MA35D1
emWin AppWizard Quick Start

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Agenda

- Development Process
  - emWin Package Download
  - Linux Environment Download
- Example Practice
  - Overview
  - Start AppWizard
    - Adding Objects
    - Setting Interactions
    - Export AppWizard Project
- Making the emWin AppWizard File
- Other Resource

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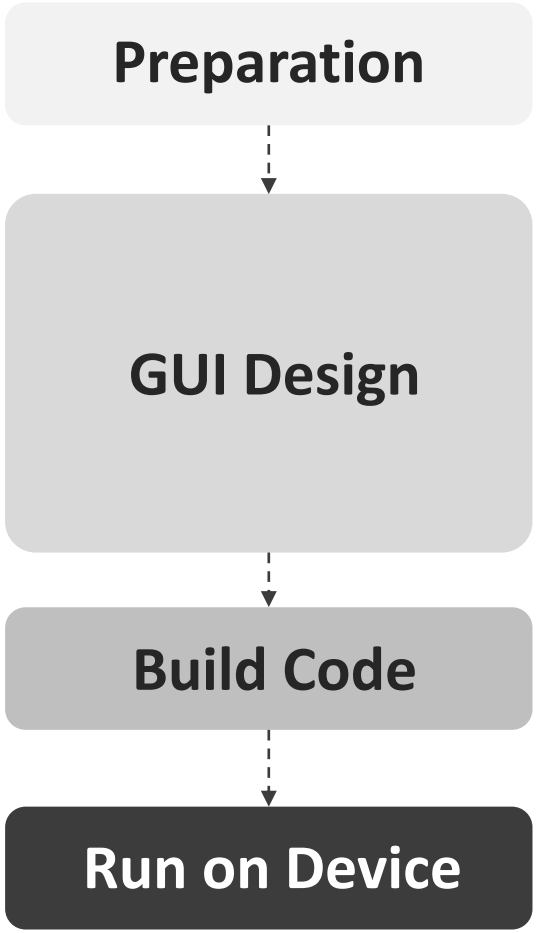
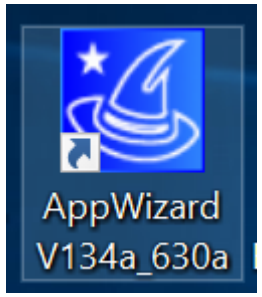
Development Process



- Preparation Software Download and Unzip
  - emWin Package

    https://www.nuvoton.com/products/microprocessors/arm9-mpus/-n9h-series/?group=Software&tab=2
  - VMware Linux develop Environment

    https://www.nuvoton.com/resource-download.jsp?tp_GUID=SW18202210151612204 2



This demo uses AppWizard V134a_630a for development.

AppWizard path: ***emWin package/emWin/Tool***

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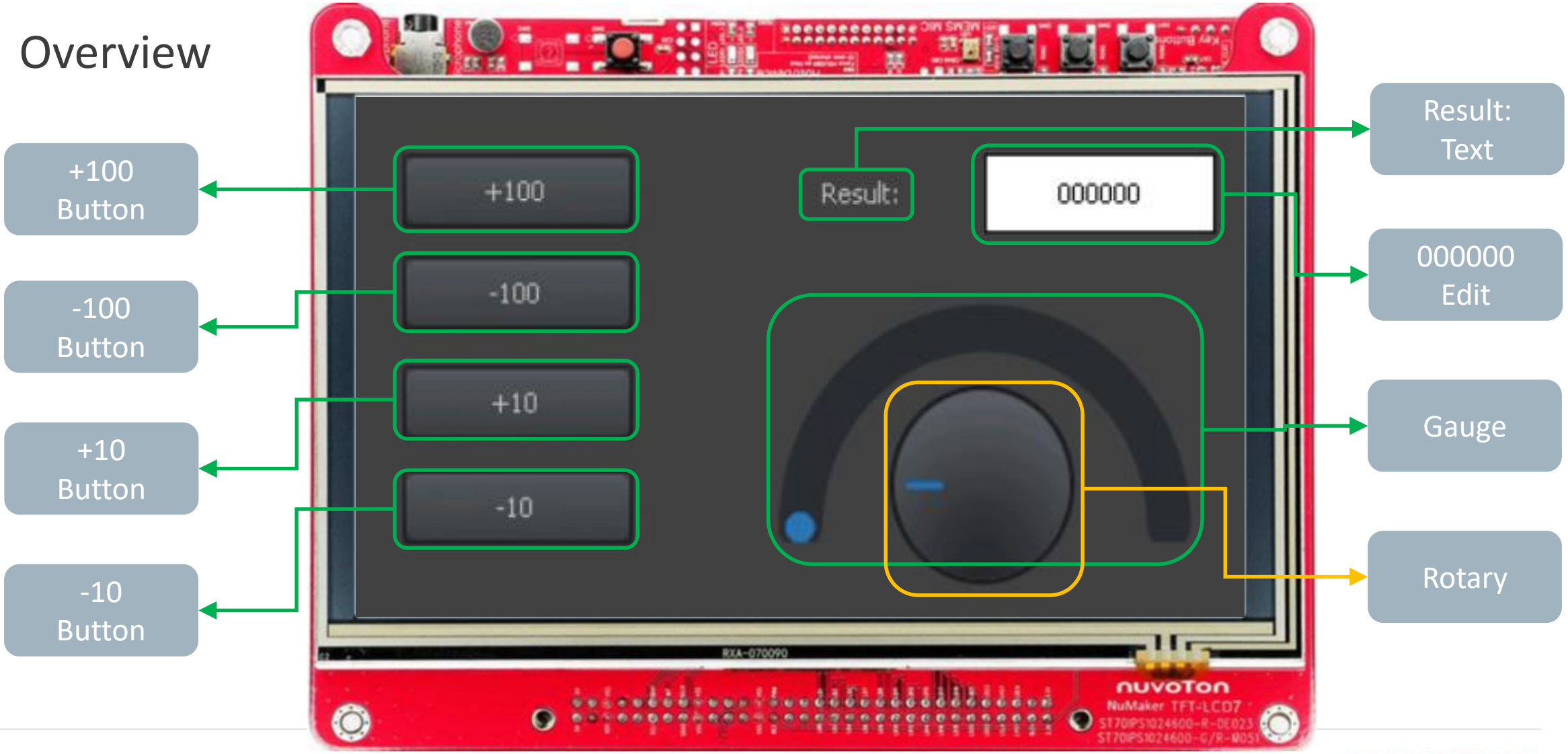
Example Practice

Demo Video

- Overview



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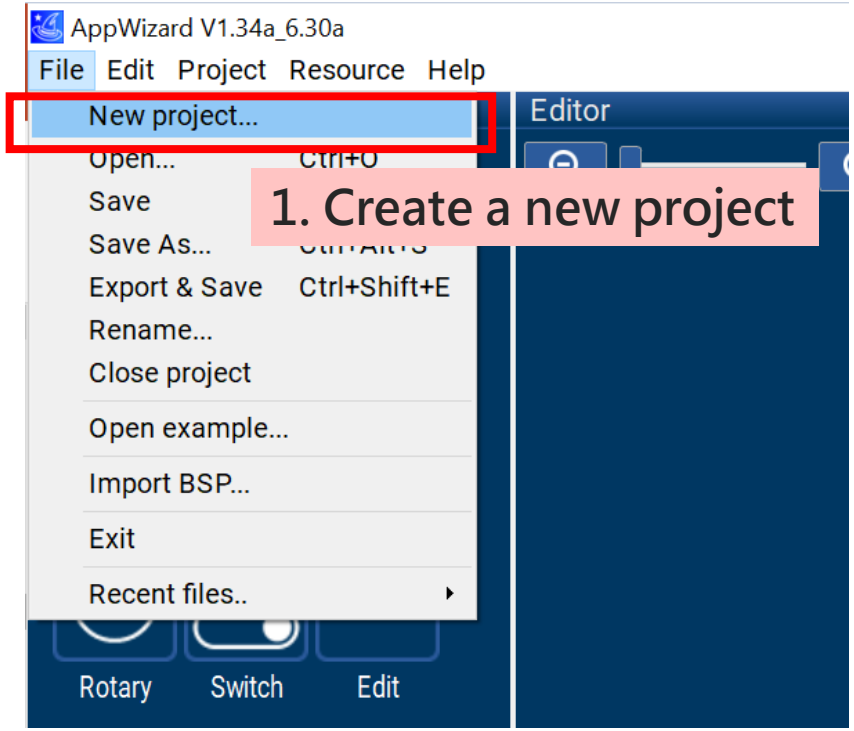
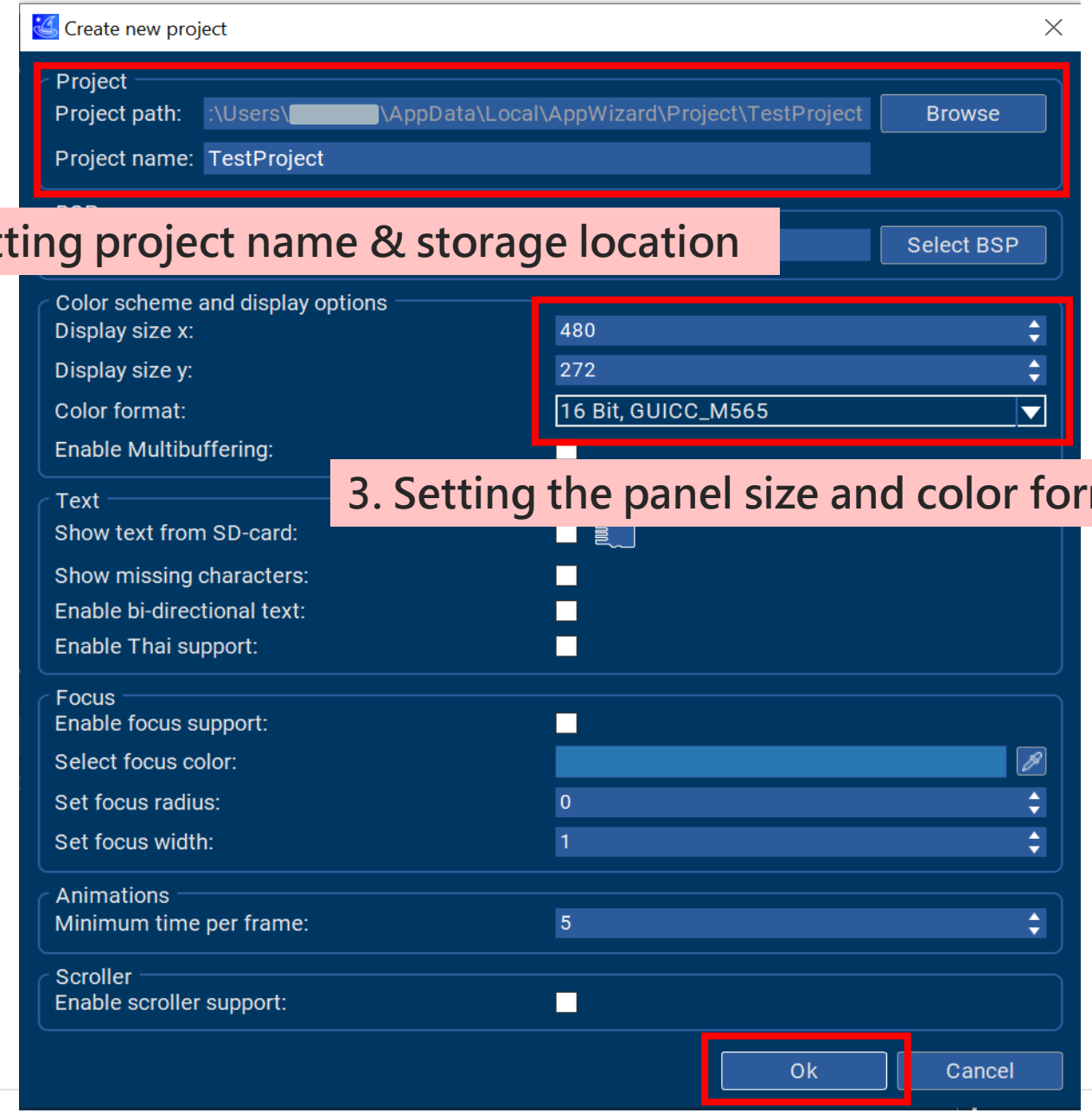
Start AppWizard

- Create project





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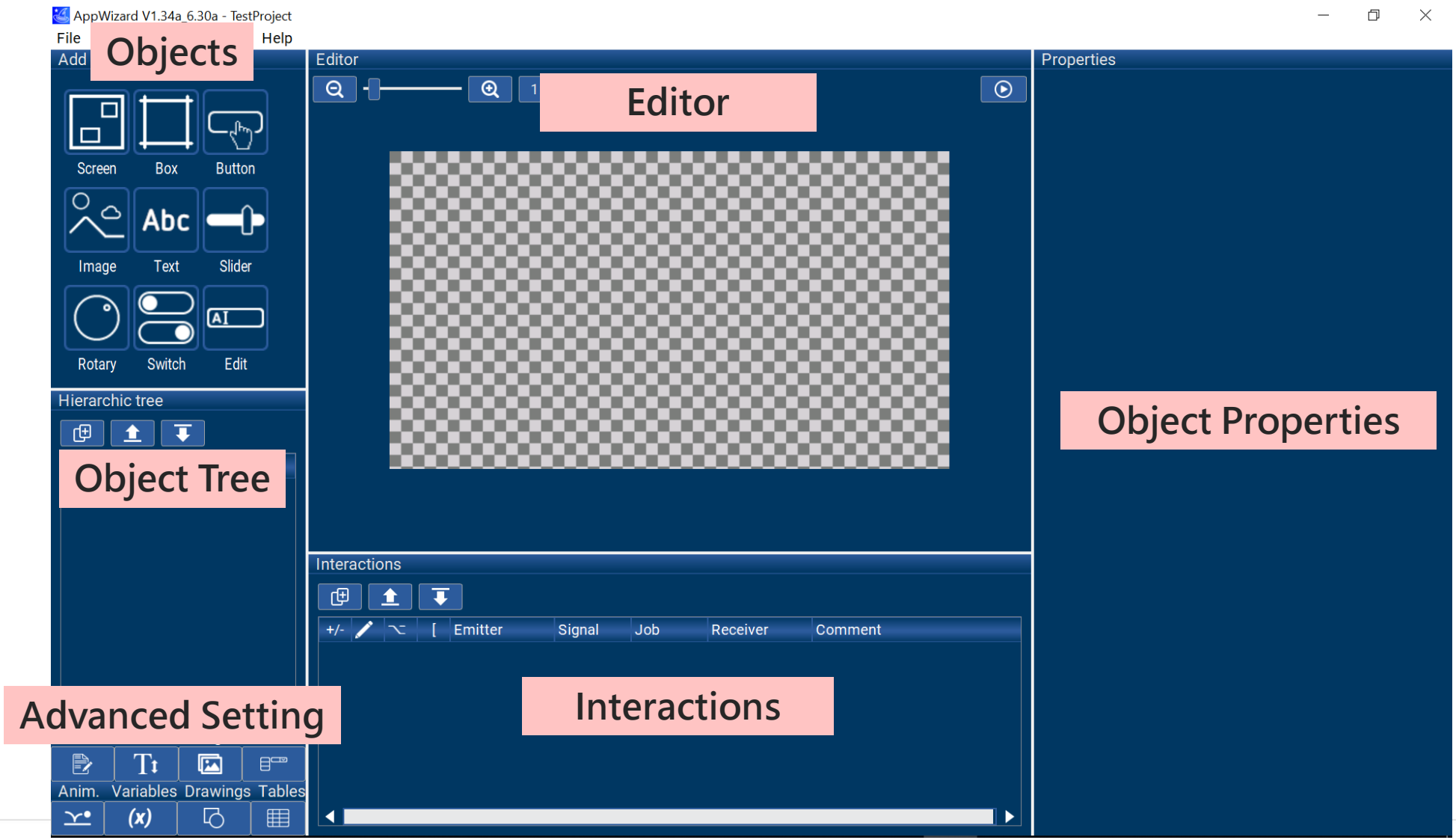
4. Save & open the project

Start AppWizard



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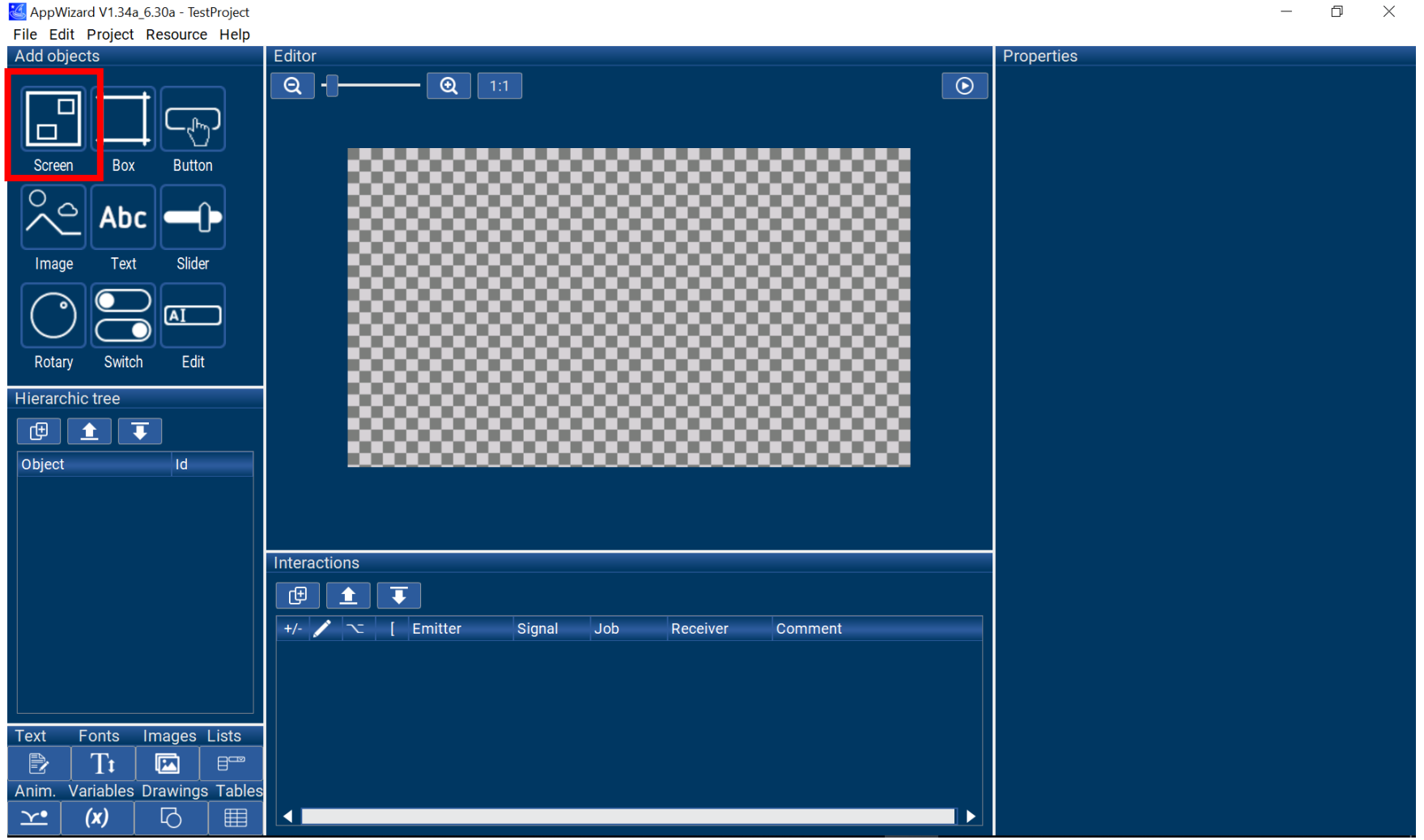
NuDeveloper Ecosystem – Make the engineers' job easier.

*Add new screen object



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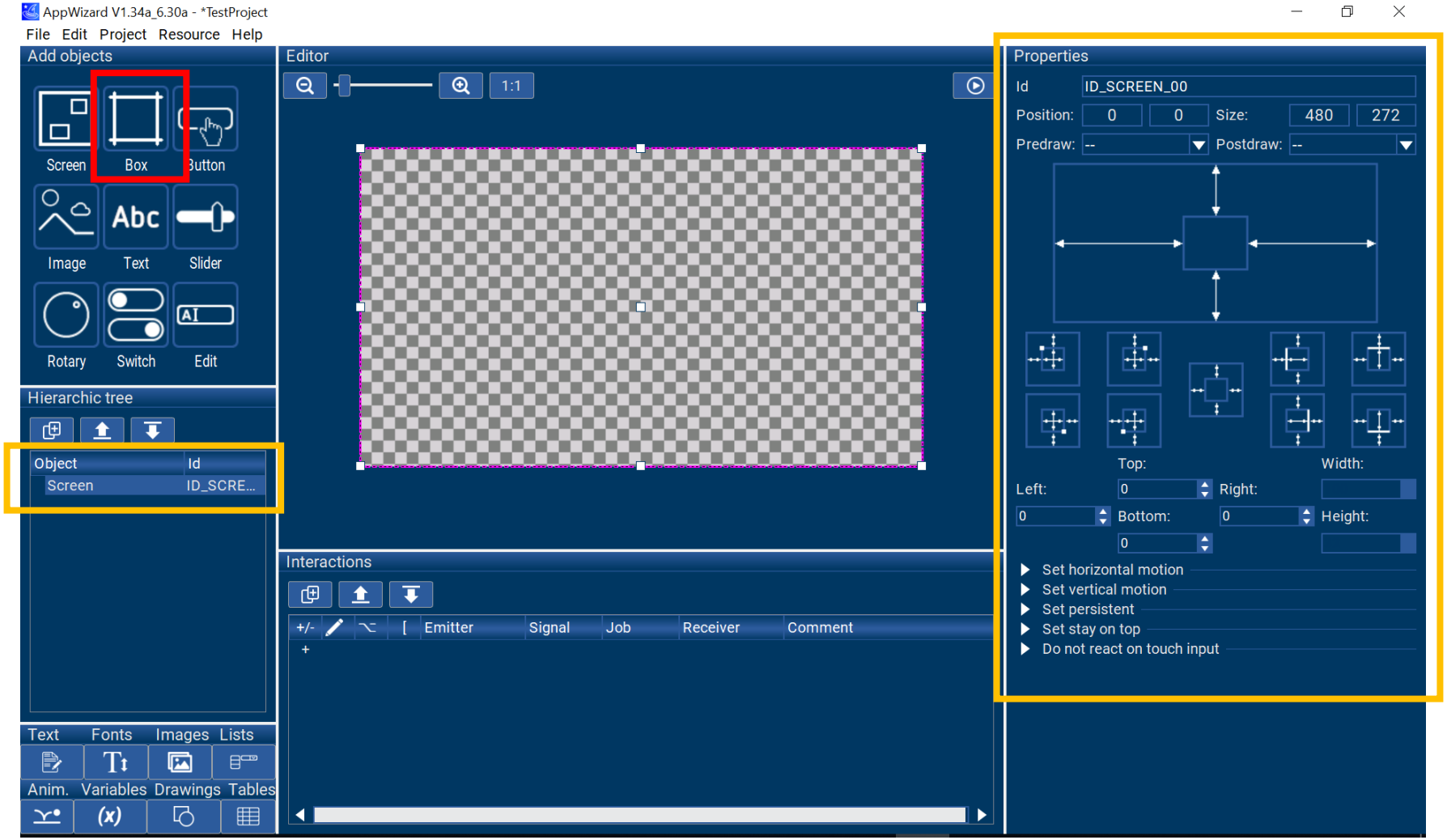
*Add new screen object



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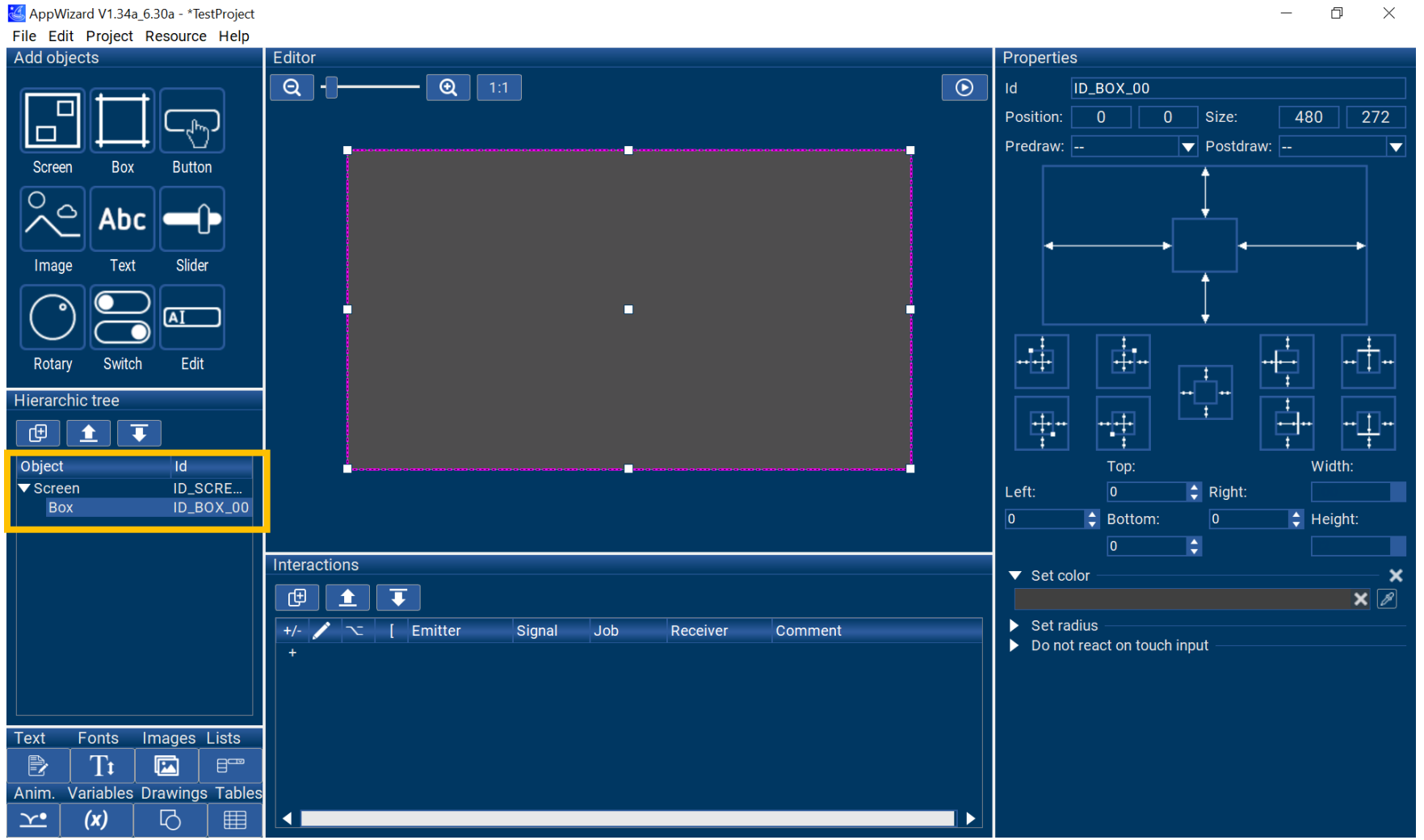

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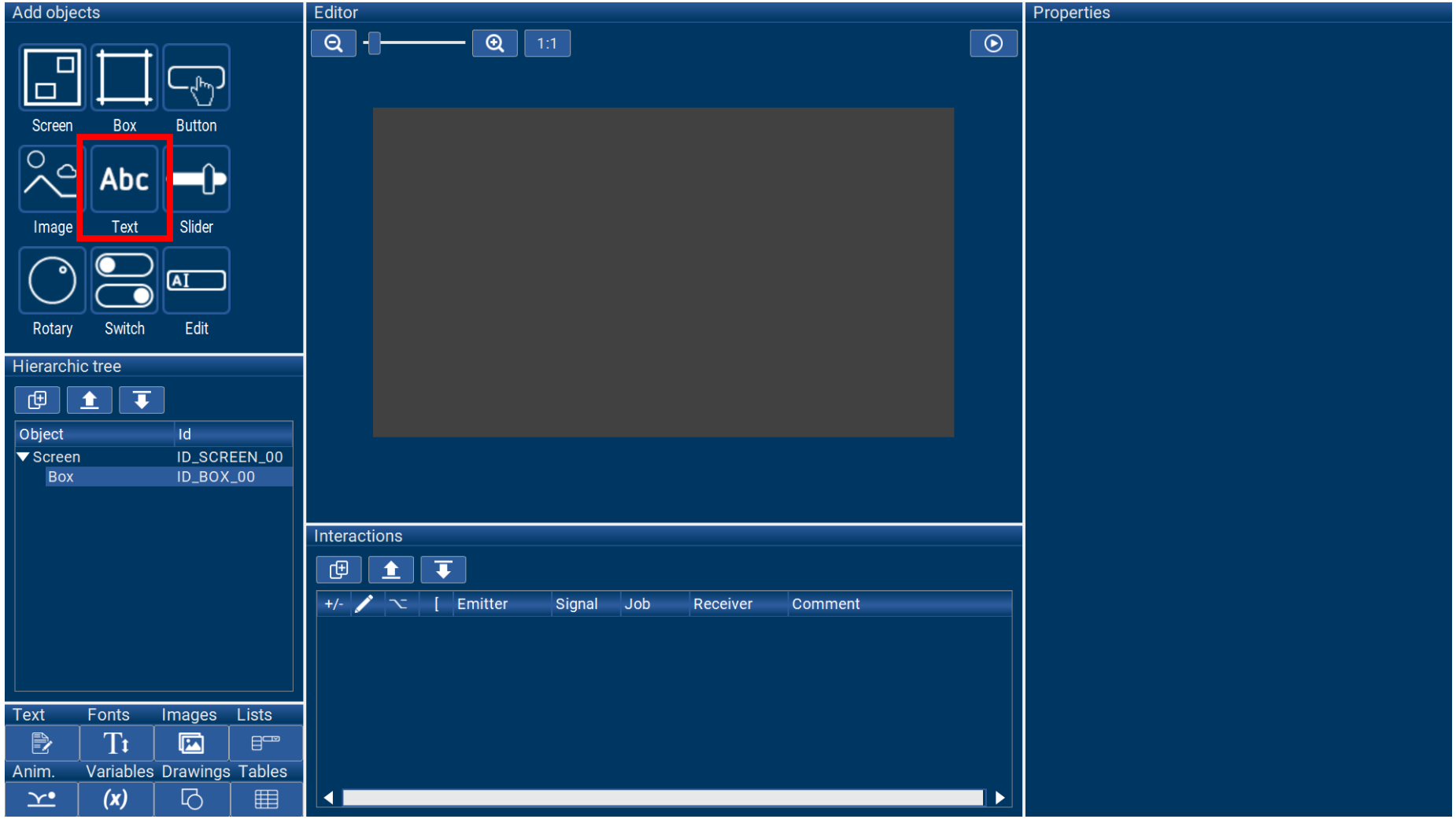
Add new text object



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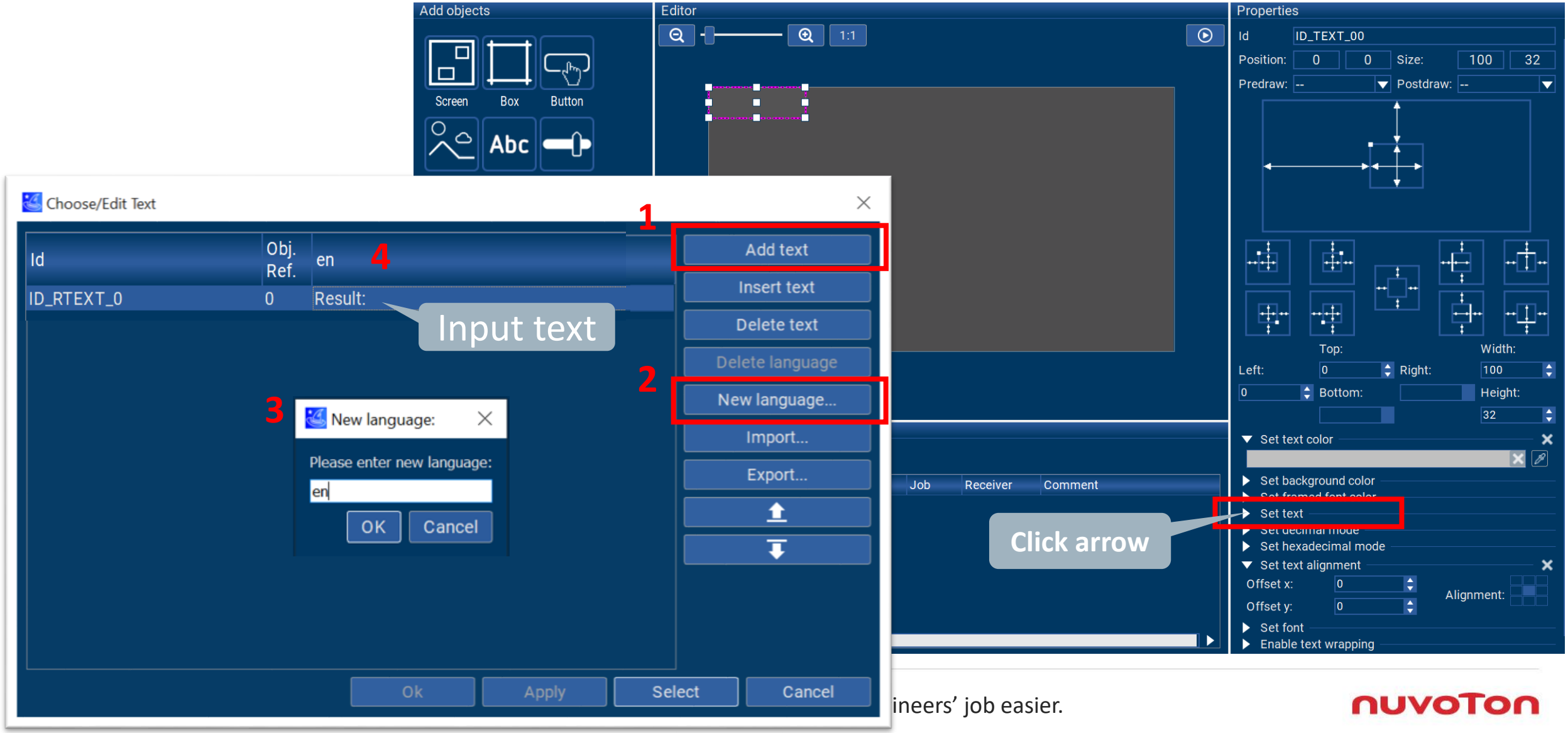
Add new text object



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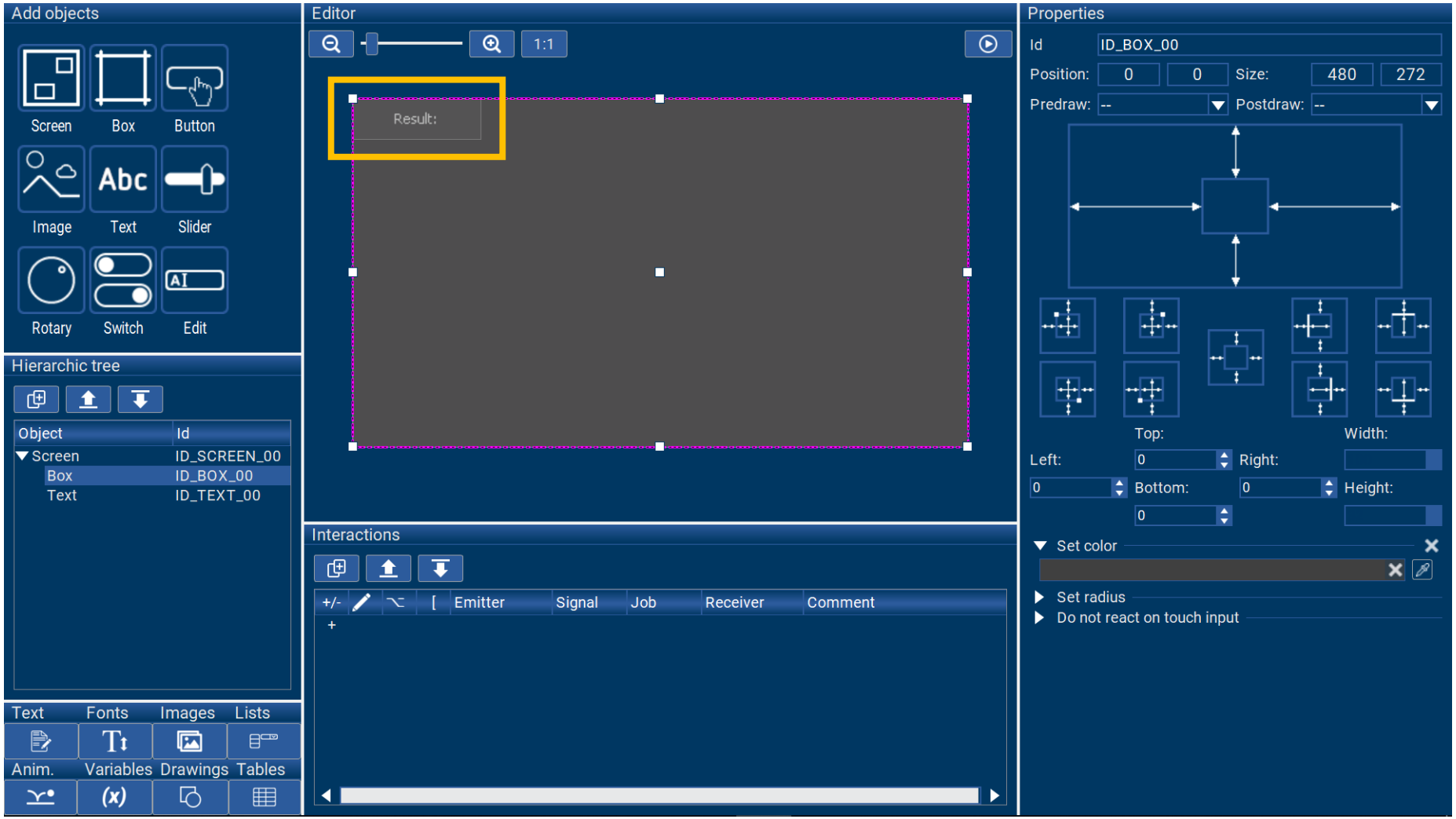
Add new text object



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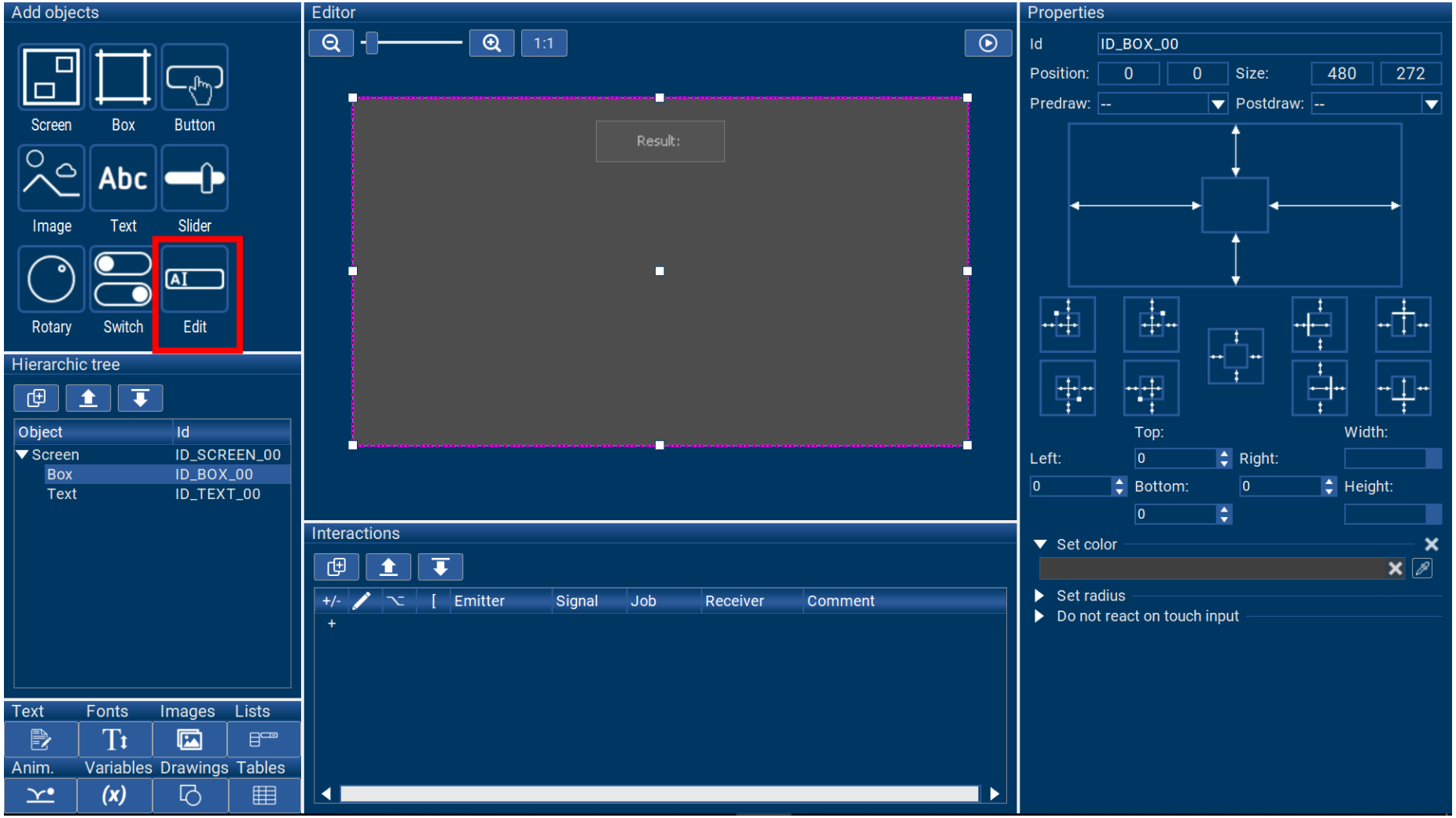
Add new edit object



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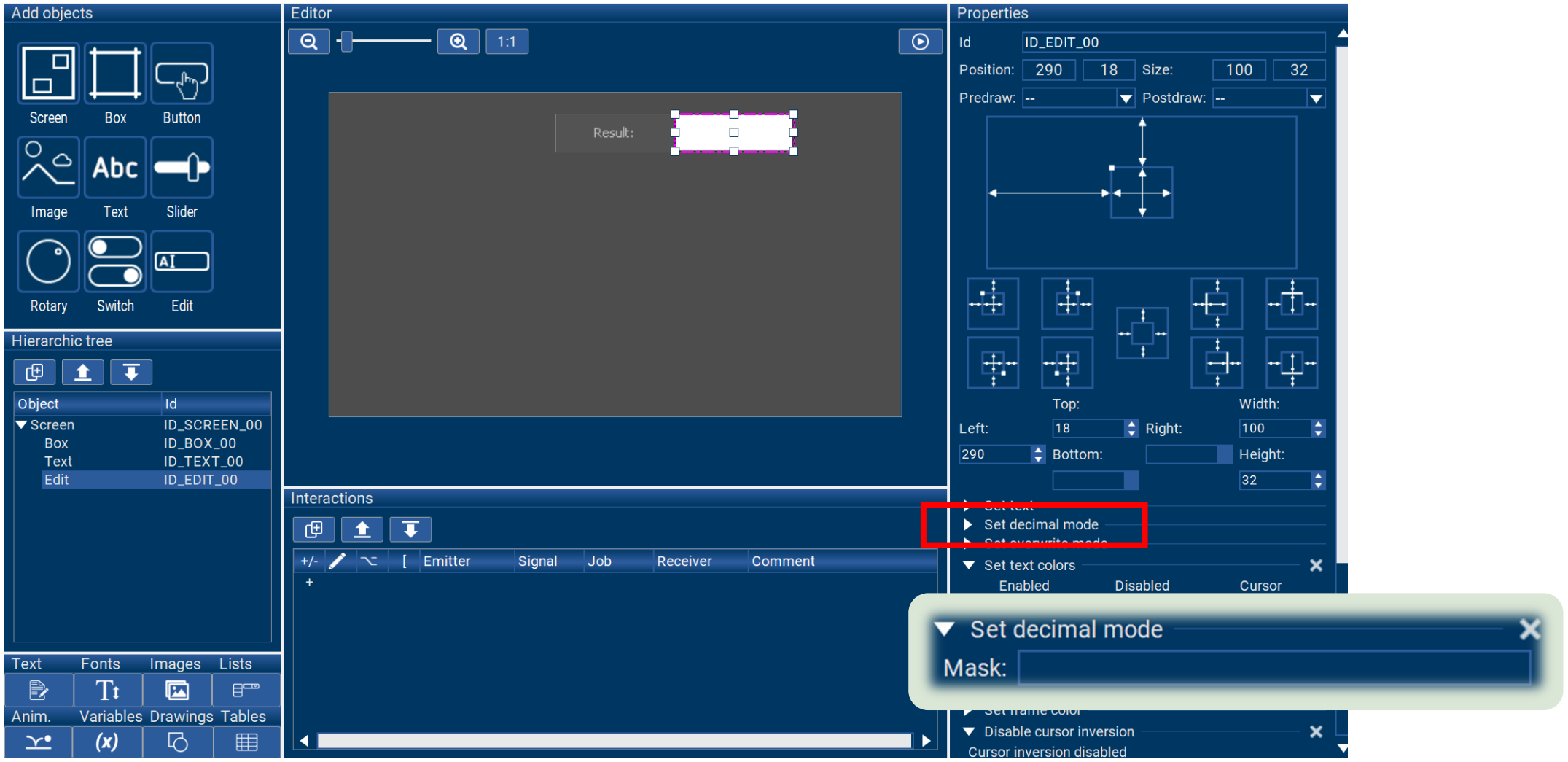
Add new edit object



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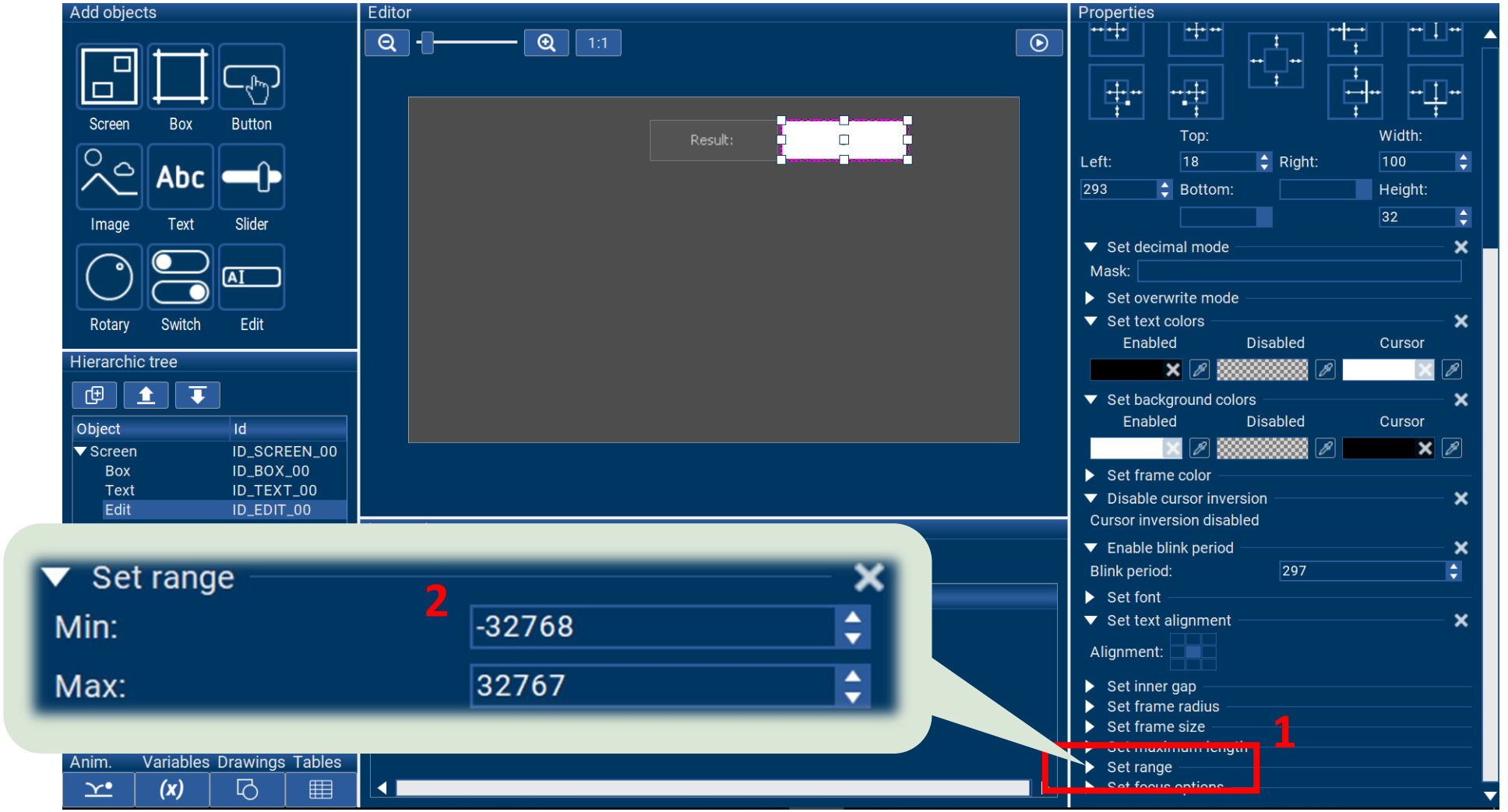
Add new edit object



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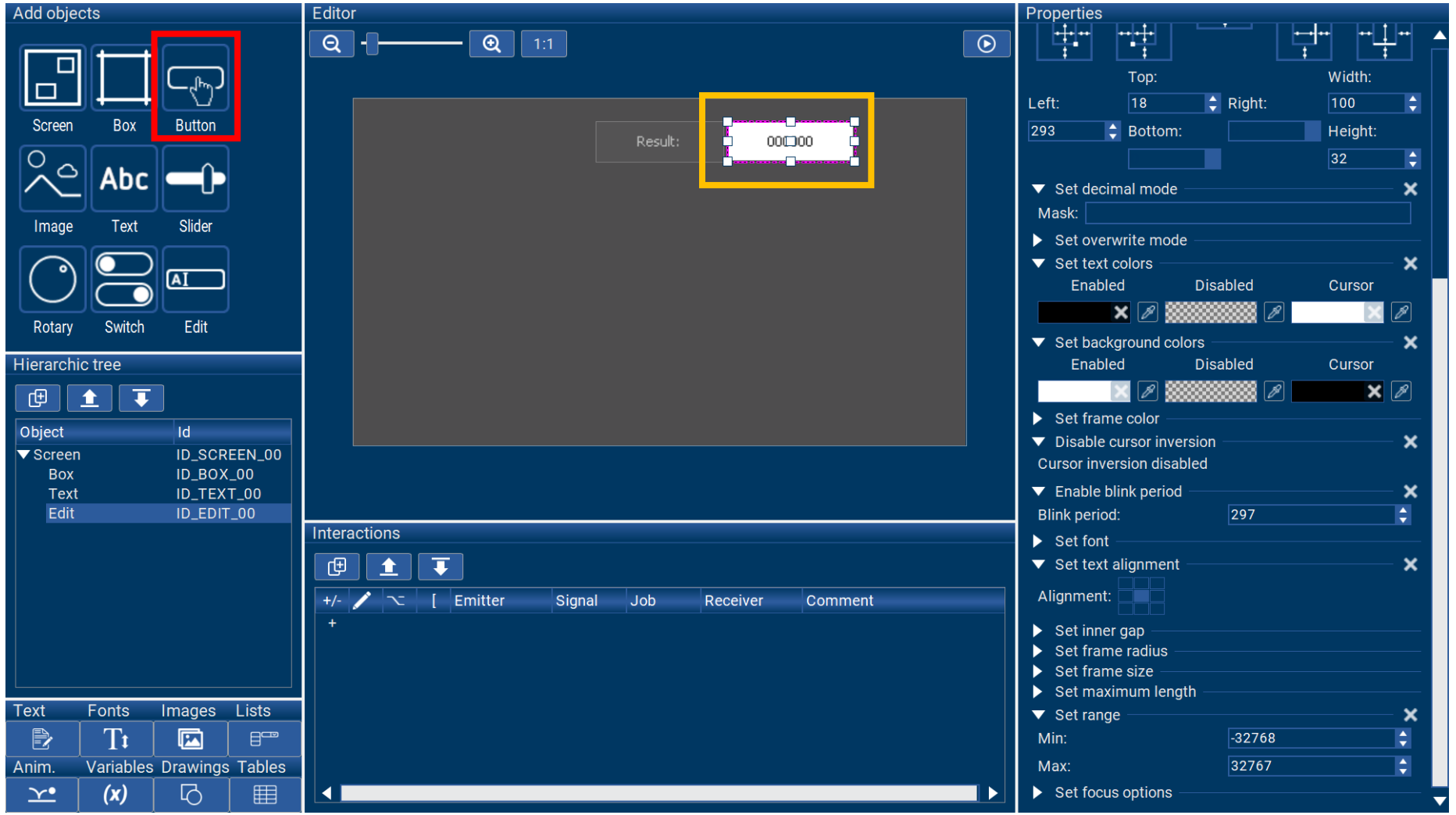
Add new edit object



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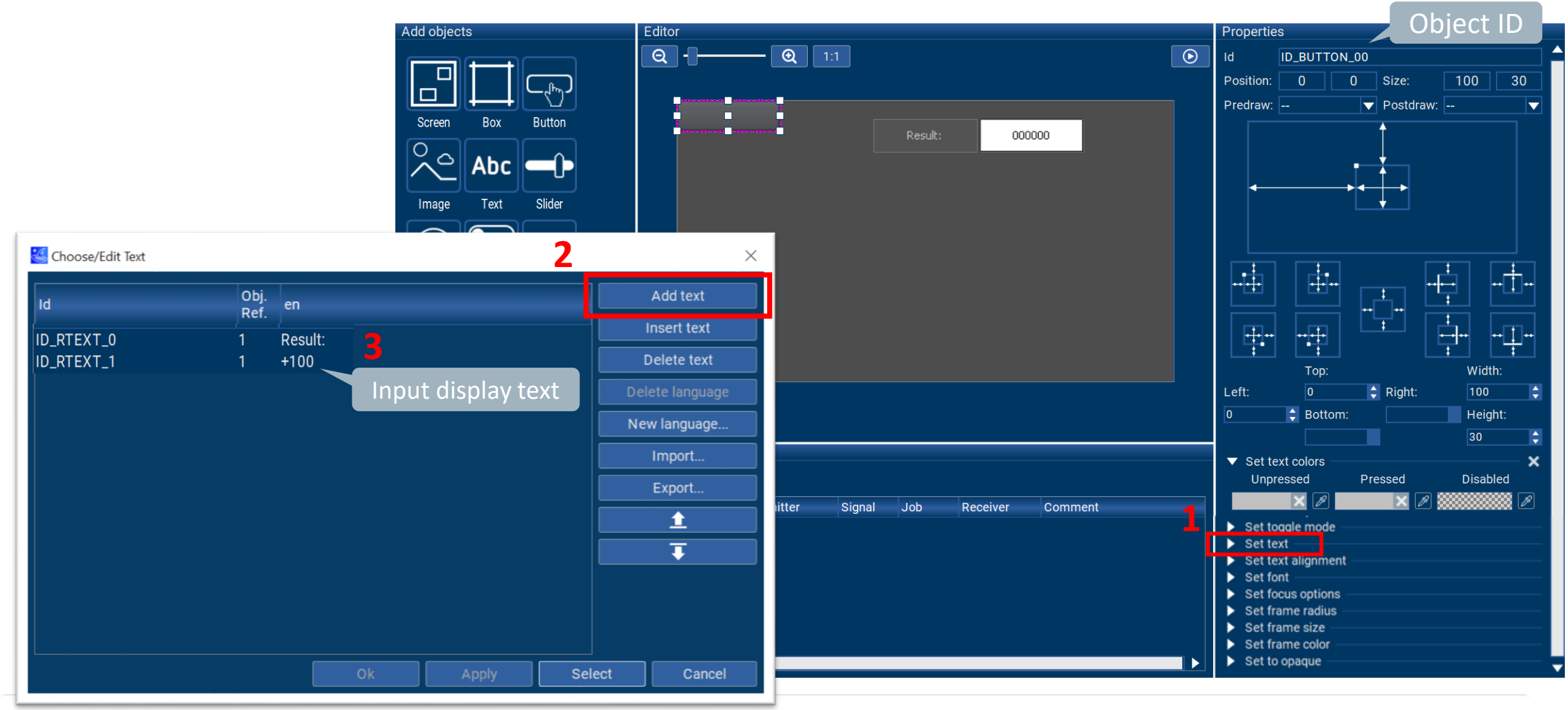
Add new button object



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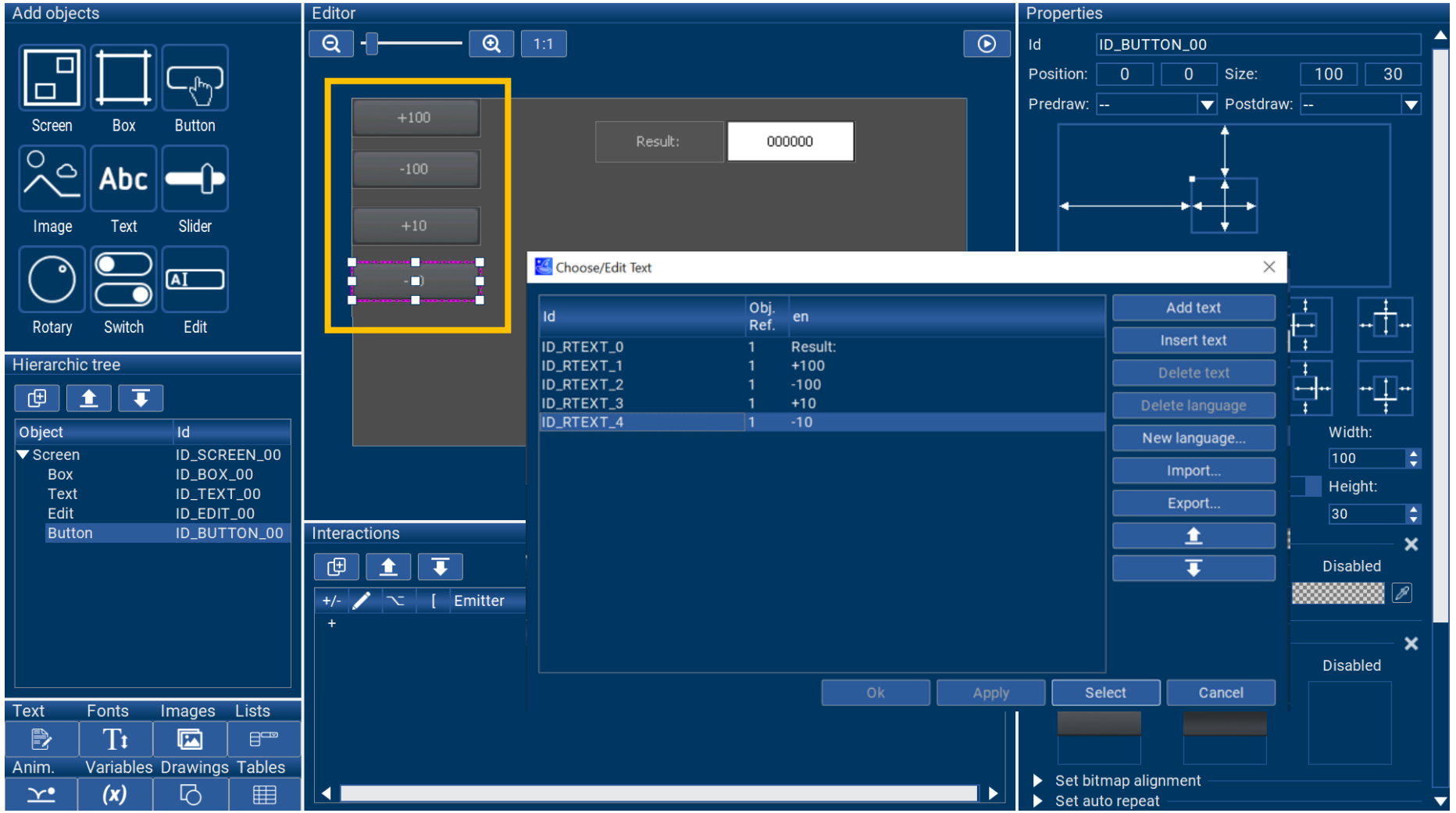
Add new button object



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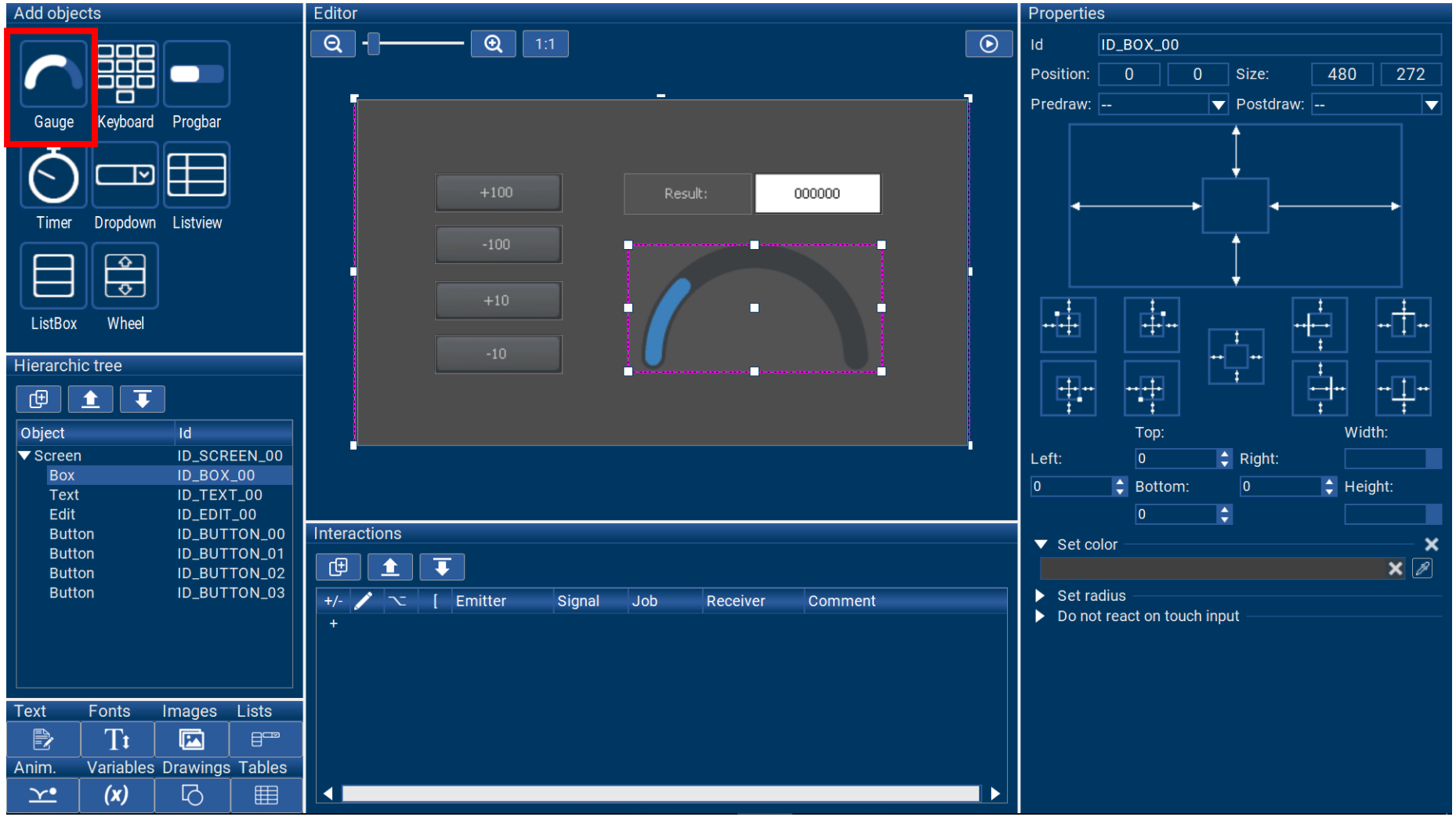
Add new gauge object



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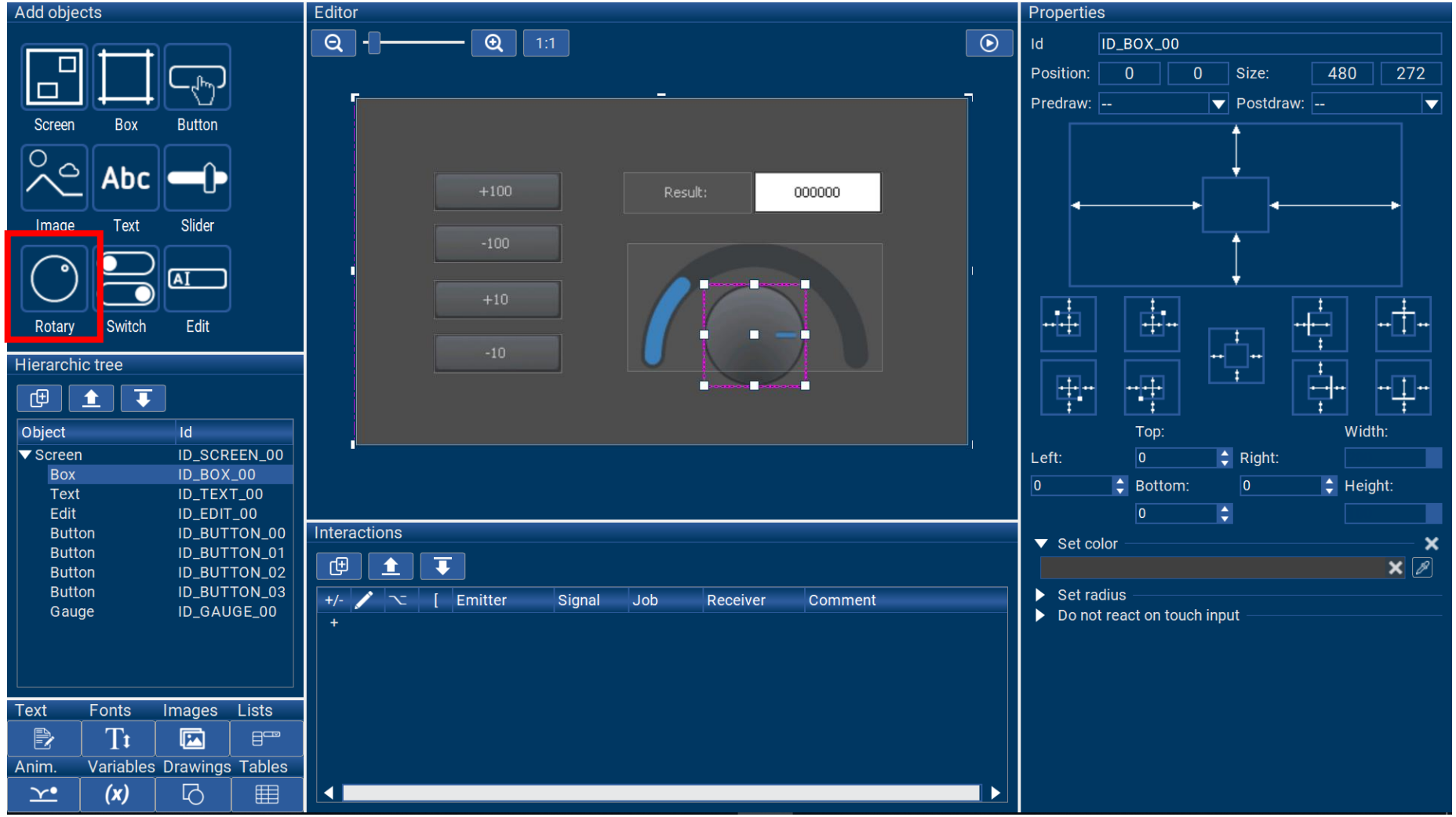
*Add new rotary object



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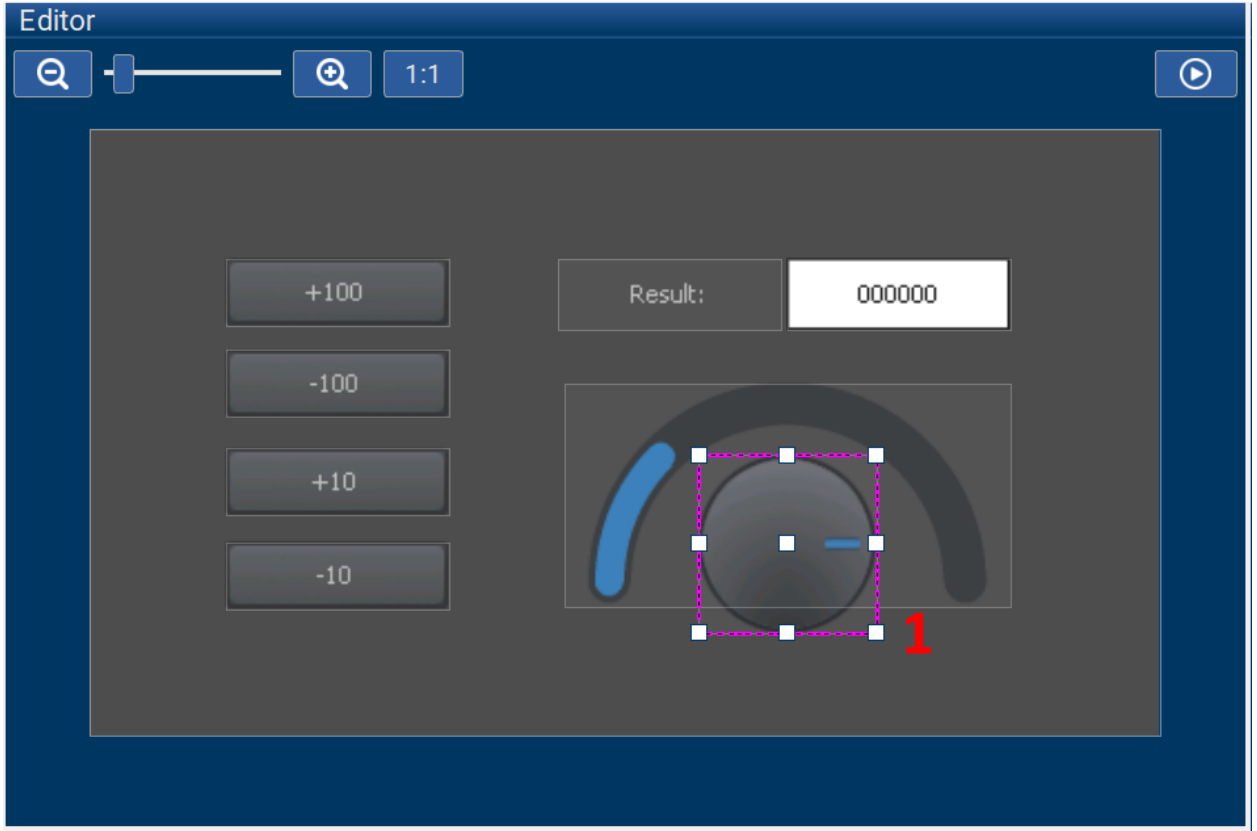
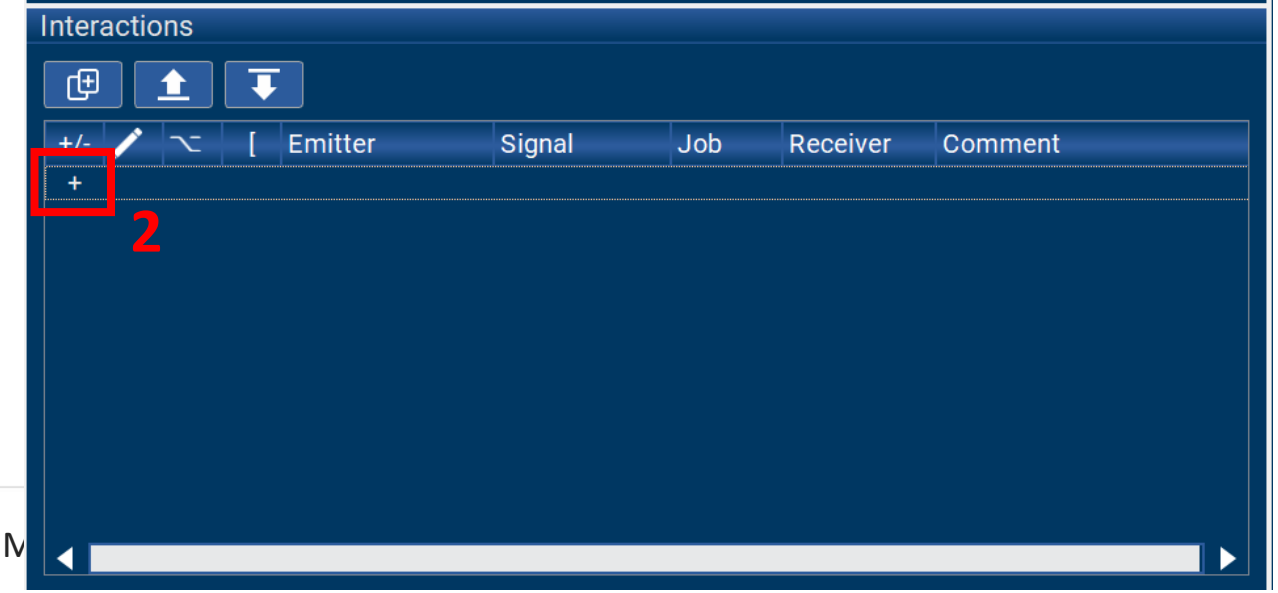
*Add Interactions

- Object Interactions
  - Rotary
    - Click object
    - Click “+” in Interactions window





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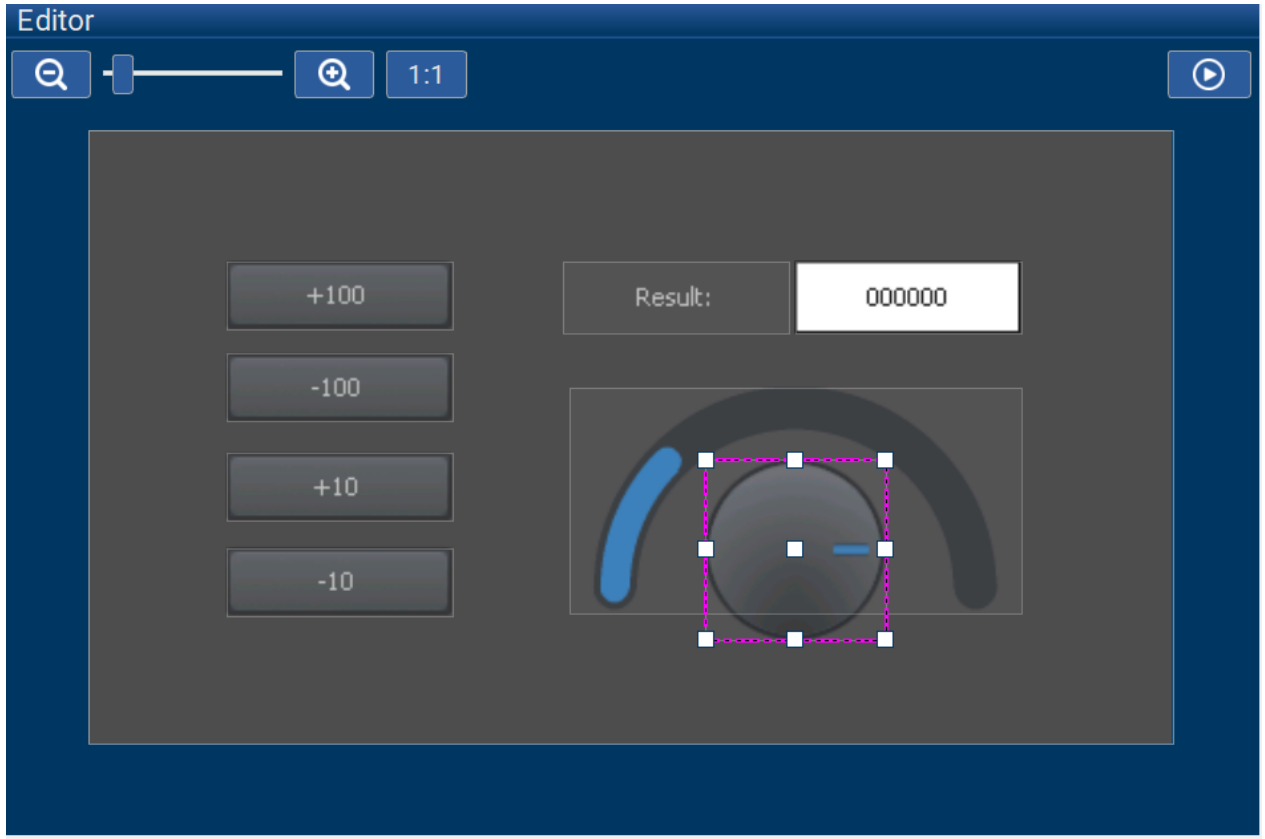
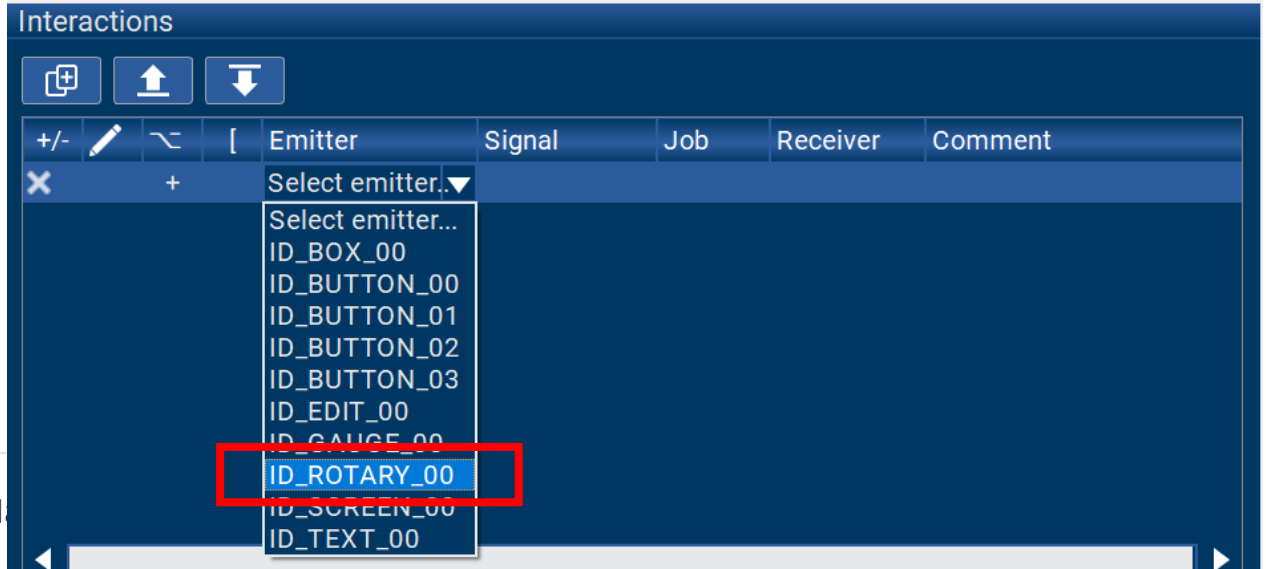
Object Interactions

- Rotary
  - Click object
  - Click “+” in Interactions window
  - Set the details
    - Emitter
      - ***ID_ROTARY_00*** (real ID’s name)





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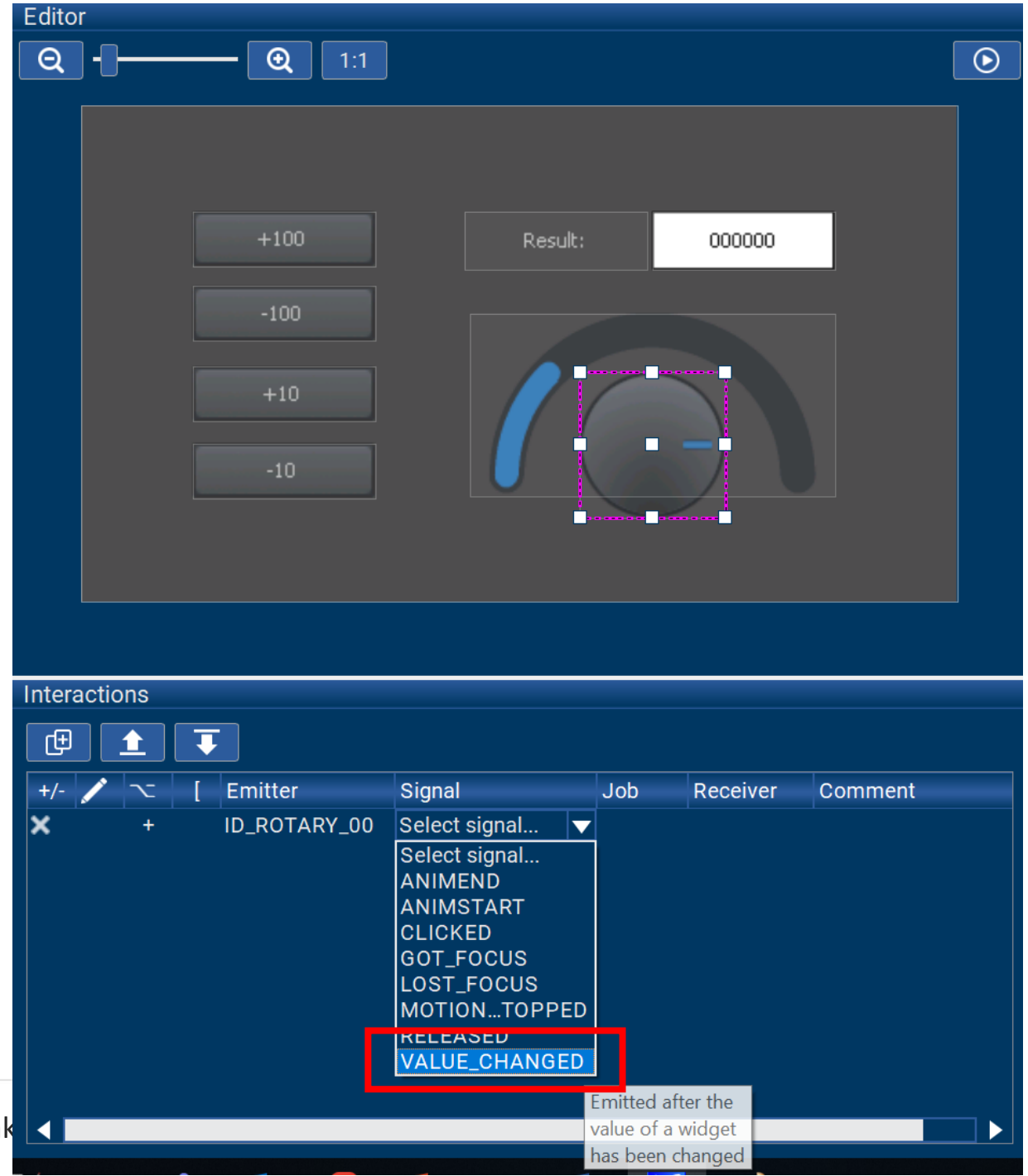
Object Interactions

- Rotary
  - Click object
  - Click “+” in Interactions window
  - Set the details
    - Emitter
    - Signal
      - ***VALUE_CHANGED***



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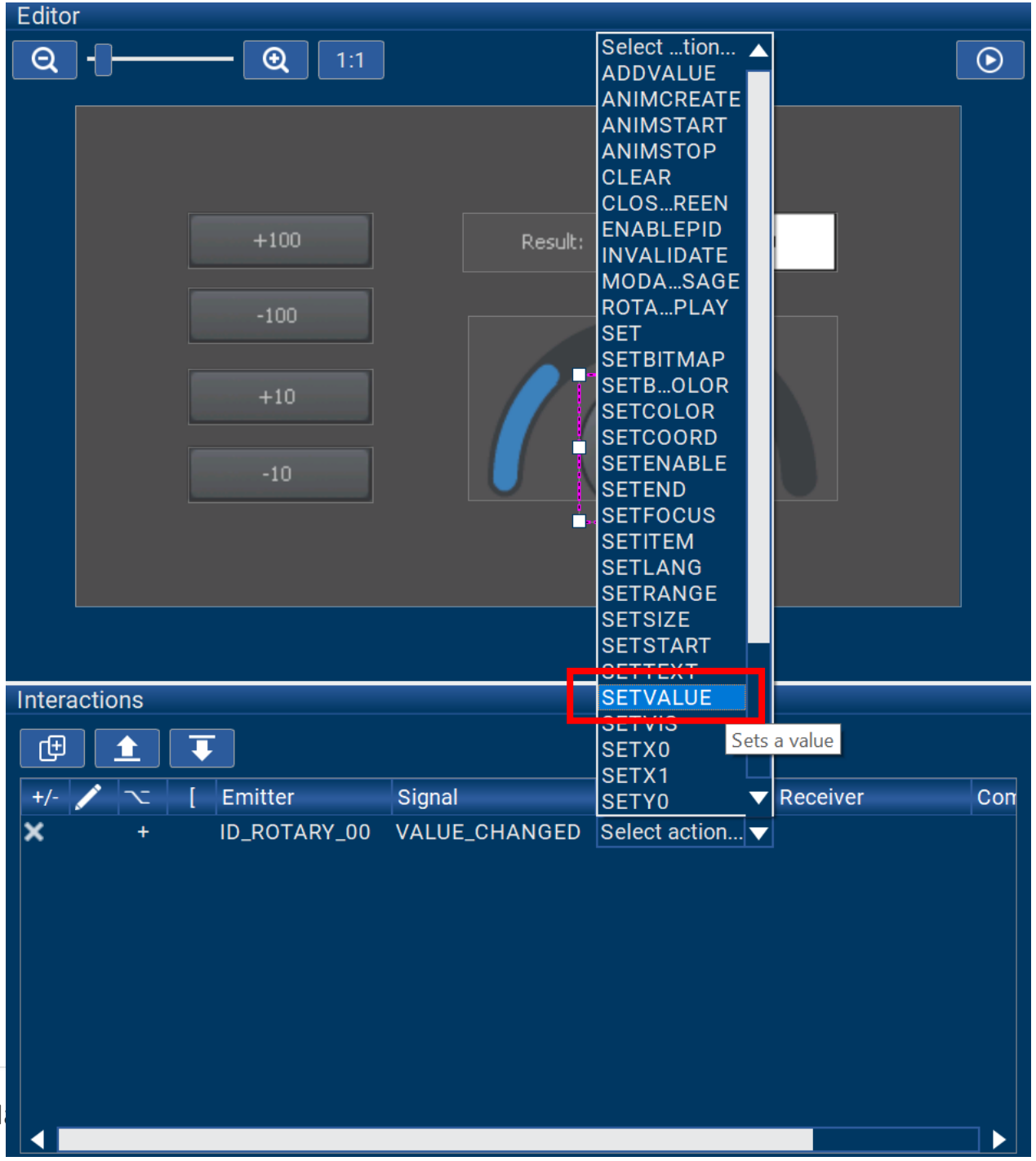
Object Interactions

- Rotary
  - Click object
  - Click “+” in Interactions window
  - Set the details
    - Emitter
    - Signal
    - Job
      - ***SETVALUE***



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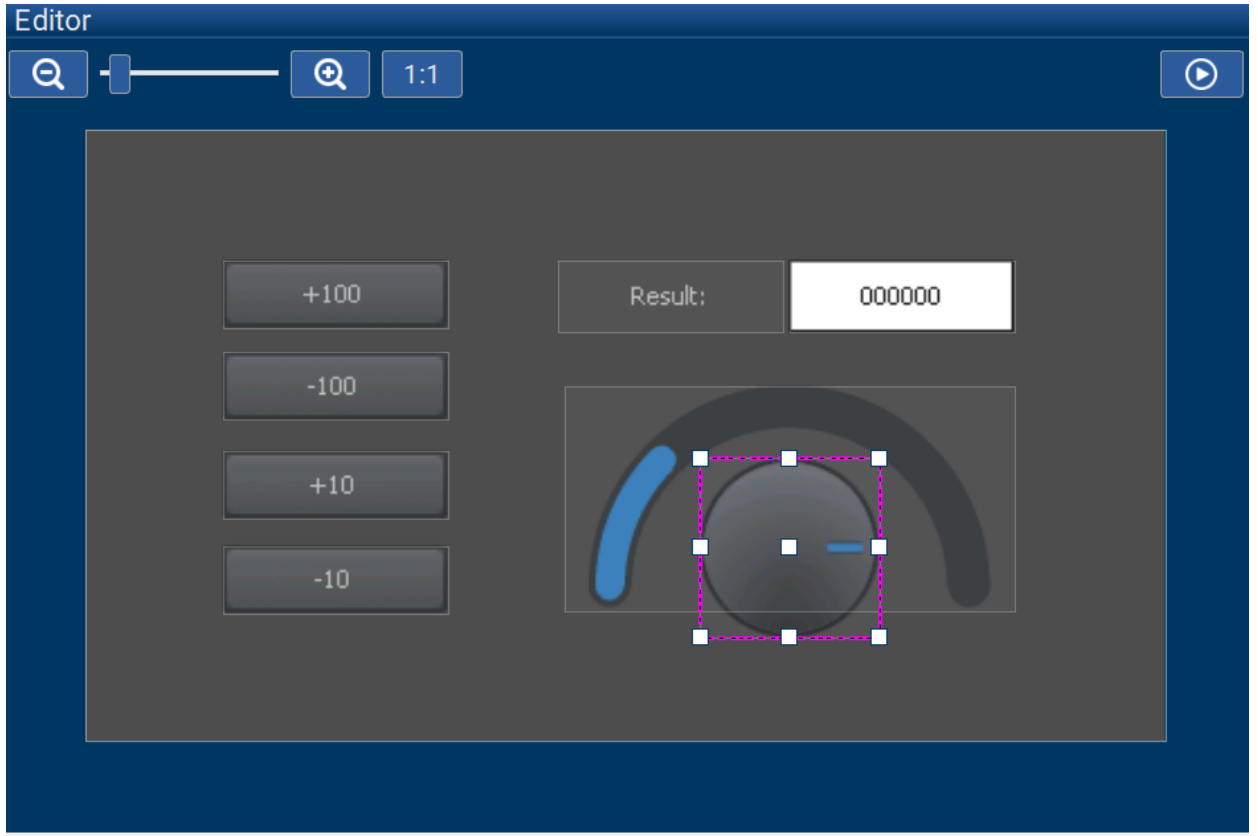
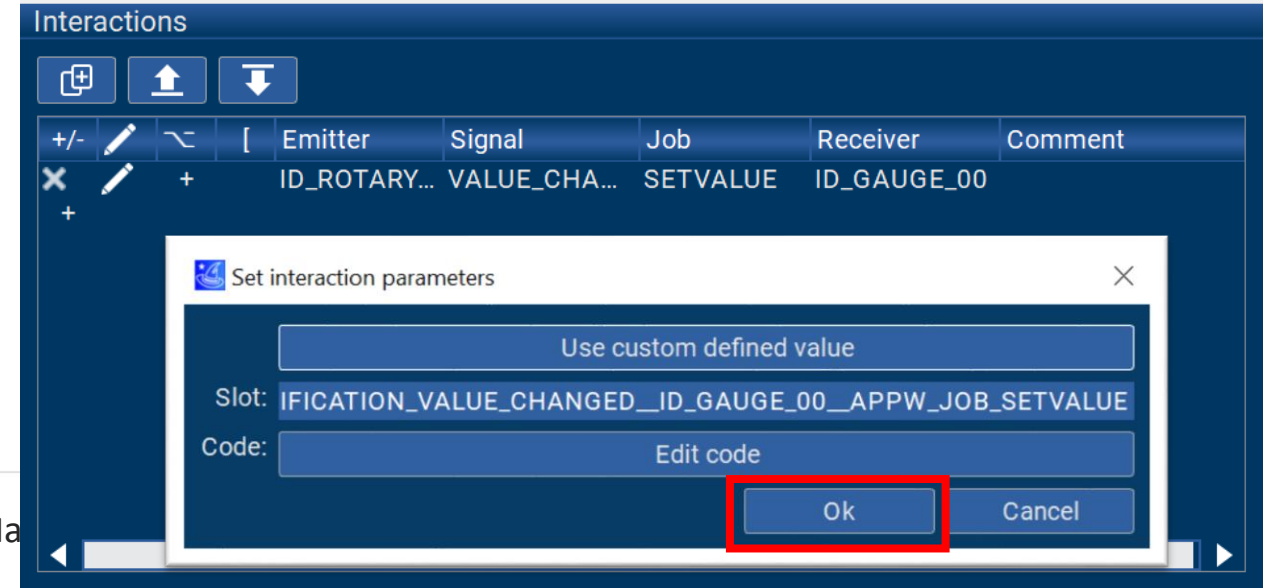
Object Interactions

- Rotary
  - Click object
  - Click “+” in Interactions window
  - Set the details
    - Emitter
    - Signal
    - Job
    - Reciver
      - ***ID_GAUGE_00*** (real ID’s name)





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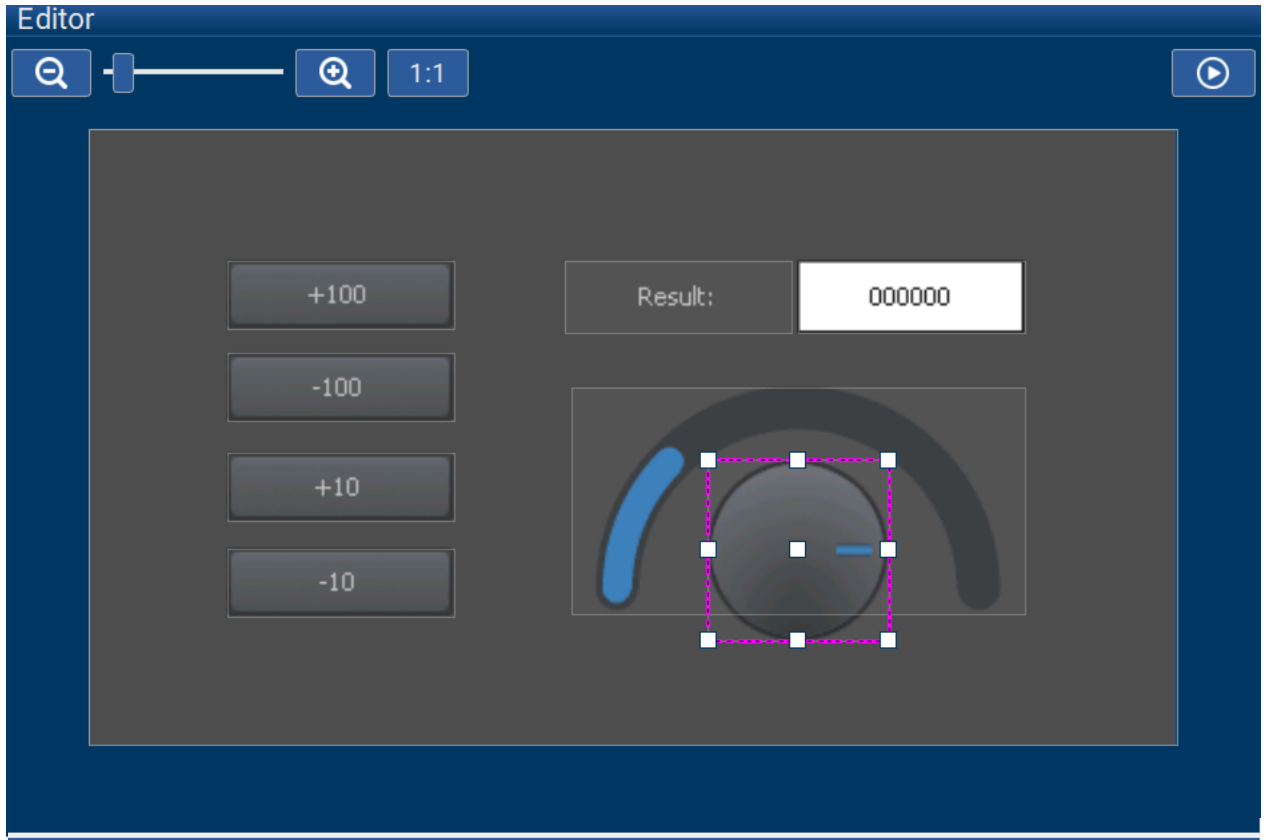
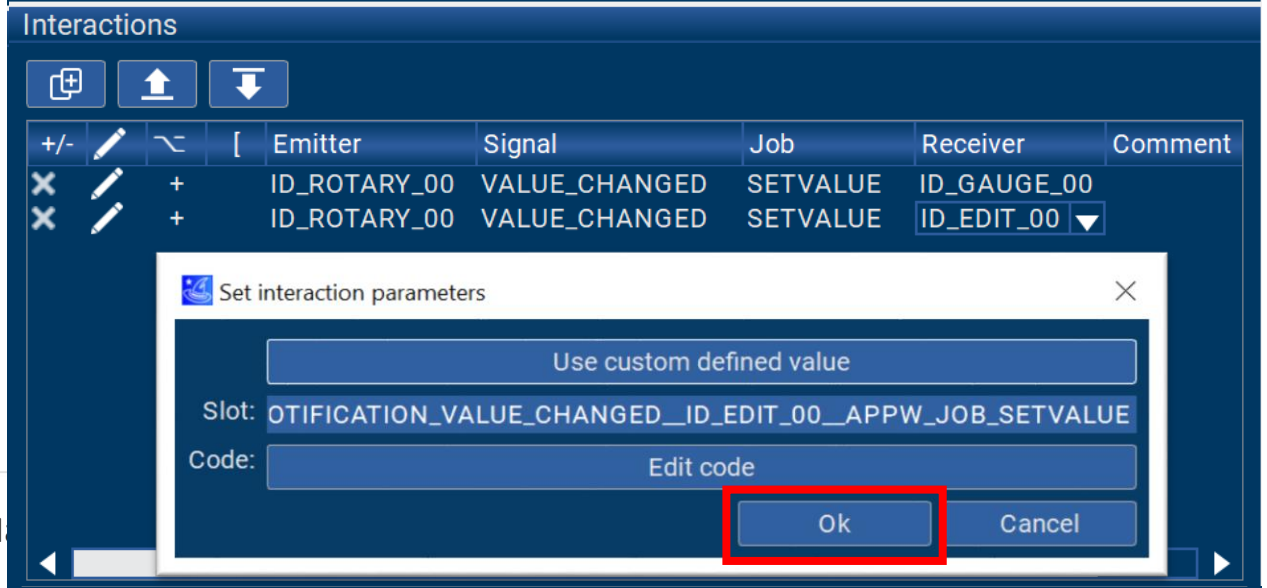
Object Interactions

- Rotary
  - Add the second Interaction
  - Set the details same as before
    - Emitter
    - Signal
    - Job
  - Set the detail
    - Receiver
      - ***ID_EDIT_00*** (real ID's name)





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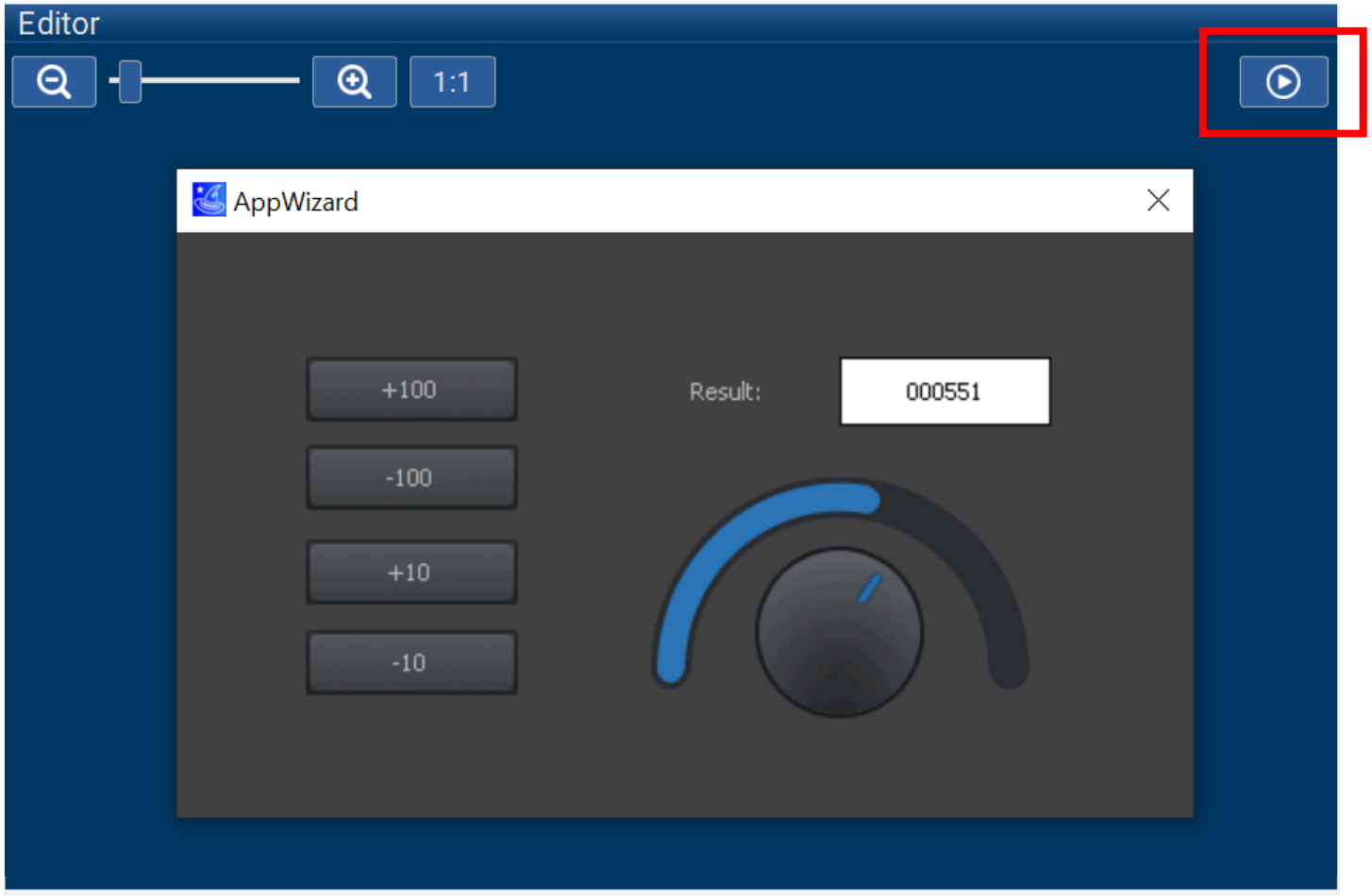
Object Interactions

- Rotary
  - Value change in rotary will both affect objects “*Edit*” and “*Gauge*”.



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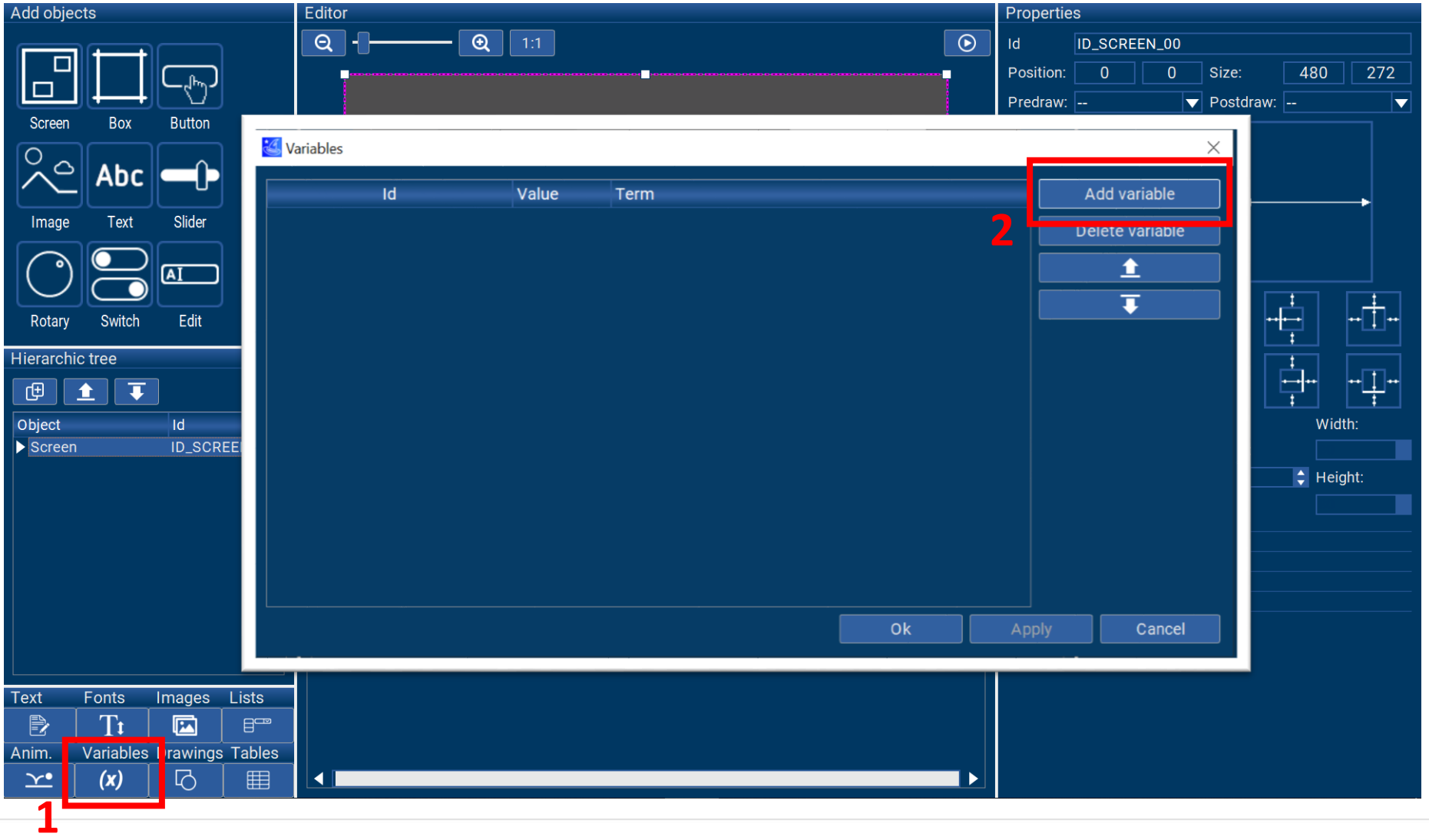
Variable Interactions



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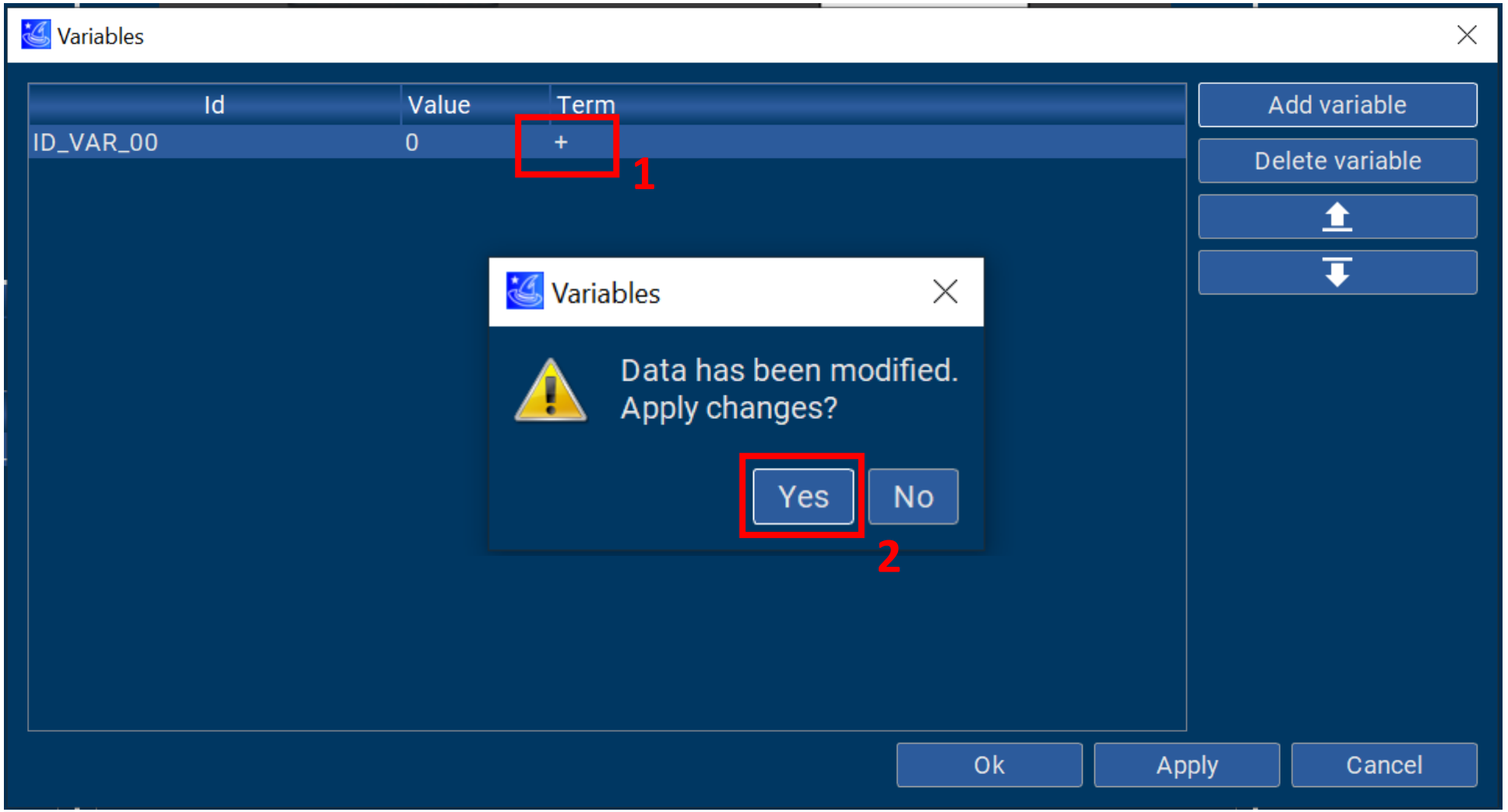
*Variable Interactions



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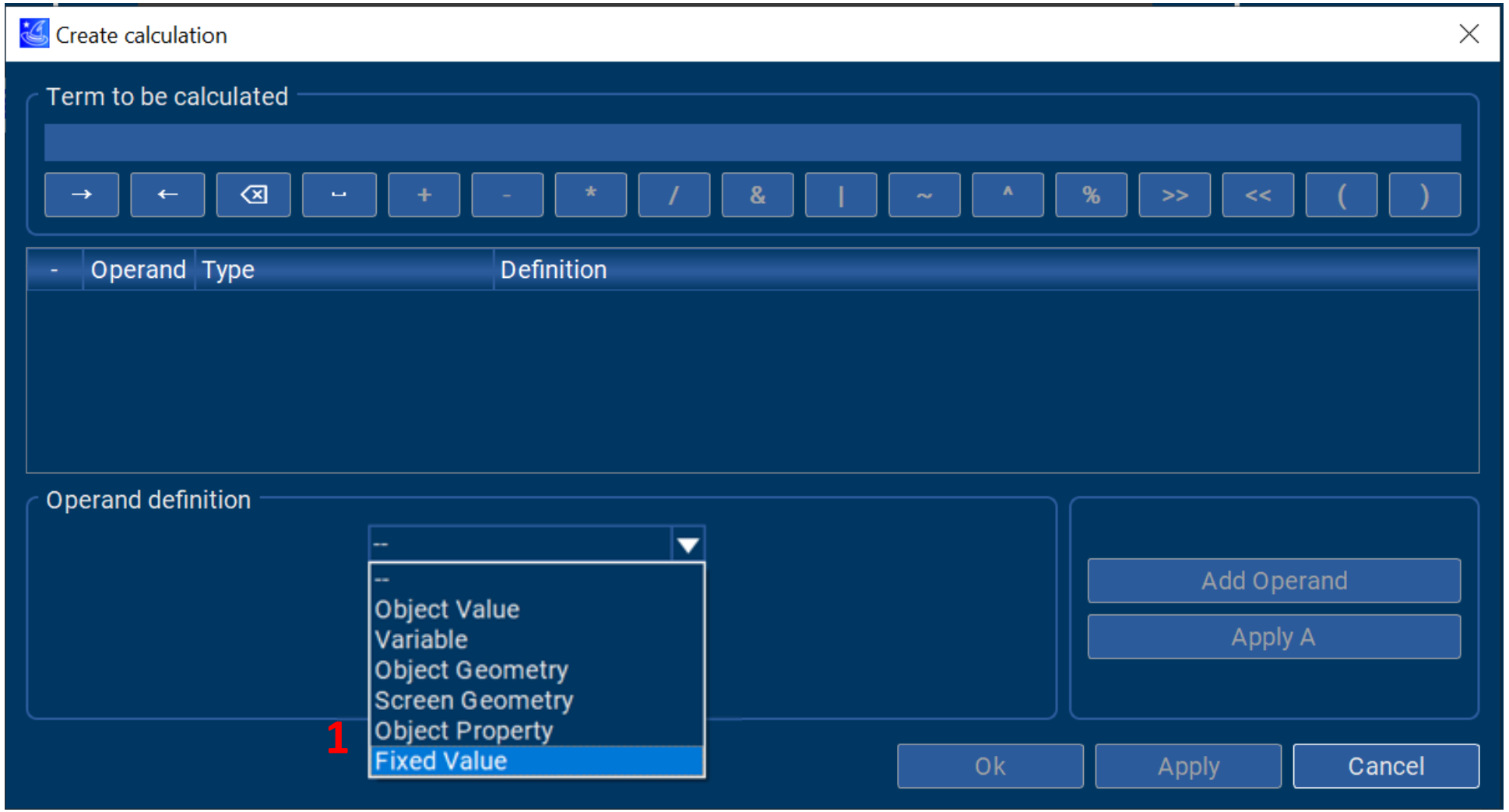
Variable Interactions



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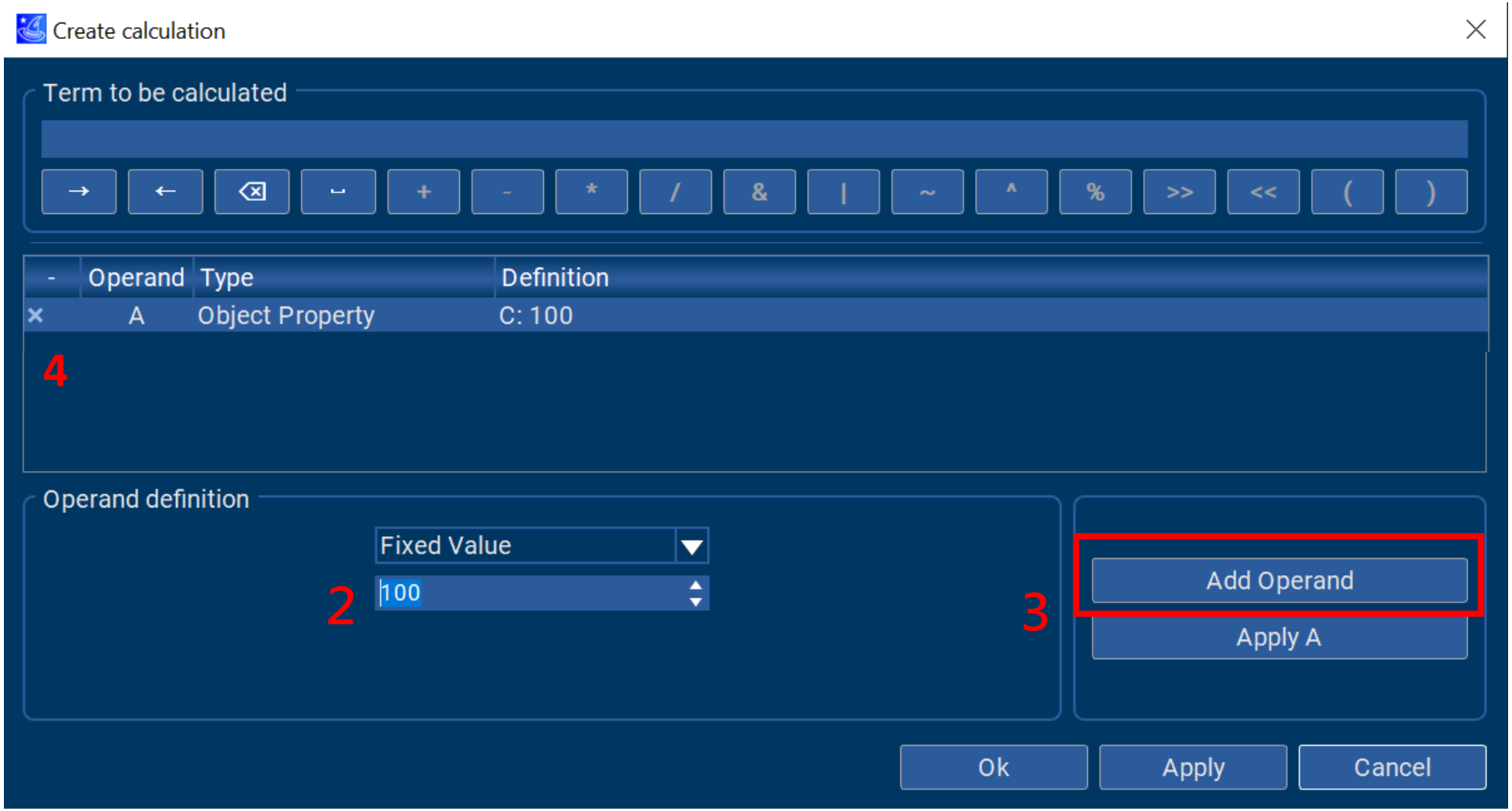
Variable Interactions



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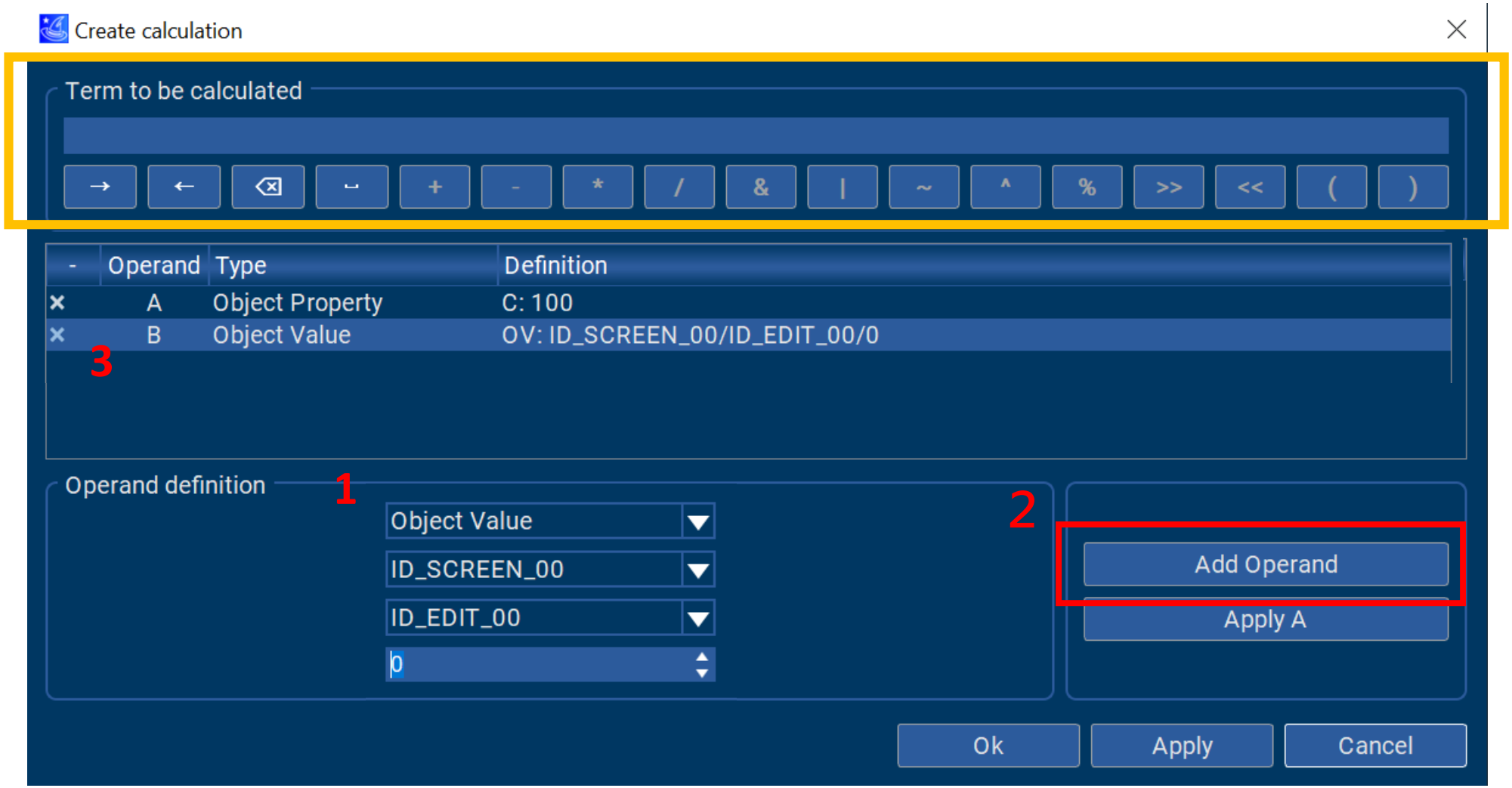
Variable Interactions



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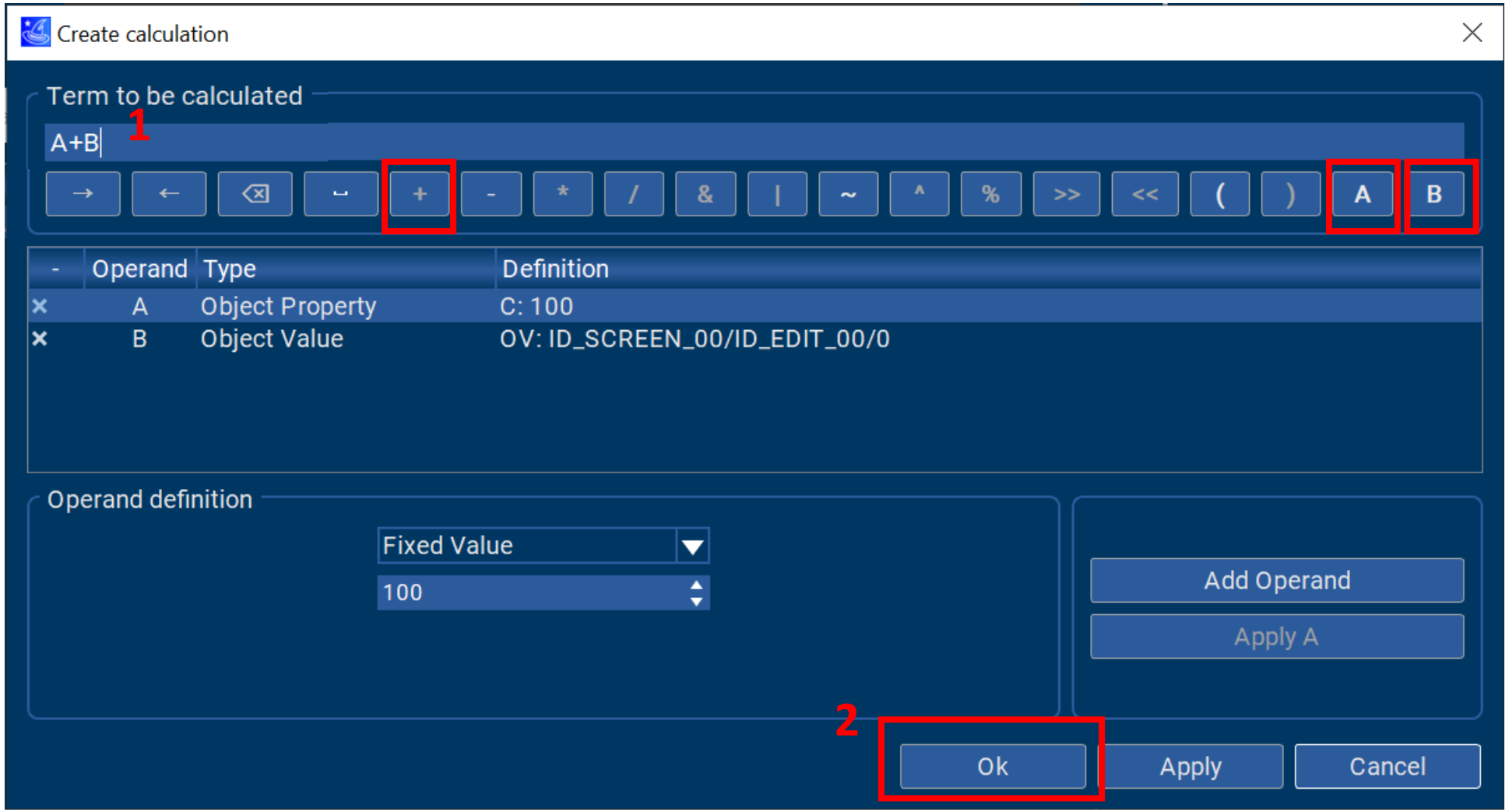
Variable Interactions



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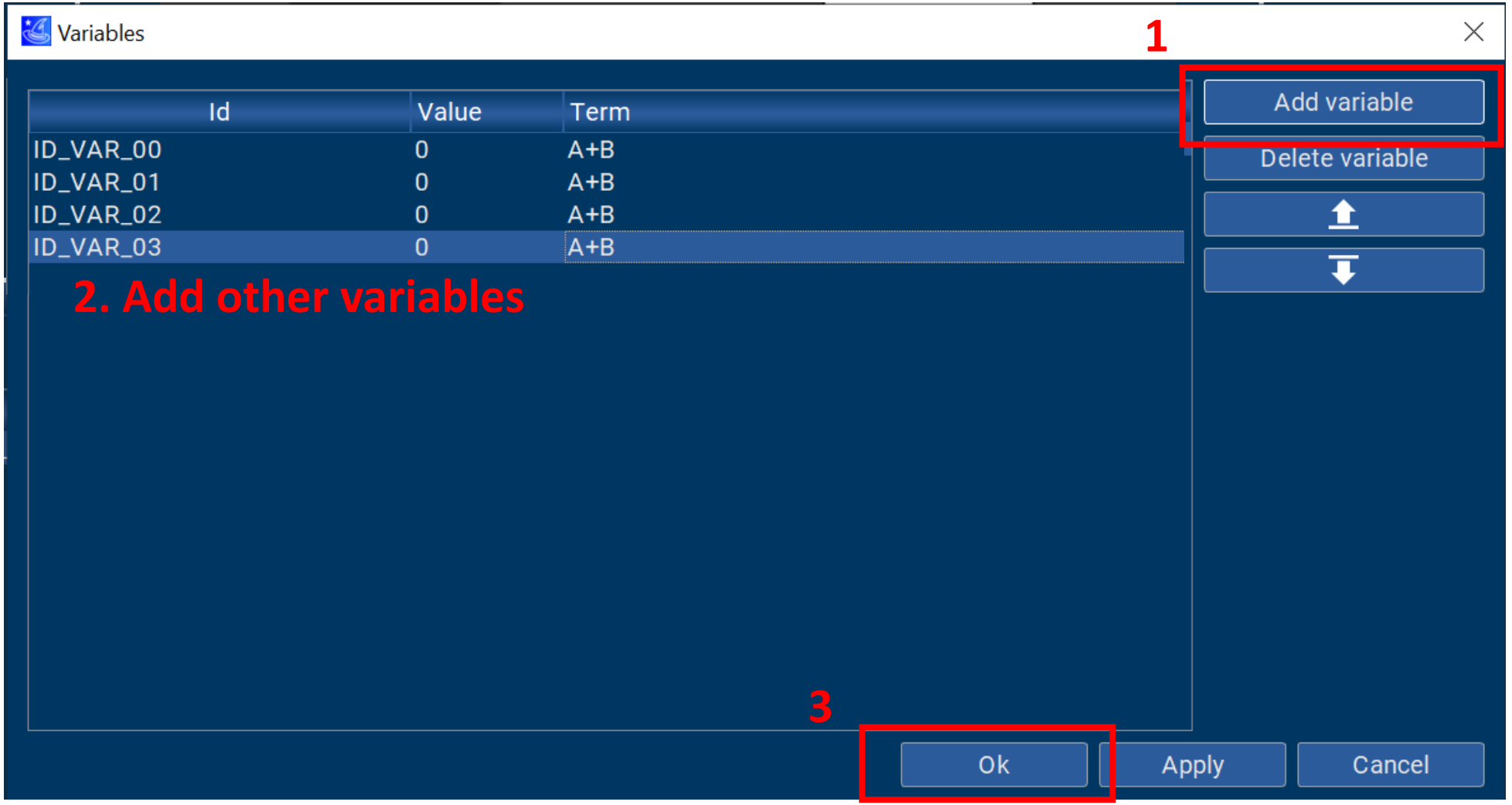
Variable Interactions



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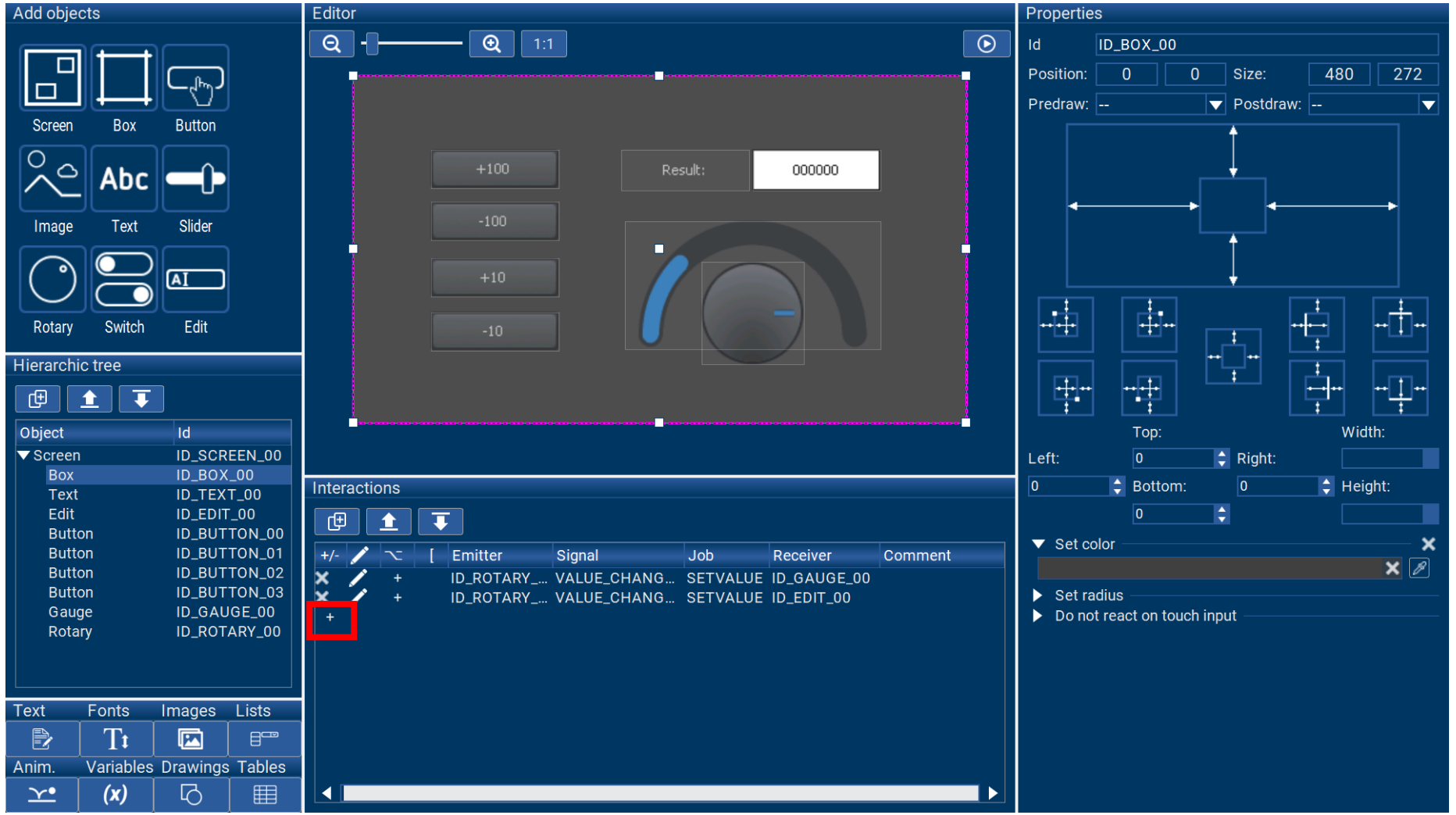
Variable Interactions



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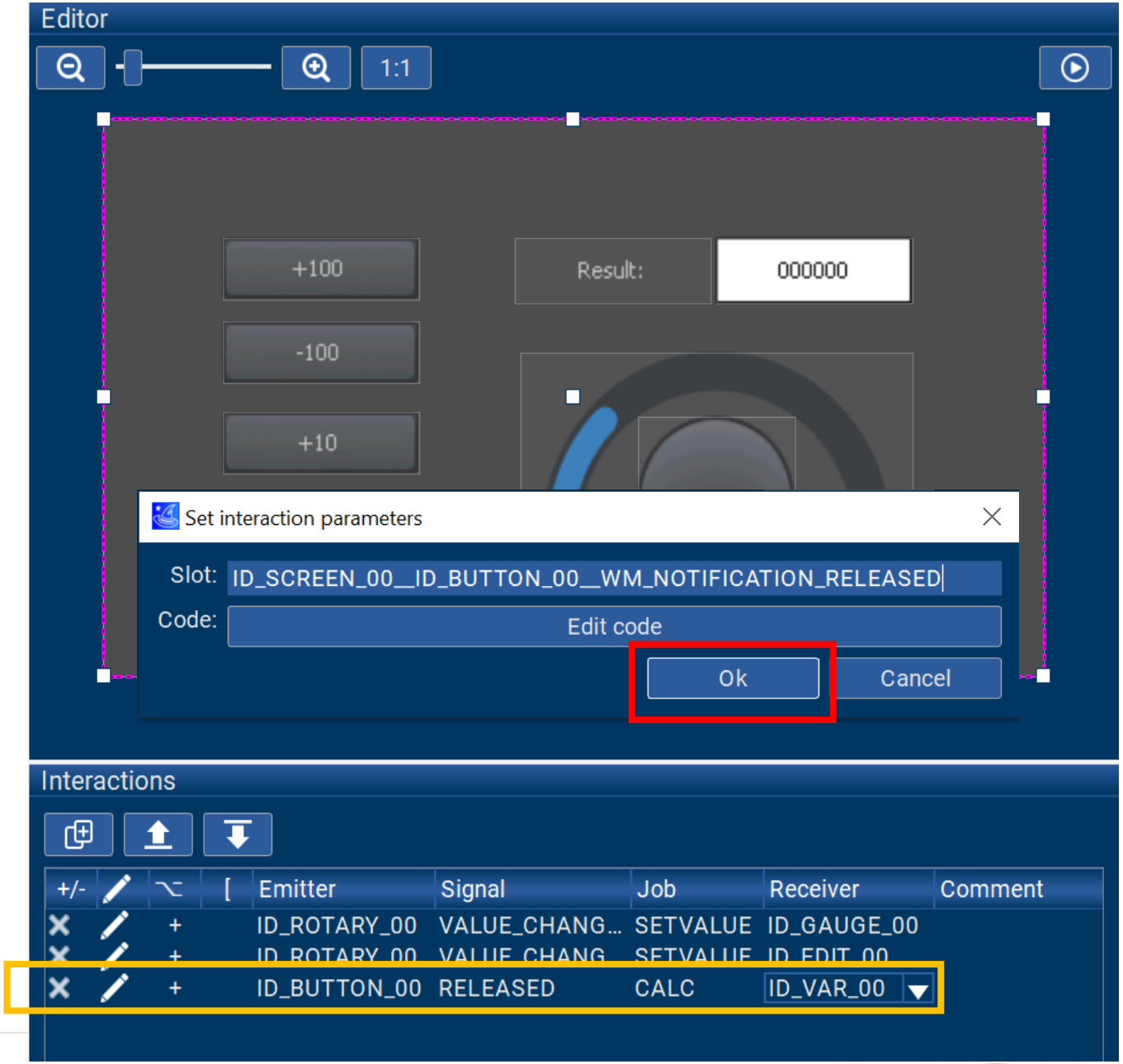
Variable Interactions

- Emitter
  - **ID_BUTTON_00**
- Signal
  - **RELEASED**
- Job
  - **CACL**
- Receiver
  - **D_VAR_00**



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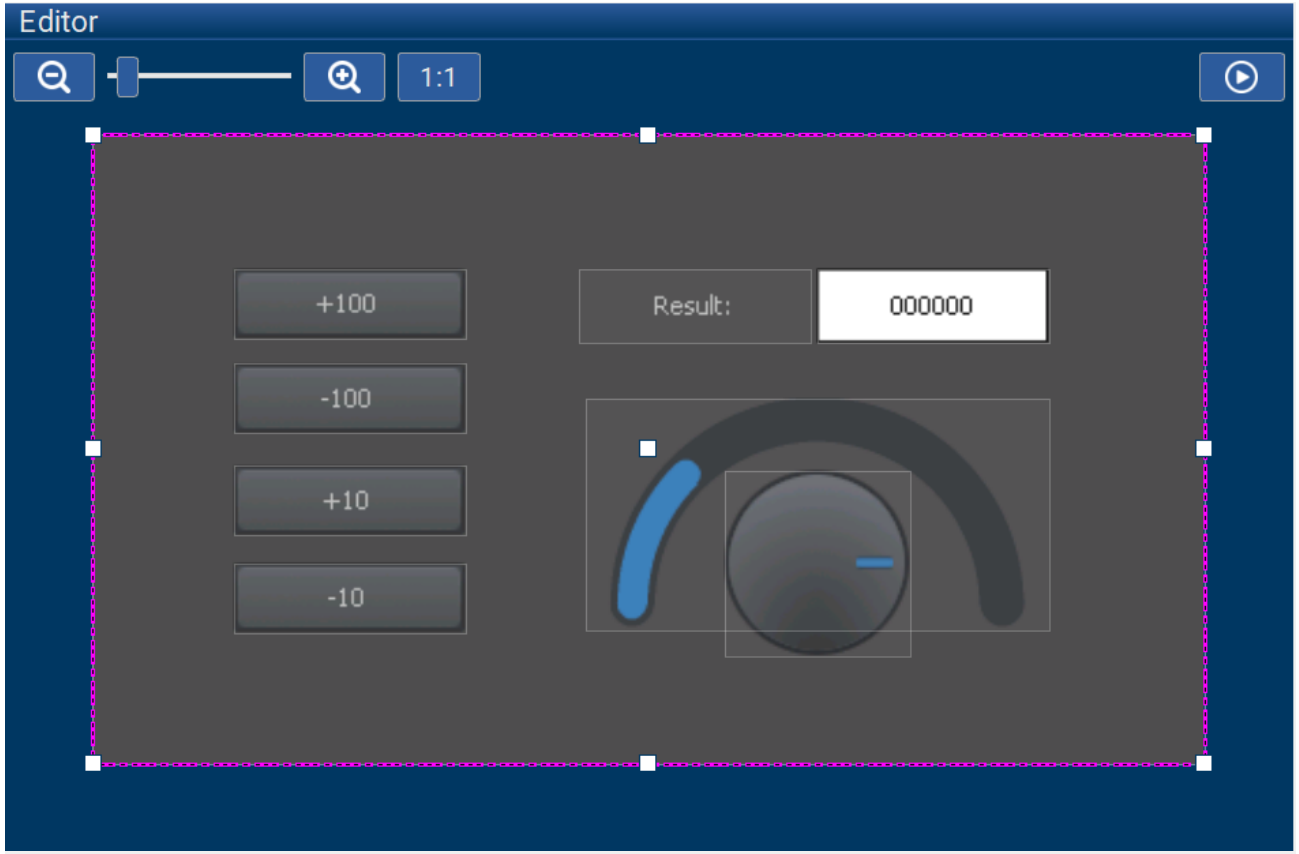
Variable Interactions

- Emitter
  - **ID_VAR_00**
- Signal
  - **VALUE_CHANGED**
- Job
  - **SETVALUE**
- Receiver
  - **ID_EDIT_00**



Interactions

+/-		⌥	[	Emitter	Signal	Job	Receiver	Comme
✕	✎	+		ID_ROTARY_00	VALUE_CHANGED	SETVALUE	ID_GAUGE_00	
✕	✎	+		ID_ROTARY_00	VALUE_CHANGED	SETVALUE	ID_EDIT_00	
✕	✎	+		ID_BUTTON_00	RELEASED	CALC	ID_VAR_00	
✕	✎	+		ID_VAR_00	VALUE_CHANGED	SETVALUE	ID_EDIT_00	
✕	✎	+		ID_BUTTON_01	RELEASED	CALC	ID_VAR_01	
✕	✎	+		ID_VAR_01	VALUE_CHANGED	SETVALUE	ID_EDIT_00	
✕	✎	+		ID_BUTTON_02	RELEASED	CALC	ID_VAR_02	
✕	✎	+		ID_VAR_02	VALUE_CHANGED	SETVALUE	ID_EDIT_00	
✕	✎	+		ID_BUTTON_03	RELEASED	CALC	ID_VAR_03	
✕	✎	+		ID_VAR_03	VALUE_CHANGED	SETVALUE	ID_EDIT_00	
+								

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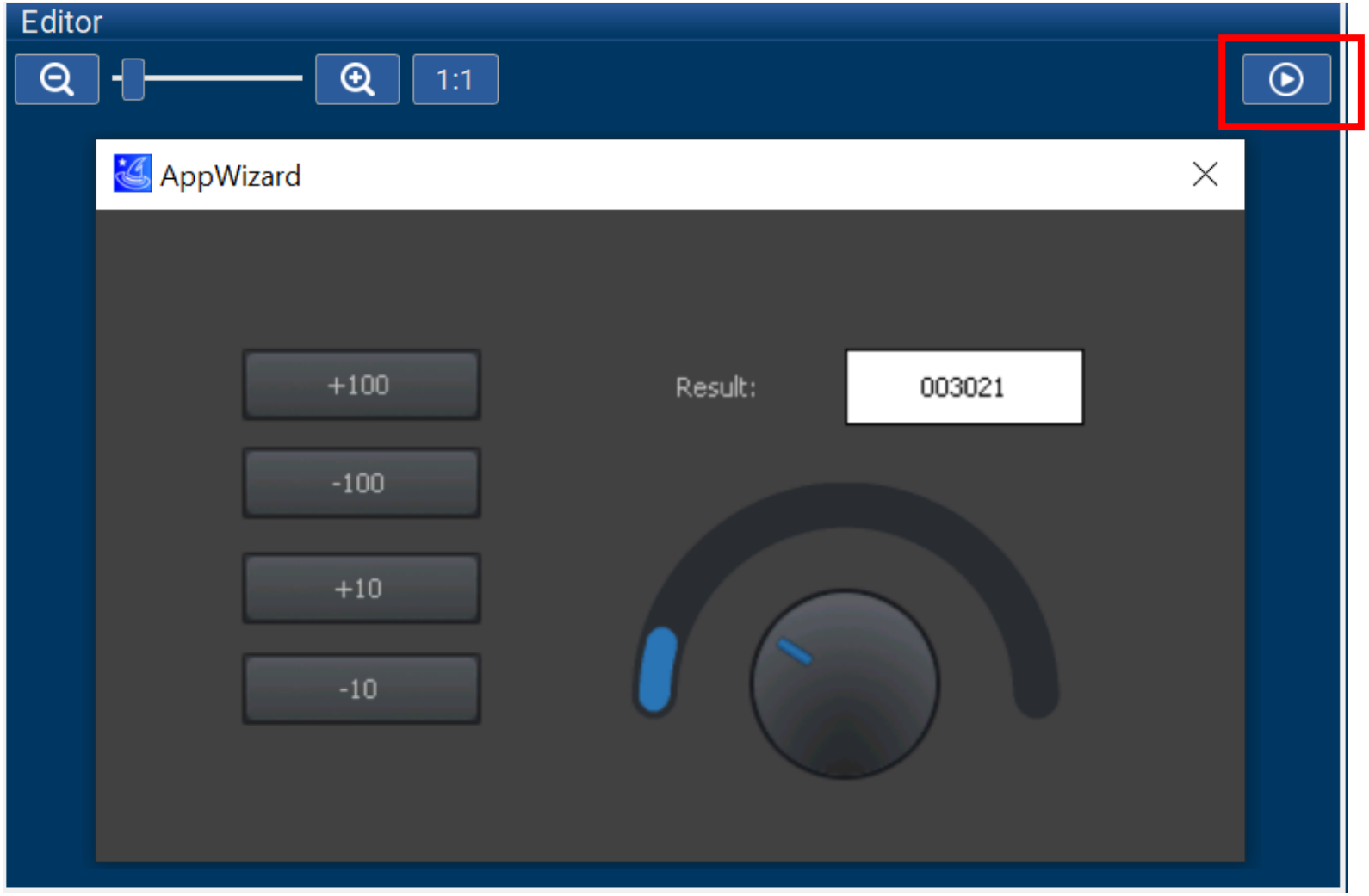
Variable Interactions



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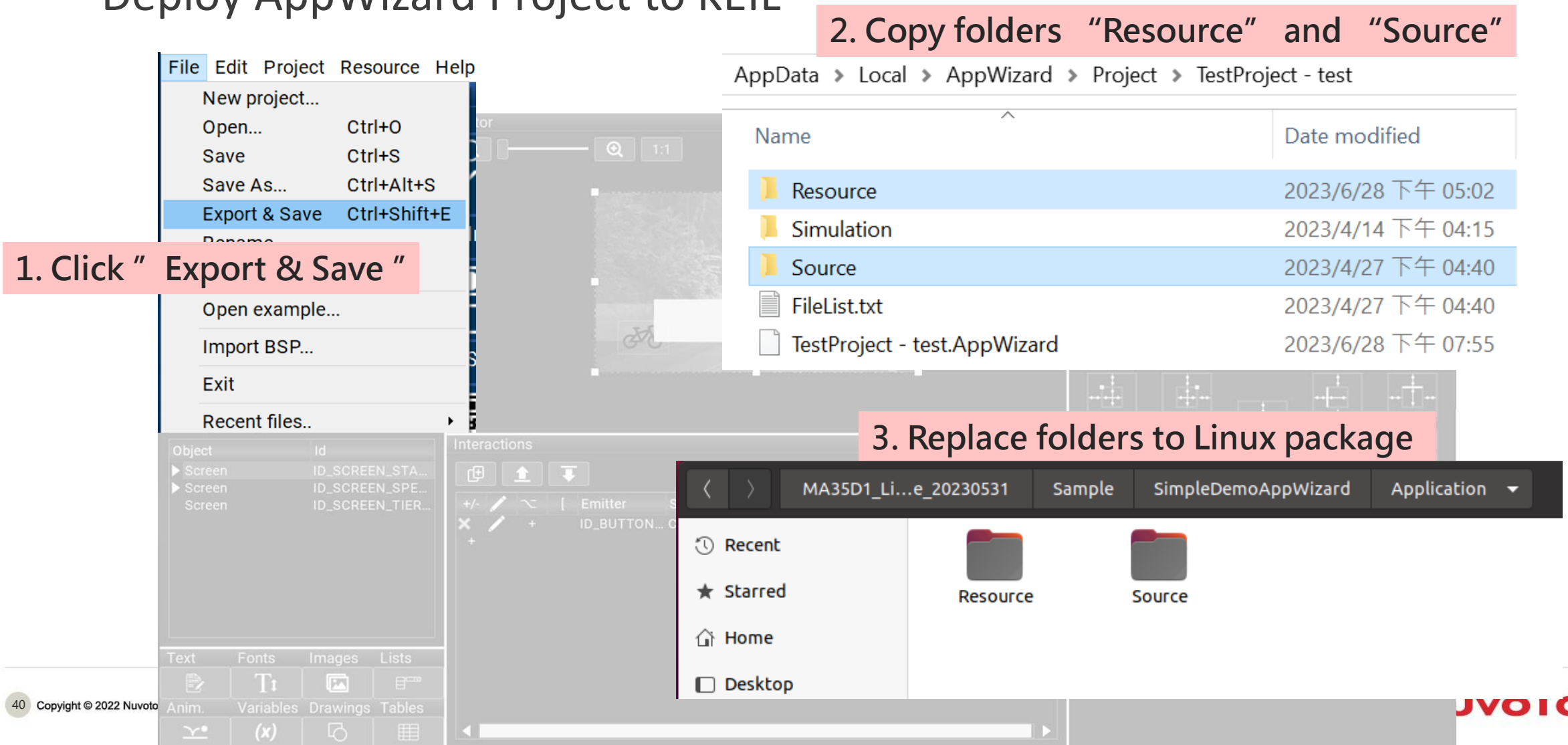
Export & Deploy Project

- Deploy AppWizard Project to KEIL



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Making the emWin AppWizard File

- In Linux environment
  - It requires the MA35D1 toolchain to make the emWin AppWizard file of MA35D1.
    - Please follow the steps of MA35D1_Buildroot_Quick_Start to install.
      - https://www.nuvoton.com/export/resource-files/en-us--MA35D1_Buildroot_Quick_Start_Rev1.01.pdf
    - emWin AppWizard package
      - https://www.nuvoton.com/products/microprocessors/arm9-mpus/-n9h-series/?group=Software&tab=2
      - Download and unzip the package into the Linux folder.

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Making the emWin AppWizard File

Before **RERUN** Makefile,
please clean the record first:
$ make clean

- In Linux environment
  - Open Terminal in Sample file
  - Run the file "Makefile" and build one binary file SimpleDemoAppWizard.

```
$ make
```

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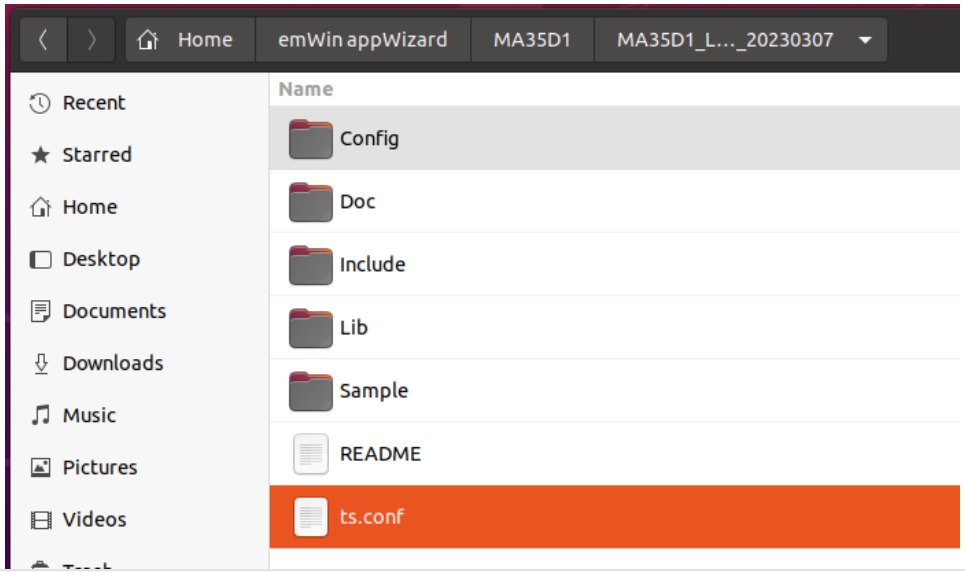
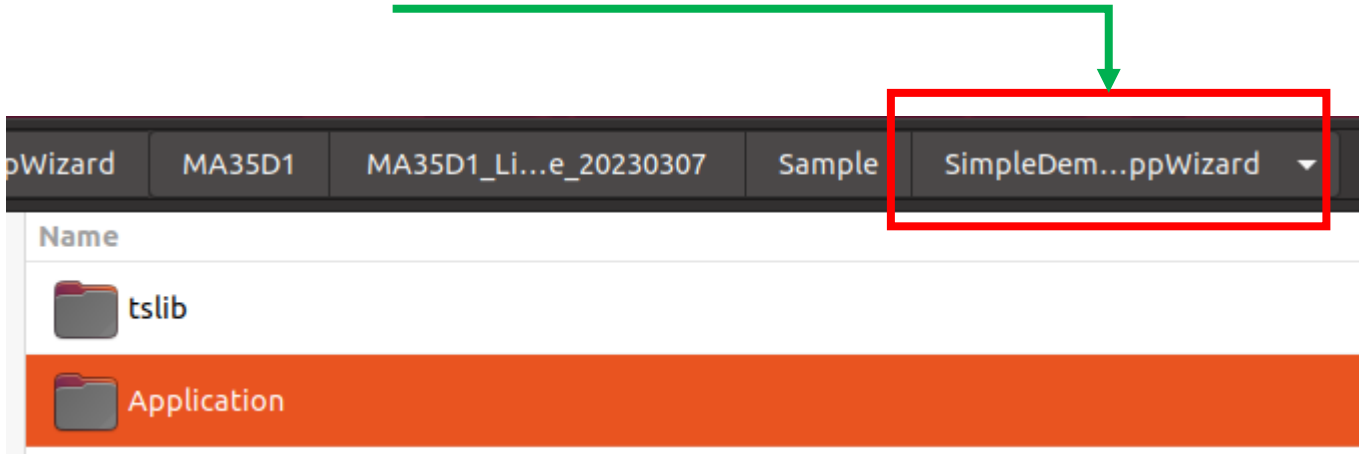
Making the emWin AppWizard File

- In Linux environment
  - Open Terminal in Sample file
  - Run the file "Makefile" and build one binary file SimpleDemoAppWizard.
  - Move the built files: *SimpleDemoAppWizard*, *GUIDemo*, *SimpleDemo*, and *ts.conf* to windows.





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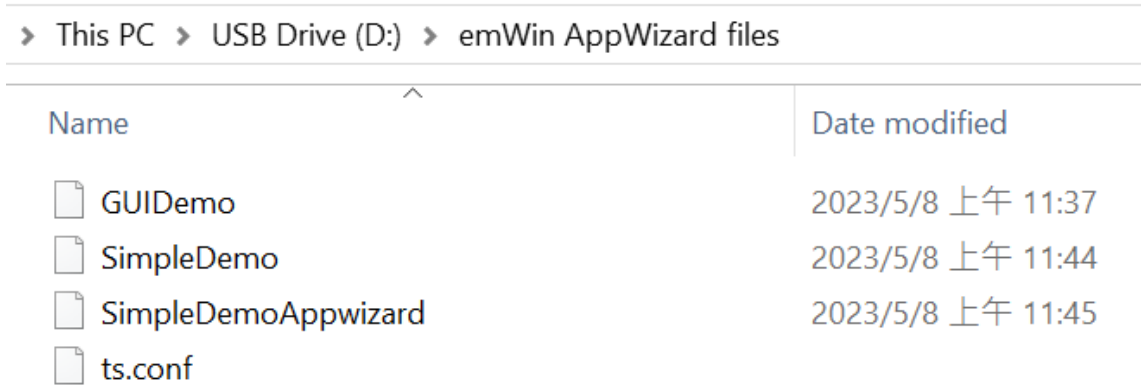
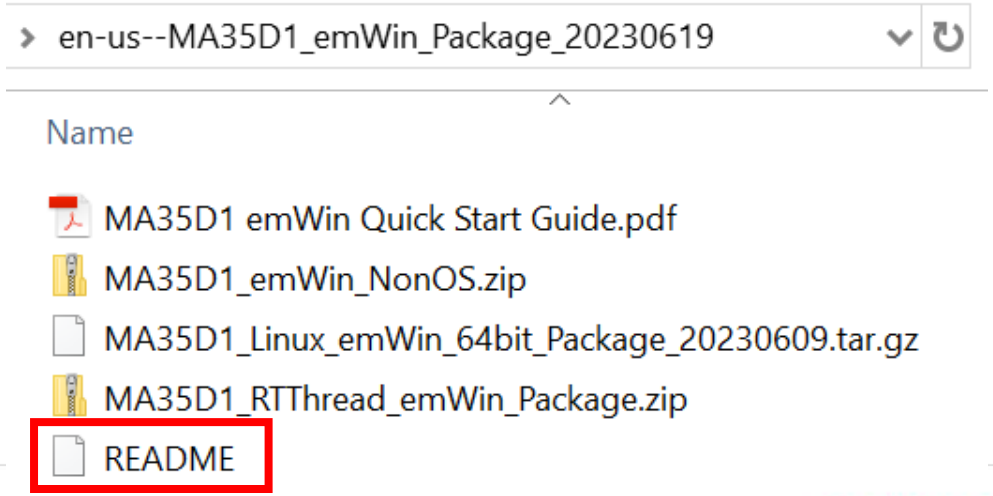
Making the emWin AppWizard File

- In Linux environment
  - Open Terminal in Sample file
  - Run the file "Makefile" and build one binary file SimpleDemoAppWizard.
  - Move the built files: *SimpleDemoAppWizard*, *GUIDemo*, *SimpleDemo*, and *ts.conf* to windows.
  - Copy files to a USB pen drive, then follow the steps of ***README*** in the package to execute files.





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Other Resource

- **Nuvoton NuForum**
  - http://forum.nuvoton.com/viewforum.php?f=31
- **SEGGER emWin User Manual**
  - AppWizard User Guide & Reference Manual (segger.com)
- **SEGGER emWin training video**
  - AppWizard - The emWin GUI Design Tool - YouTube
- **Quickly Build-up GUI on Nuvoton HMI Platform by emWin AppWizard**
  - https://www.youtube.com/watch?v=Edi-IZjk0Cg

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