A diagram of a work flow

Description automatically generated

**Artefact UML Activity Diagram Diagram:**

### **Software:**

The artifact aims to simulate collision of dust/sand particles with a glass pane, this is simulated using boxes to represent the particles and a transparent cuboid to represent the glass.

The particles spawn in random positions that is bound so each will hit the glass in different places. They approach the glass at a constant speed. An AABB collision test is run in the update function that tests the bounds of each particle against the bounds of the glass. This allows detection of when each particle collides with the glass, when this happens the particle is stopped, a delay function is triggered which then stops the particle rendering after a couple seconds of hitting the glass.

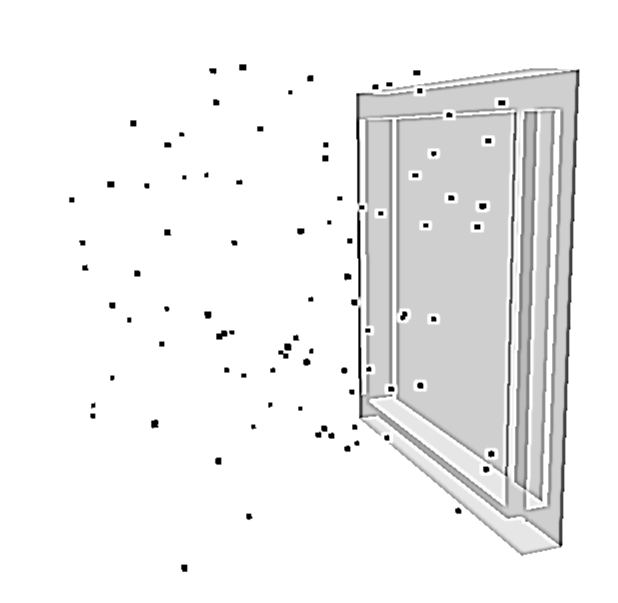


Figure Image of artifact

### **Objectives:**

The objective when making this artifact was to create a graphic simulation of particles hitting glass and then disappearing a few seconds after to simulate dust or sand particles hitting a glass pane.