

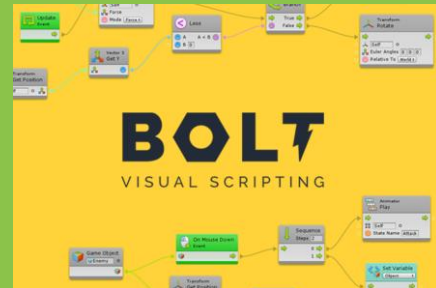
# ***KINE 458:*** ***Virtual Interactive*** ***Worlds***

Today's Objectives:

- Introduction to Programming
- Introduction to Bolt
  - Visual Scripting Overview
  - Installing Bolt
  - Simple Live Demo

Unity / Bolt

Introduction to Programming and Bolt



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# Introduction To Programming

## Variables

- ❑ Variables serve as ways of storing information in a program.
- ❑ Stored information is valuable because it can be reused multiple times when needed.
- ❑ Variables typically translate into some real world entity. (E.x. seconds passed, switch status, counts, lists, calculations etc.)
- ❑ Imagine a variable as a container
- ❑ There are three things we are concerned about with each variable:
  - ❑ The name of the container (variable name)
  - ❑ The type of container it is (variable type)
  - ❑ What the container is holding (variable value)

## Types

- ❑ Variables have different types, these types are used to store different kinds of information.
- ❑ Typing is a key component in determining how variables can interact with each other.

Var name: tomatoContainer  
Var type: Square Food Container  
Var value: Tomatoes



Var name: midSizedEmpty  
Var type: Circle Food Container  
Var value: Empty



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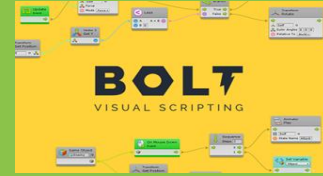


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## Types ([Unity Types Page](#))

- ☐ The two main categories of variable types are primitive and object types. These both contain several other subtypes.
  
- ☐ Primitive Data Types
  - ☐ Int (E.x: 4, -5, 1298)
  - ☐ Float (E.x: 1.75, 2.15, -3245.556)
  - ☐ Boolean (E.x: true, false)
  - ☐ Char (E.x: 'a', 't', 'z')
  - ☐ String (E.x: "hello", "victory", "yes")
  
- ☐ Object Data Types
  - ☐ Vector3 (E.x: <2.5f, 10.2f, -3.2f>, <10.0f, 2.3f, 5.2f>)
    - ☐ Vector3 types represent a 3 dimensional vector within 3D space, they contain 3 float values corresponding to the x, y, and z axis
  - ☐ Rigidbody
  - ☐ GameObject
  - ☐ Collider
  - ☐ Transform
  - ☐ Time

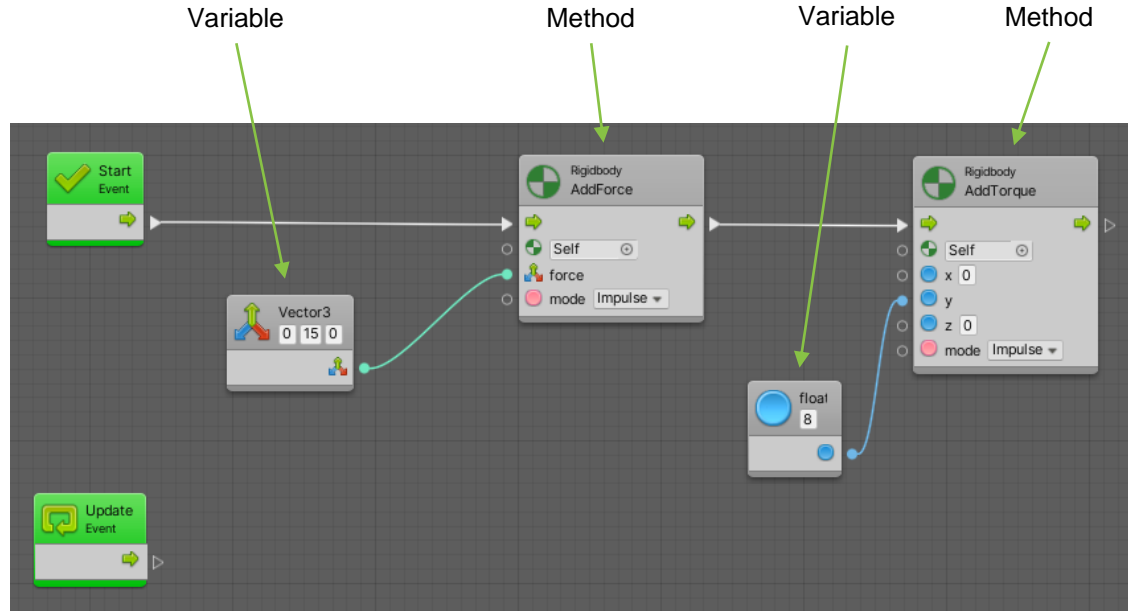
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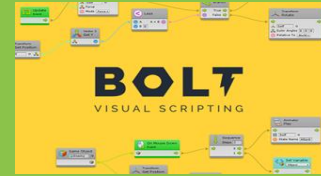
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# Bolt

- Visual Scripting is a visual way of creating programs for your objects in Unity.

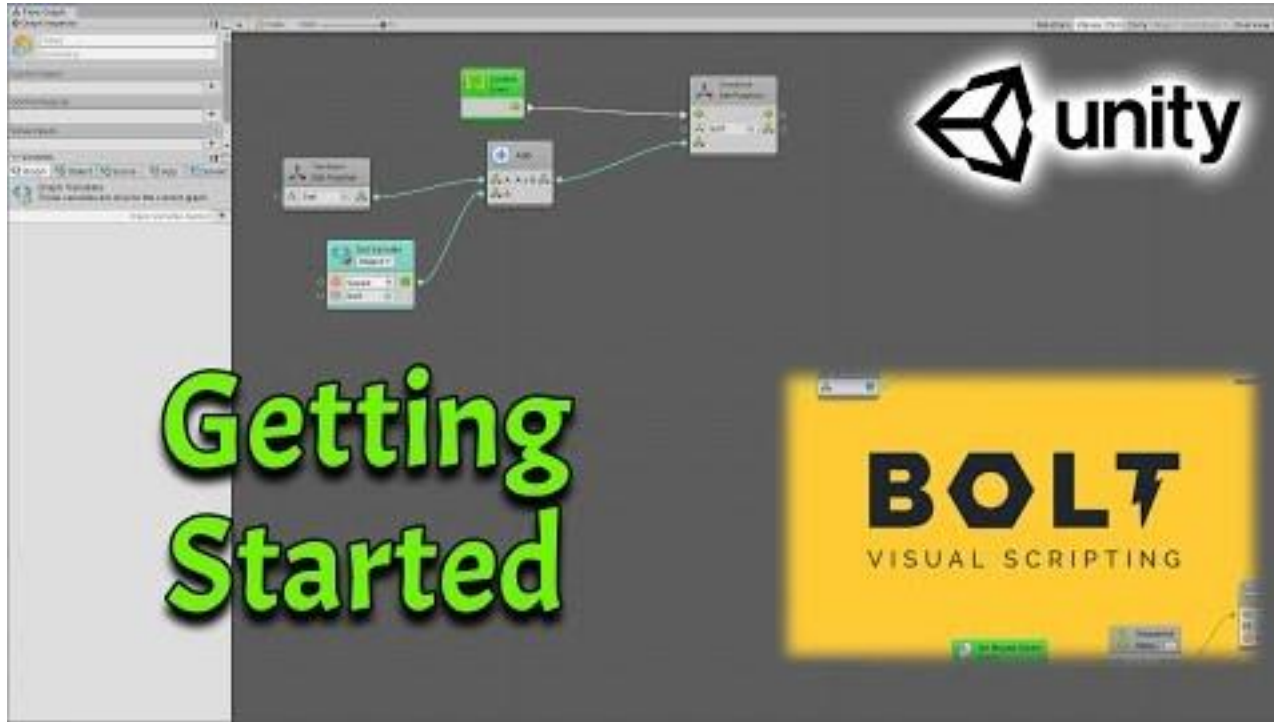


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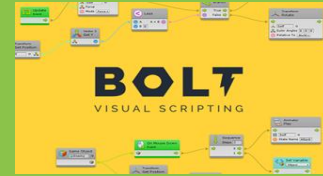


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## Installing Bolt ([Unity Bolt Installation Page](#))

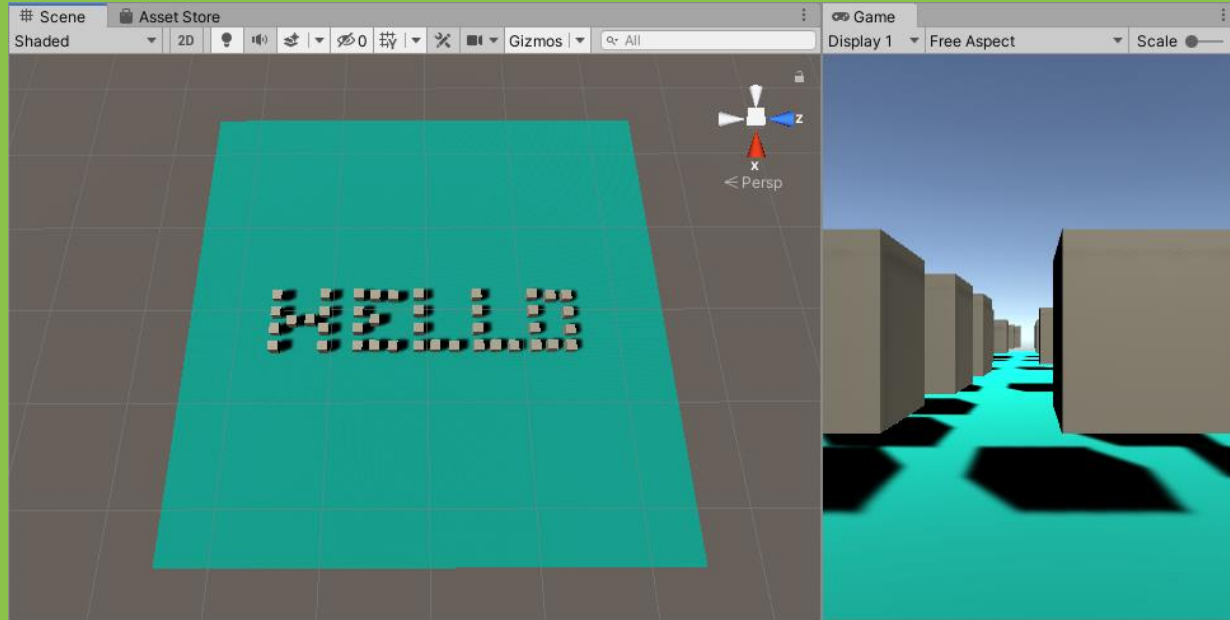


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## Section Two: Live Demo



## ***Additional Resources***

[Simple Bolt Tutorial 2D \(Includes Installation\)](#)

[Simple Bolt Tutorial 3D \(Includes Installation\)](#)

[Full Bolt Tutorial](#)

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# Questions?

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