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Final Project Proposal

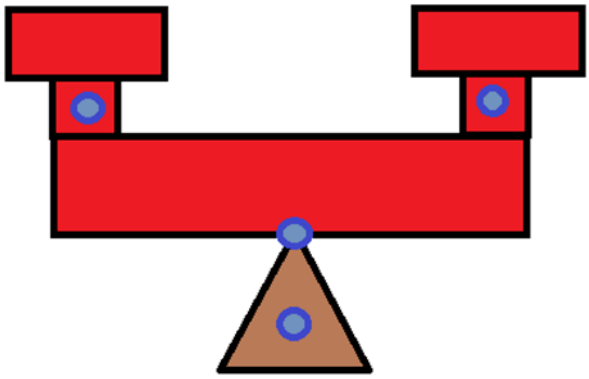
Purpose of Application:

The purpose of the application is to simulate basic physics such as gravity, projectile motion, and collision detection. Objects could have mass and friction.

Graphical Objects:

SceneNode hierarchy of three generation:

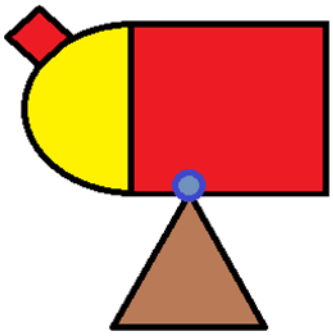
Scale



The top two blue pivot points represent the SceneNode children of the largest red rectangle, the largest red rectangle SceneNode is a child of the SceneNode of the triangle.

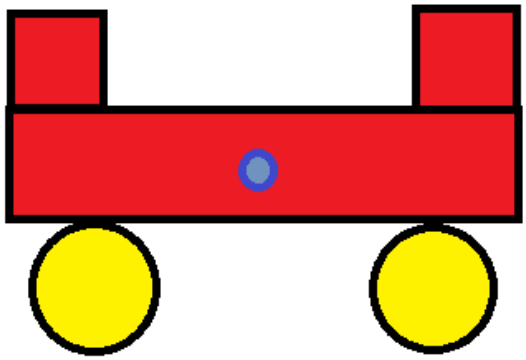
Other Two SceneNodes will be:

Cannon



The red and yellow shapes are a SceneNode which is a child of the triangle. The pivot point is the blue dot.

Cart



The red shapes are all part of a SceneNode, the two yellow circles are children of the SceneNode.

Ability to edit graphical objects: select and modify

Selection:

Left Mouse Button clicking area around center of objects

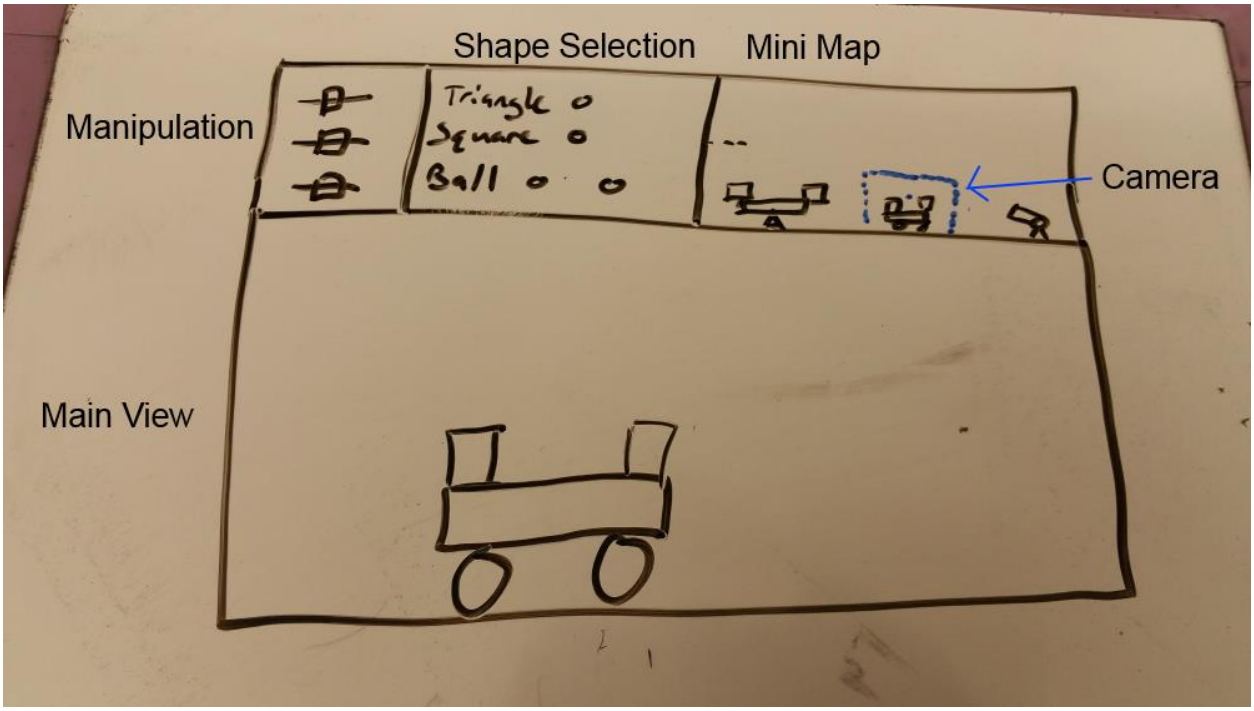
Modify:

Can select shapes and change their transform. Can also erase created objects.

These are the basic shapes that the user can select and create into the world. Clicking the center of these shapes will select it, and then changing their transform will be possible.

Two Different Views:
Main View and MiniMap

Direct manipulation in the world:
WC Window manipulation by dragging the camera in the MiniMap.



The scale, cart, and cannon will be in the world as a default. User can select a shape, in the Shape Selection area, and click and drag to create it into the main view. The Manipulation box will contain sliders regarding changing the transform of the current selected object.