Explanations of A3 – Ryan Lebeau 104535367

**Blue Sphere** – The blue sphere does not move on game start since it has no rigidbody which means it is not affected by gravity.

**Red Spheres** – The first red sphere has a rigidbody with no gravity and not kinematic which is why it does not fall on start but does get pushed by the orange capsule. The second red sphere has no rigidbody and does not fall or get moved by the orange capsule.

**Green Sphere** – The green sphere is affected by gravity and is kinematic, which means it would have fallen and does not get affected by other objects (e.g. Pushed).

**Yellow Cube** – The yellow cube does not have a rigidbody component but does have the ‘RotateIt’ script attached. This script rotates the cube 30d on the xAxis, 60d on the yAxis, and 90d on the zAxis.

**Orange Capsule** – The orange capsule has a rigidbody component that is not affected by gravity but is kinematic, meaning other objects will not differ the orange capsule off its given path. This is tested with the ‘MoveIt’ script that moves the object between 2 and -2 on the xAxis. The capsule pushes the Red Sphere with a rigidbody and the White Sphere that is not kinematic.

**Purple Sphere** – The purple sphere has no rigidbody component but does have the ‘ResizeIt’ script attached which scales the sphere up to 4x it’s original size then back down, at a rate of 1x per second.

**White Spheres** – The first white sphere has a rigidbody component that is kinematic which is why it does not get pushed by the Orange Capsule. The second white sphere also has a rigidbody component that is not kinematic, allowing to to get pushed by the Orange Capsule.

**Grey Sphere** – The grey sphere has a rigidbody component that is affected by gravity causing it to fall from its height of 10 to the teal plane, stopping when it encounters it.

**Black Sphere** – The black sphere is identical to the Grey Sphere except it is missing it’s Sphere Collider component. This causes it to fall straight through the bottom teal plane as it has nothing to collide.

**Colourless Cube** – The colourless cube has no rigidbody but still contains its Box Collider which causes the black cube to move across it as well as the plane.

**Black Cube** – The black cube has a rigidbody component with gravity and is not kinematic. This is the reason that the cube slides across the plane and the top of the Colourless Cube when it is hit by the White Sphere.