Unity Bootcamp
By Michael Veazanchin
http://isue.verynotgood.info/cap6121/

Unity 3D Download

https://unity3d.com/get-unity/download?ref=personal
Unity 3D Tutorials

- [https://unity3d.com/learn/tutorials](https://unity3d.com/learn/tutorials)
Unity 3D Basics

- Scene
  - Top level. Contains various objects and scripts
- GameObject
  - Part of the scene as static parts or can be instantiated through scripts
  - Prefab – used to save various settings of GameObject for later instantiation
- Scripts
  - Written in C# or Javascript
  - Attached to various GameObjects in the scene to execute

Unity 3D Basics - Script

- Most scripts inherit from MonoBehaviour
- Default functions when creating a script
  - MonoBehaviour.Start()
    - Executed when the game object is created and script is enabled
    - Executed only once
  - MonoBehaviour.Update()
    - Called each frame if the script is enabled
- Other functions
  - MonoBehaviour.Awake()
    - Similar to Start(), executed once. Awake() is called before any Start() functions
  - MonoBehaviour.OnApplicationQuit()
    - Sent to all game objects before the application is quit.
Unity 3D Basics - Script

- Overall execution flow
- Start() is called from all objects in the scene
  - Use this to initialize values, set up any references to other GameObjects, etc.
- Update() is called repeatedly each frame
  - Use this to perform any needed calculations to update the state of the GameObjects between frames
  - Time between Update() calls is not guaranteed.
  - In case of things like movement use Time.deltaTime to get time since last frame to properly calculate delta distance traveled etc.

Live Demo

- Also known as when things break