Design Friendly Code

Documentation

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Unity Package

Here you can download a unity package containing the scripts used to build this document:

https://drive.google.com/drive/folders/17BtIGEYbJFeQhDBxWGxEec4QzqaqICxo?usp=sharing
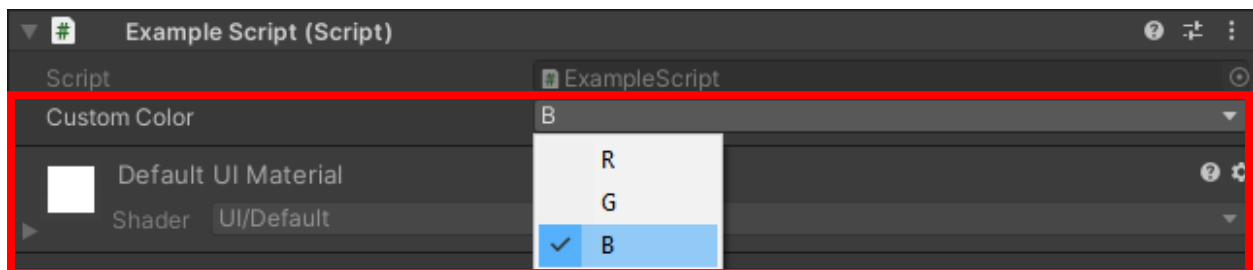
Variable Types

Enums

Implementation

```
// All the items listed here will appear in a dropdown menu in the inspector
2 references
public enum ObjectColor
{
    r,
    g,
    b,
}
```

```
//Only by creating an enum variable visible in the inspector a dropdown menu will be displayed
public ObjectColor _customColor = ObjectColor.r;
```

Inspector

▼ # Example Script (Script)		❷ ⇄ ⋮
Script	⊞ ExampleScript	⊙
Custom Color	B	▼
	R	
⬜ Default UI Material	G	❷ ✿
Shader UI/Default	✓ B	▼

More Resources

https://learn.unity.com/tutorial/enumerations
https://www.youtube.com/watch?v=-PT-LADWymI
https://stackoverflow.com/questions/63456163/how-can-i-add-enum-menu-to-gameobject

Inspector Name

```
public enum ObjectColor
{
    //Inspector Name overrides the name of enums in the inspector
    [InspectorName("Red")] r,
    [InspectorName("Green")] g,
    [InspectorName("Blue")] b,
}
```

```
public enum ObjectColor
{
    //Inspector Name overrides the name of enums in the inspector
    [InspectorName("Rojo")] r,
    [InspectorName("Verde")] g,
    [InspectorName("Azul")] b,
}
```

Inspector

More Resources

https://docs.unity3d.com/ScriptReference/InspectorNameAttribute.html
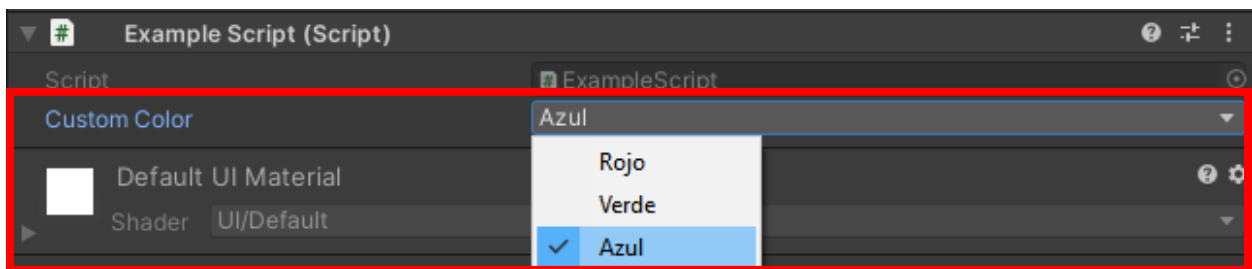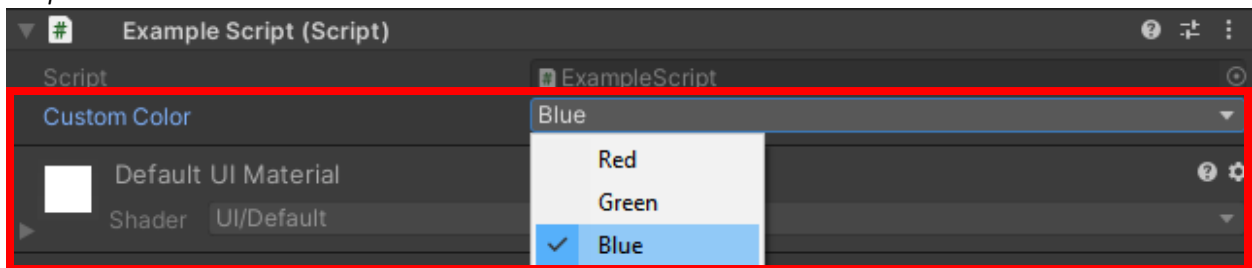
Class Attributes

Require Component

Implementation

```
//If you assing this script to a gameObject and it doesn't has the selected component,
//the component will be added automatically
[RequireComponent(typeof(BoxCollider2D))]
◎ Unity Script | 0 references
public class ExampleScript : MonoBehaviour
{
```

More Resources

https://docs.unity3d.com/ScriptReference/RequireComponent.html

Execute in Edit Mode

Implementation

```
//Allows to execute Update and Awake in the editor mode
[ExecuteInEditMode]
◎ Unity Script | 0 references
public class ExampleScript : MonoBehaviour
{
```

More Resources

https://docs.unity3d.com/ScriptReference/ExecuteInEditMode.html

Disallow Multiple Component

Implementation

```
//Avoids having this script multiple times in the same GameObject
[DisallowMultipleComponent]
◎ Unity Script | 0 references
public class ExampleScript : MonoBehaviour
{
```
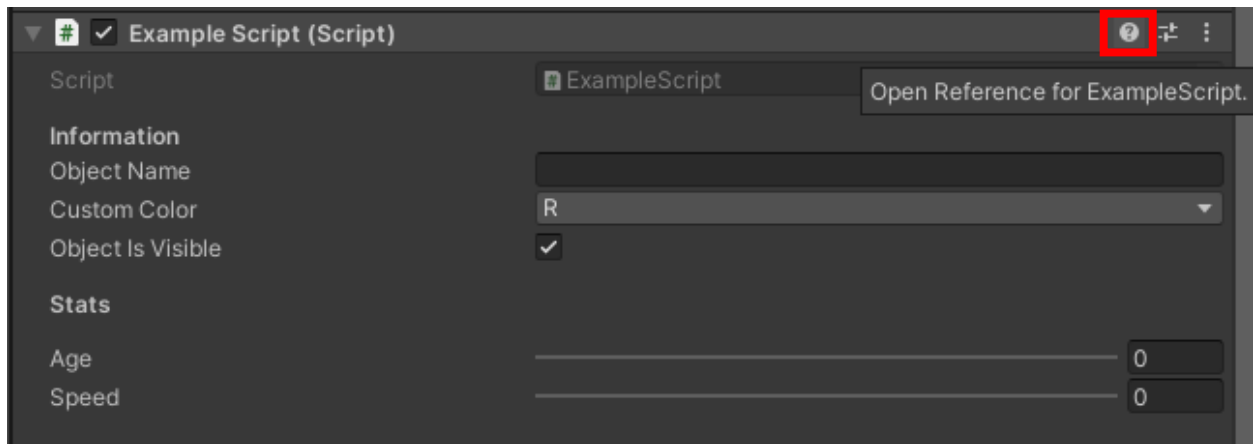
More Resources

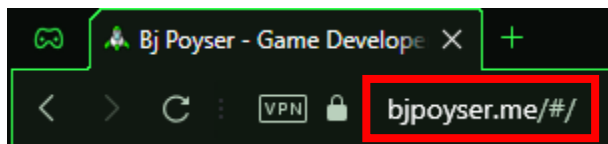https://docs.unity3d.com/ScriptReference/DisallowMultipleComponent.html

Help URL

Implementation

```
//You can attach online documentation to this class
[HelpURL("https://bjpoyser.me/#/")]
// Unity Script | 0 references
public class ExampleScript : MonoBehaviour
{
```

Inspector

Web

More Resources

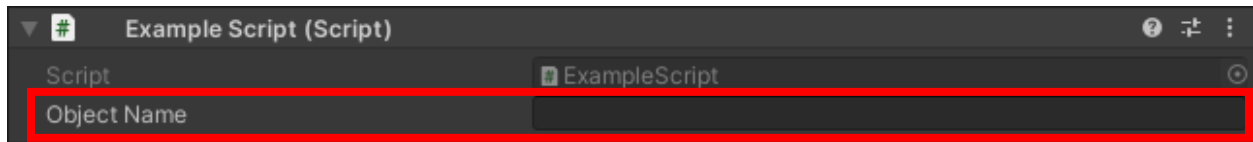https://docs.unity3d.com/ScriptReference/HelpURLAttribute.html

Variables Attributes

Serialize Field

Implementation

```
//SerializeField allows to see private and protected variables in the inspector
[SerializeField] private string objectName;
```

Inspector

```
▼ #   Example Script (Script)                                    ❼ ≢ ⋮
      Script                          # ExampleScript                    ⊙
      Object Name
```

Inspector

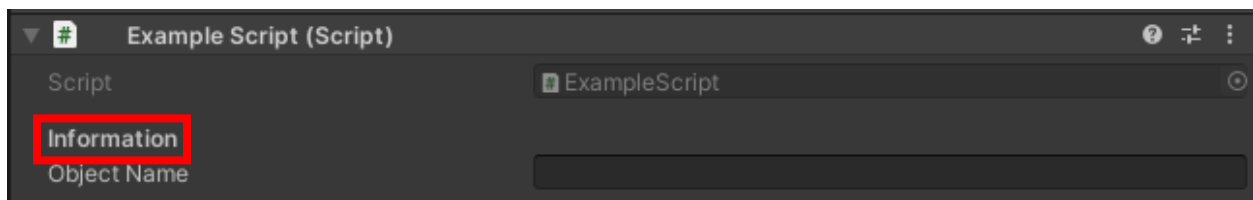https://docs.unity3d.com/ScriptReference/SerializeField.html

Header

Implementation

```
[Header("Information")]
//SerializeField allows to see private and protected variables in the inspector
[SerializeField] private string objectName;
```

Inspector

```
▼ #   Example Script (Script)                                    ❼ ≢ ⋮
      Script                          # ExampleScript                    ⊙
      Information
      Object Name
```

More Resources

https://docs.unity3d.com/ScriptReference/HeaderAttribute.html

Tool Tip

Implementation

```
//Tool Tip allows us to add a description to this variable.
//If you hover with the mouse this variable in the inspector,
//you can see whatever is in-between the parenthesis
[Tooltip("Enables/Disables the image component, making not visible the object")]
public bool _objectIsVisible = true;
```

Inspector

More Resources

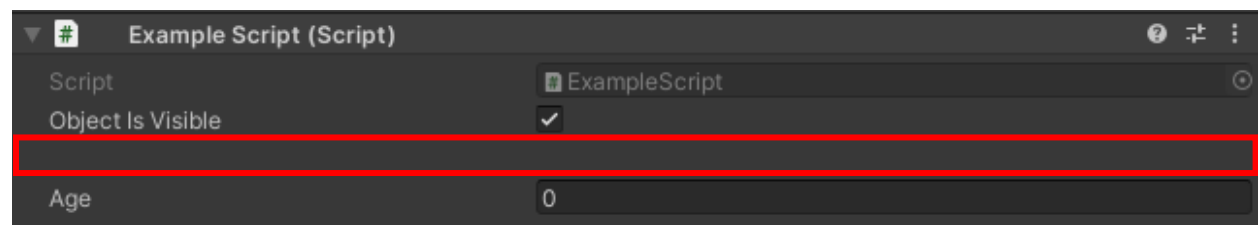https://docs.unity3d.com/ScriptReference/TooltipAttribute.html
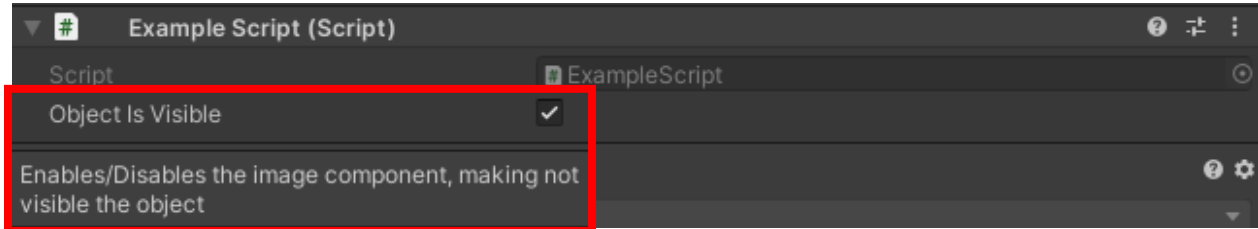
Space

Implementation

```
//Adds a space in the inspector. The number in-between the parenthesis is the height in pixels
[Space(20)]
public int age;
```

Inspector

More Resources

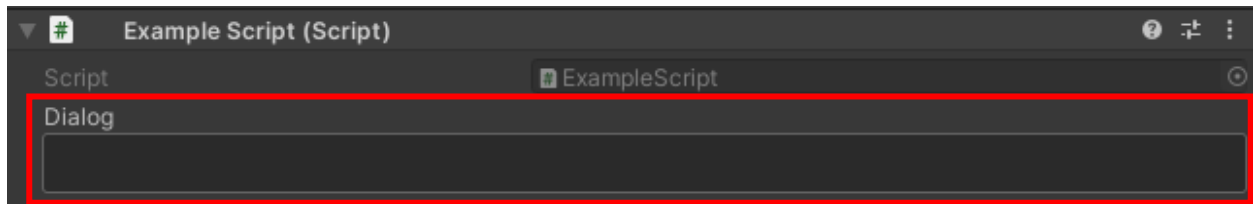https://docs.unity3d.com/ScriptReference/SpaceAttribute.html

Text Area

Implementation

```
//Text Area shows a bigger field to write whatever you want
//You can set a min and max number of visible lines (min, max)
[TextArea(1, 10)] public string _dialog;
```

Inspector

More Resources

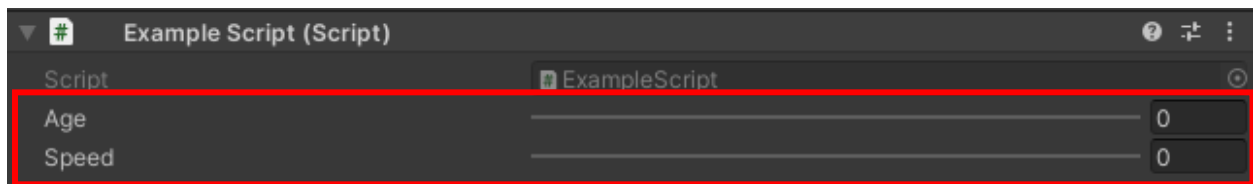https://docs.unity3d.com/ScriptReference/TextAreaAttribute.html

Range

Implementation

```
//Range adds a slidder to handle this variable.
//Can be an int or float
[Range(10, 20)] public int age;
[Range(5.5f, 8.5f)] public float _speed;
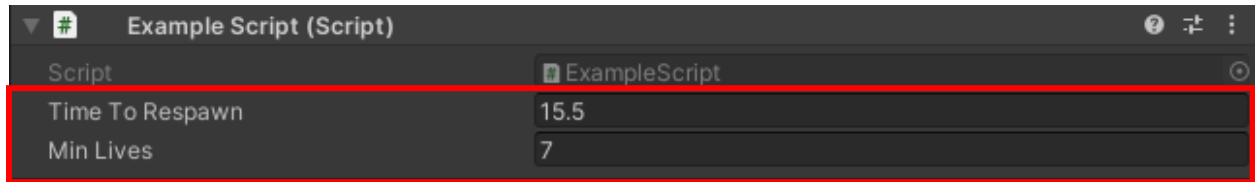```

*Inspector*



*More Resources*

https://docs.unity3d.com/ScriptReference/RangeAttribute.html

## Min

*Implementation*

```
//Min restricst the minimun value that can be set in the variable
//Works with decimals and integers
[Min(15.5f)] public float _timeToRespawn;
[Min(7)] public int _minLives;
```

Inspector

▼ # Example Script (Script)		❓ ⊶ ⋮
Script	# ExampleScript	⊙
Time To Respawn	15.5	
Min Lives	7	

More Resources

https://docs.unity3d.com/ScriptReference/MinAttribute.html
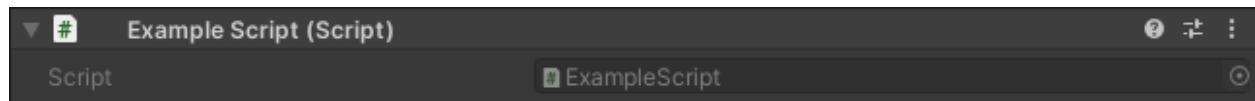
Hide in Inspector

Implementation

```
//Hide In Inspector avoids the variable to be shown in the inspector
[HideInInspector] public int objectID;
```

Inspector

▼ # Example Script (Script)		❓ ⊶ ⋮
Script	# ExampleScript	⊙

More Resources

https://docs.unity3d.com/ScriptReference/HideInInspector.html

Functions Attributes

Context Menu

Implementation

```
//Context Menu makes visible this function in the inspector
//Allowing us to execute it from the edit mode
[ContextMenu("Test this function")]
void TestFunction()
{
    Debug.Log("test");
}
```

Inspector

More Resources

https://docs.unity3d.com/ScriptReference/ContextMenu.html
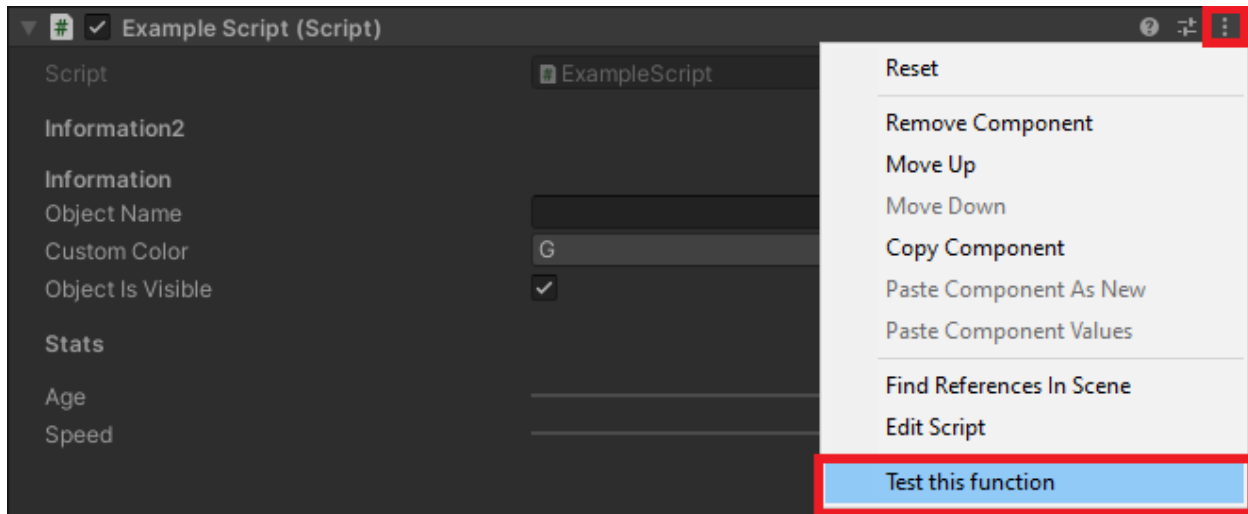
Buttons

Add Listener

Implementation

```
//You can assing actions that will be execute when the button is pressed
addButton.onClick.AddListener(Add);

//You can add more than one action to the same button
addButton.onClick.AddListener(UpdateText);
```

More Resources

> https://docs.unity3d.com/530/Documentation/ScriptReference/Events.UnityEvent.AddListener.html

Remove Listeners

Specific Listener

Implementation

```
//Removes "Add" function from the onClick event
addButton.onClick.RemoveListener(Add);
```

More Resources

> https://docs.unity3d.com/530/Documentation/ScriptReference/Events.UnityEvent.RemoveListener.html

All Listeners

Implementation

```
//Removes all actions from the onClick event
addButton.onClick.RemoveAllListeners();
```

More Resources

> https://docs.unity3d.com/530/Documentation/ScriptReference/Events.UnityEventBase.RemoveAllListeners.html