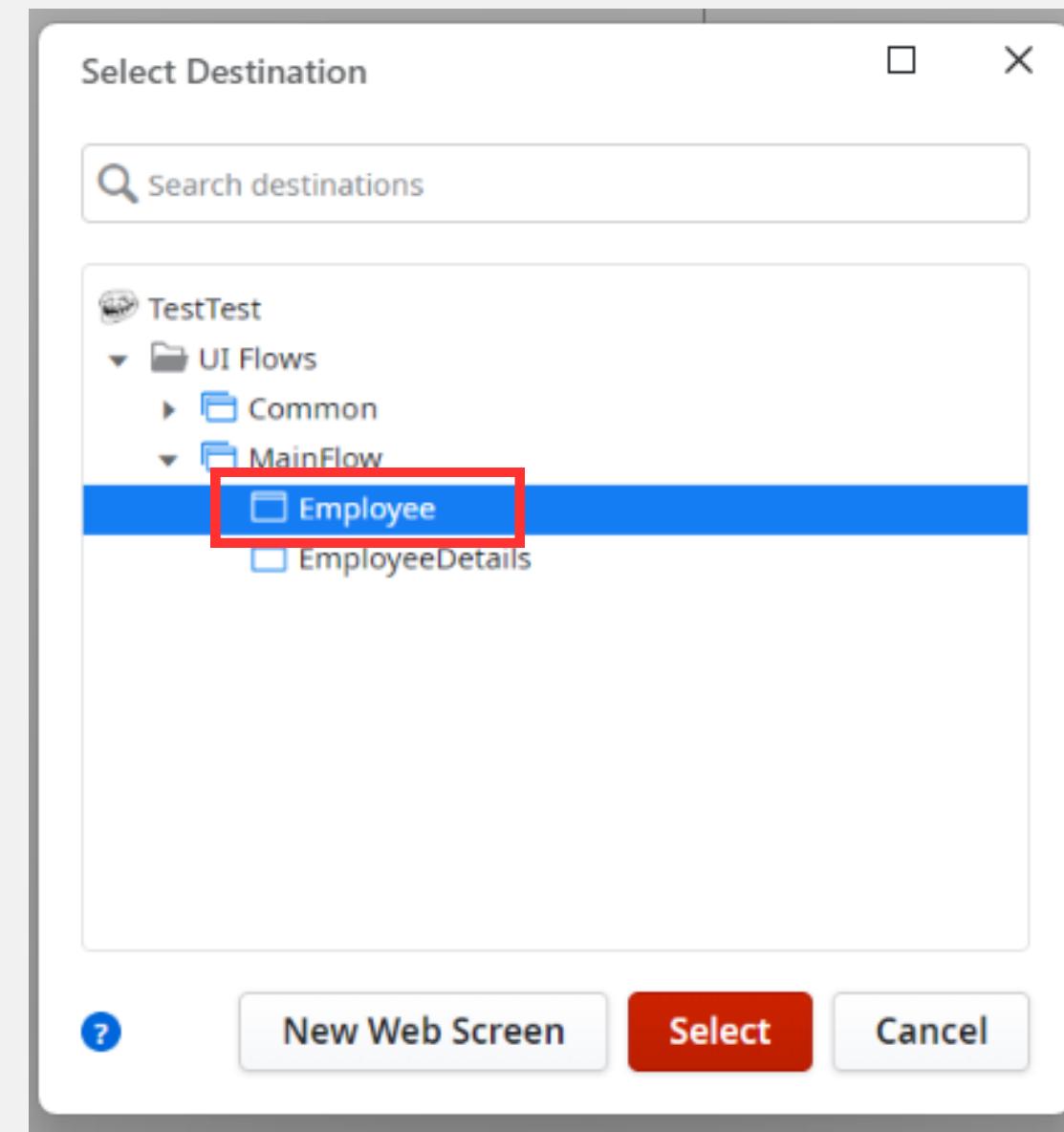
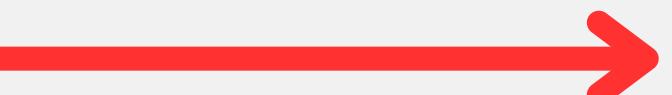
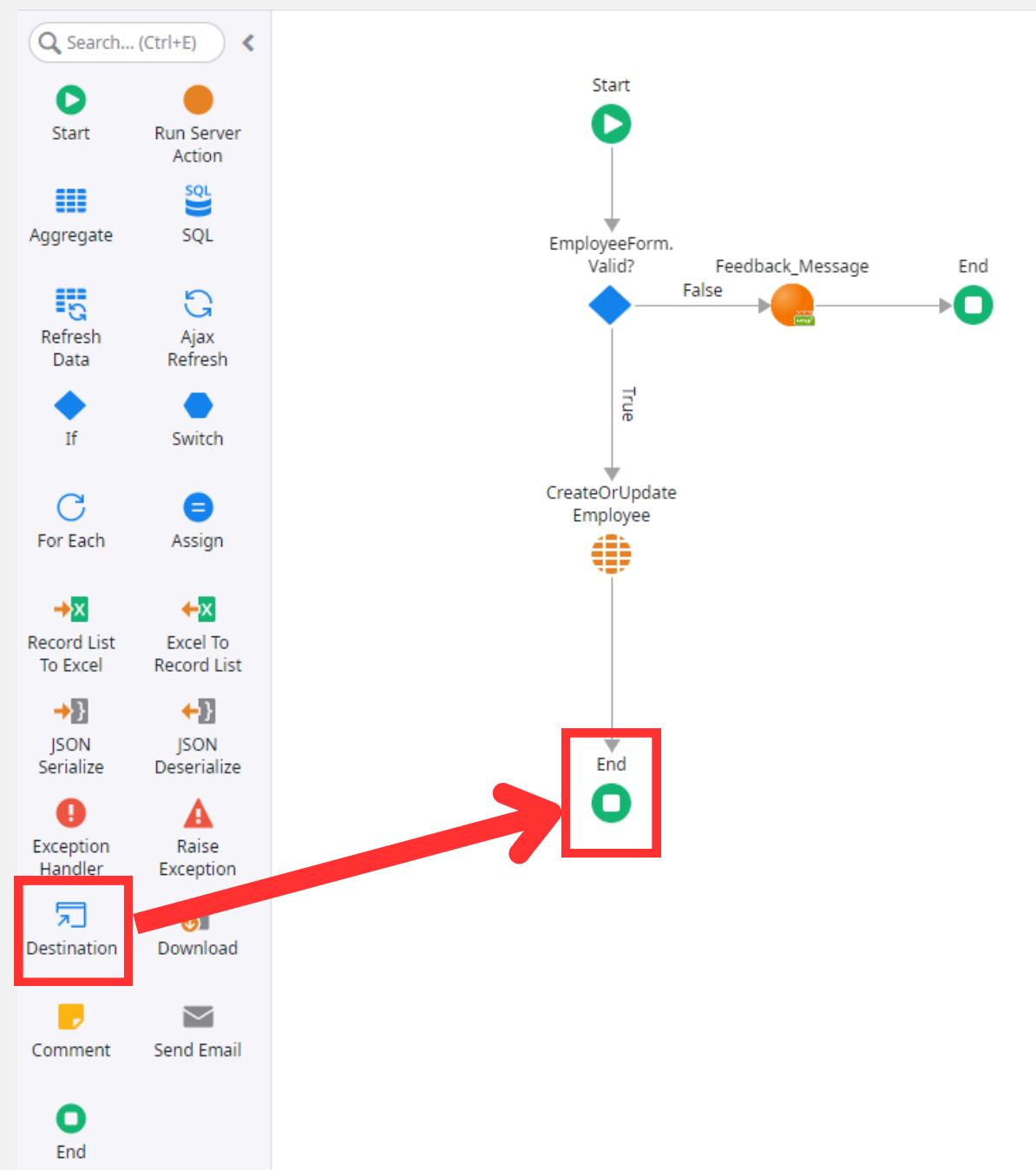
Name	Employee
Description	
Public	No
Title	
Roles	<input checked="" type="checkbox"/> Anonymous <input checked="" type="checkbox"/> Registered

Screen Directory

TIPS / REVISED WHAT WE LEARNED SO FAR.

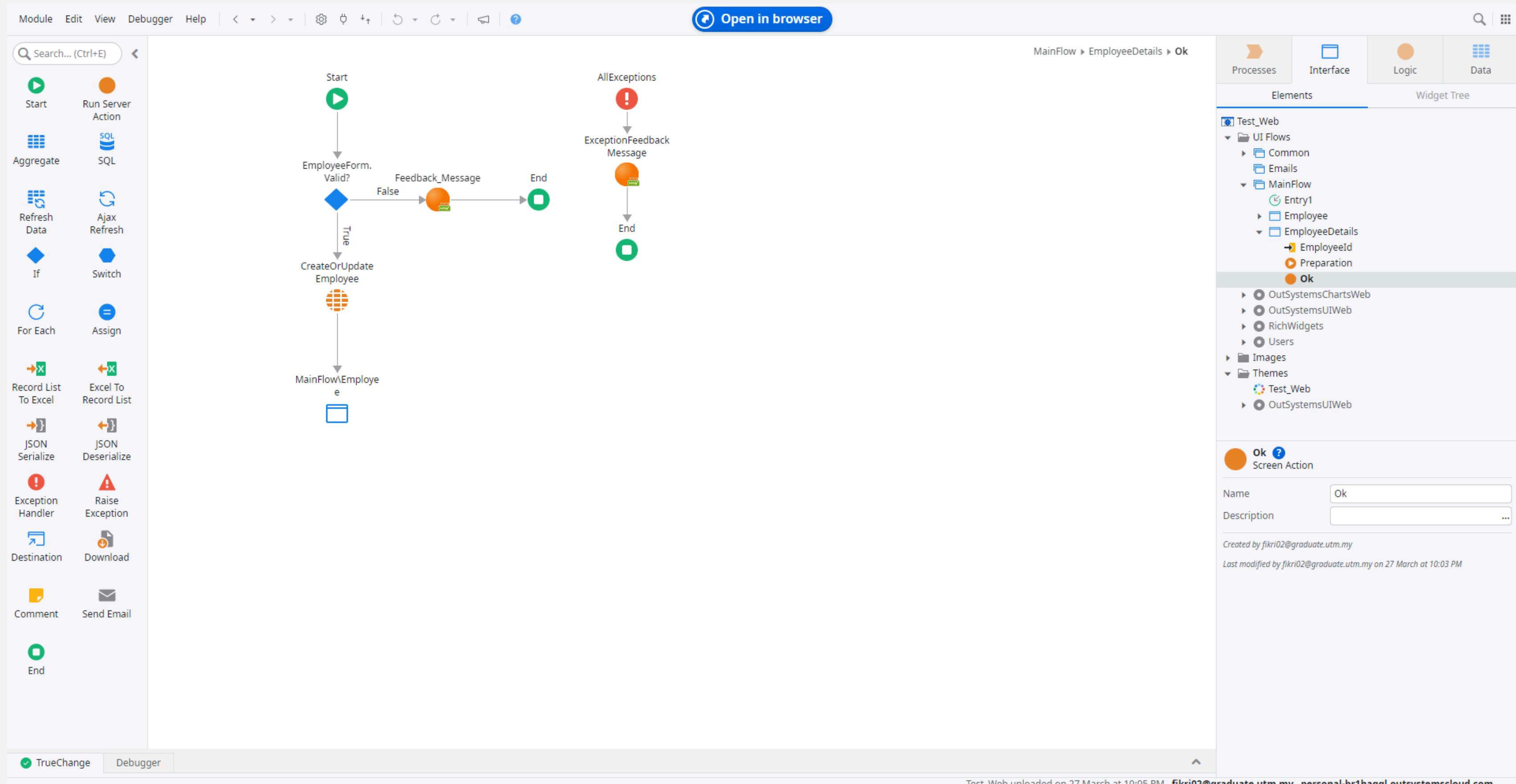
Go to **Submit** page. Drag the **Destination** tool to the **Endpoint** as shown in the red box.

Then, select **Employee** under **MainFlow**.



MainFlow → EmployeeDetails → Submit

CHECKPOINT TEMPLATE: You should have result as below.



THE

GO