Game Development

# User input

To get the direction to another entity, take away the position of the current object from the object you are trying to get the direction to, then normalize the value.

Input class

Used to get input from user.

Methods include:

* GetKey - returns a bool depending on if a certain key is getting pressed.

## Transform

Contains the position, rotation, and scale of a gameobject.

Fields include:

* Forward - The direction the transform is facing

## Time

Fields include:

* DeltaTime- time in between frames.

# Collision

Each shape has a mesh, made up of triangles, which is too complex to be used for collision usually.

Different types of collider for each shape, which is much simpler than the 3D mesh for the object. The collider uses simple maths to detect whether a collision is taking place.

Two functions for detecting collision:

* OnTriggerEnter - For a non-blocking collision, basically just moving through something. One of the colliders must have a rigid body component
* OnTriggerExit - Opposite of above
* OnCollisionEnter - For a blocking collision, like bumping into something.

Turn on IsKinematic to remove physics from rigidbody to just use it for the collider.

Tags can be used to ensure something different happens depending on the object colliding with.

Collider does not have to have the same size and position as the mesh renderer. Can use multiple colliders for one object