

Variables (/topics/134-variables/)

Variables are containers. Each variable has a `name` , a `type` , and a `value` .

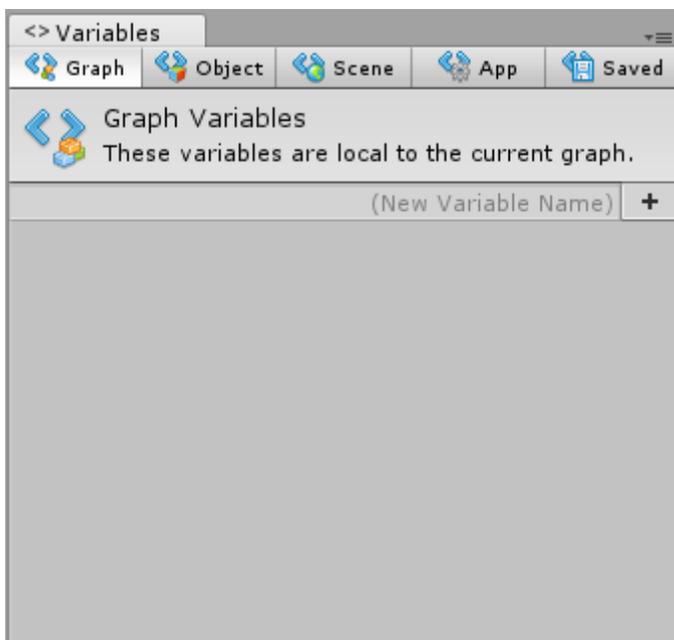
The value inside a variable can change during runtime, which is why they're called *vary-ables*.

In Bolt, there are 5 kinds of variables:

Icon	Kind	Description
	Graph Variables	Graph variables are local to an instance of a flow graph. They have the smallest scope and cannot be accessed or modified outside their graph.
	Object Variables	Object variables belong to a game object. They are shared across all graphs on that game object.
	Scene Variables	Scene variables are shared across the current scene.
	Application Variables	Application variables persist even when the scene changes. They will be reset once the application quits.
	Saved Variables	Saved variables will persist even after the application quits. They can be used as a simple but powerful save system. They are saved in Unity's <i>player prefs</i> (https://docs.unity3d.com/ScriptReference/PlayerPrefs.html), which means they unfortunately can't refer to Unity objects like game objects and components.

The variables window

The variables window can be opened via **Windows > Variables** . It contains one tab per kind of variable. The graph tab is only enabled if a flow graph is selected, and the object tab is only enabled if a game object is selected.

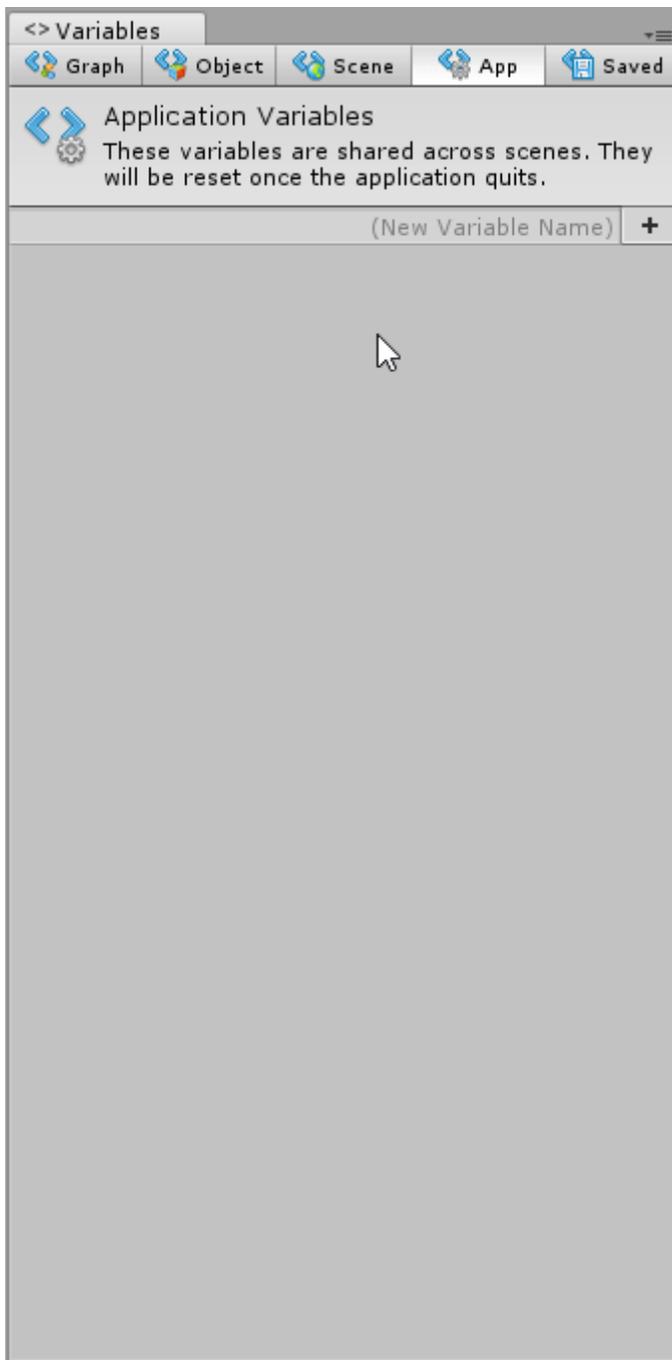


Adding a variable

1. Choose the tab corresponding to the kind of variable you want to add
2. Type the name of the new variable in the `(New Variable Name)` field
3. Click the  button

4. Choose its **Type** (Null)

5. (Optional) Change its default value

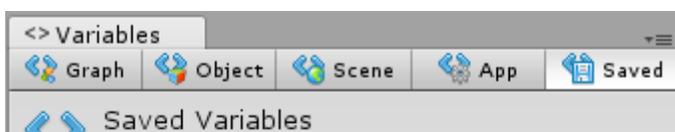


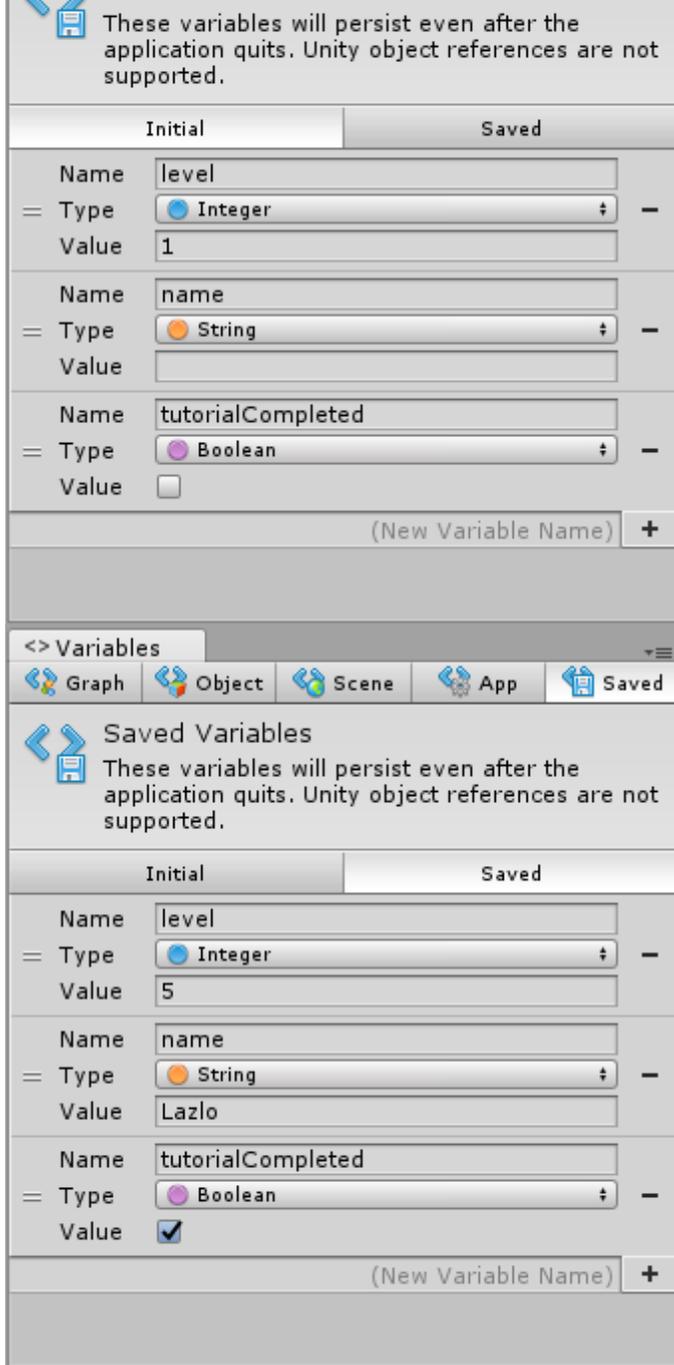
Saved & Initial Variables

You may notice that under the **Saved** tab, there are two sub-tabs: **Initial** and **Saved** .

In the initial tab, you define values are will automatically created for new games.

In the saved tab, you can see the state of saved variables for **your current computer**. You can edit these manually or delete them all if you want to start anew.





Removing Headers

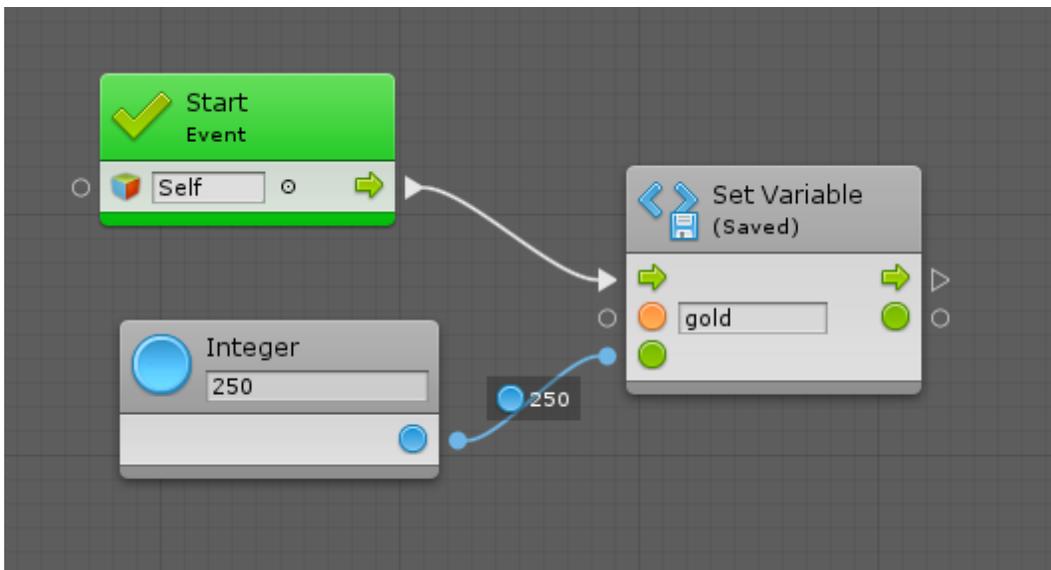
Once you get a good grip of how each kind of variable works, you can remove the headers in the variables window to save some screen real-estate. Simply uncheck **Show Variables Help** in

Tools > Bolt > Editor Preferences... .

Dynamic Variables

Variables **don't** need to be declared during edit mode! They can also be created during play mode.

Setting the value of a variable that doesn't exist automatically creates it. For example, this graph would create a new saved integer variable named `gold` with a value of `250`, even if we hadn't defined it before:



For more information about variable units, have a look at the Unit Reference (<http://support.ludiq.io/topics/186-variables/>).