Glossary

Unity message handlers

- void **Update**()
  void **FixedUpdate**()
  Called once per frame, or physics update, respectively. FixedUpdate is called on fixed intervals, regardless of framerate. Update is called once per frame.
- void **OnTriggerEnter**(Collider2D)
  void **OnTriggerStay**(Collider2D)
  void **OnTriggerExit**(Collider2D)
  Called when an object first enters/stays within/exits a trigger region

Object (UnityEngine.Object)

- Type Object.**FindObjectOfType**<*Type*>()
  Type[] Object.**FindObjectsOfType**<*Type*>()
  Searches entire game for objects of specified *Type* and returns the first one found, or all of them, respectively.
- void Object.**Destroy**(object)
  Destroys object

GameObjects

- **transform**
  The Transform component of this GameObject.
- void **Destroy**(object)
  Destroys object
- GameObject **Instantiate**(Prefab)
  Creates a new gameobject from Prefab)
- Type **GetComponent**<*Type*>()
  Returns the GameObject's component of the specified *Type*, or null is there isn't one.

Components

- **transform**
  The Transform component of this component's GameObject. Equivalent to gameObject.transform.
- **gameObject**
  The GameObject to which this component belongs
- Type **GetComponent**<*Type*>()
  Equivalent to gameObject.GetComponent<*Type*>(). Looks up the calling component's GameObject, and asks it for its component of the specified *Type*.

Specific types of components

Transform

- **position**
  Where the object is in world coordinates
- **right**, **up**, **forward**
  Unit vector pointing in the object's local X, Y, or Z direction, respectively.
- **scale**
  A Vector3 containing the scales for the X, Y, and Z axes.

Coroutines

IEnumerator

- Return type used to signal that a message handler should be called as a coroutine.

YieldInstruction (values for yield return)

- **null**
  Pause coroutine until next Update cycle
- new **WaitForFixedUpdate**()
  Pauses coroutine until next FixedUpdate cycle
- new **WaitForSeconds**(float seconds)
  Pauses coroutine for specified amount of time
- **StartCoroutine**(*coroutine*)
  Pauses this coroutine until the argument coroutine finishes.

Other Unity classes

Time

- Time.**time**
  How many seconds the game has been running for
- Time.**deltaTime**
  Number of seconds between calls to Update.
- Time.**fixedDeltaTime**
  Number of seconds between calls to FixedUpdate

Input

- Input.**GetKey**(keycode or string)
  True if the key is pressed
- Input.**GetKeyDown**(keycode or string)
  True if the key was just pressed this frame

Vector3, Vector2

- **x**, **y**, **z**
  The x, y, or z component of the vector. Z is only defined for Vector3.
- **magnitude**
  Length of the vector

- new **Vector2**(x, y)
  new **Vector3**(x, y, z)
  Makes a new vector with those components.
- float Vector3.**Distance**(v1, v2)
  float Vector2.**Distance**(v1, v2)
  Distance between two vectors

The class for representing vectors. Fields are x and y. Vector3 also has a z field. Constructor takes the three fields as arguments.

Matrix4x4

The class for representing transform matrices.

- A * B
  Returns the matrix AB, i.e. the matrix product of the two matrices A and B.

Float

- float.**PositiveInfinity**
  float.**NegativeInfinity**
  The largest/smallest expressible float value.

GL

- void GL.**Begin**(primitivetype)
  Starts generation of primitives, as specified by subsequence calls to GL.Vertex or GL.Vertex3.
- void GL.**End**()
  Ends generation of primitives
- void GL.**Vertex3**(float x, float y, float z)
  Outputs a vertex to the GPU.
- GL.**Lines**, GL.**Triangles**, GL.**TriangleStrip**, GL.**Quads**
  Specifies a type of primitive to draw.

Material

- Color **color**
  Specifies the color with which to tint the objects being drawn
- Texture2D **texture**
  Specifies the texturemap to use for drawing
- void **SetPass**(int passNumber)
  Tells Unity to start drawing using this material and to draw using the specified pass number.