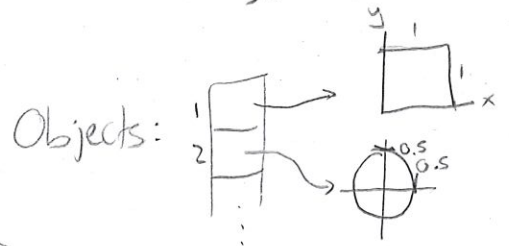
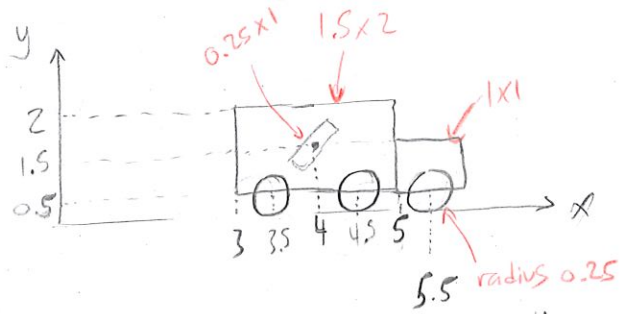


Scene Graph Example



Shape: What shape should the object be? not inherited

Pose: Where should the object be placed? inherited from parent

Object: 1 Back Box
Pose: $T(3, 0.5)$
Shape: $S(2, 1.5)$

Object: 2 Back Wheel
Pose: $T(0.5)$
Shape: $S(0.5, 0.5)$

Exercise 1
Object: 2 Middle Wheel
Pose: $T(1.5, 0)$
Shape: $S(0.5, 0.5)$

Object: 1 Front Box
Pose: $T(5, 0.5)$
Shape: I_{2x}

Exercise 2
Object: 1 Diagonal box
Pose: $T(1, 1) \cdot R(45) \cdot T(-0.5, -0.125)$
Shape: $S(1, 0.25)$

Object: 2 Front Wheel
Pose: $T(0.5, 0)$
Shape: $S(0.5, 0.5)$

Exercise 3?

get_pose(Node n):

if n.hasParent:

return $n.P \cdot \text{get_pose}(n.\text{parent})$

else:

return n.P

get_T(n):

return $\text{get_pose}(n) \cdot n.S$