Project A: Quad-dumbbell and spinning screw

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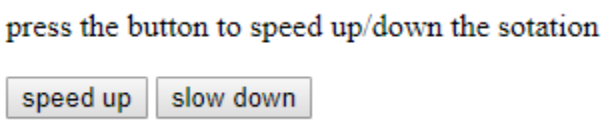
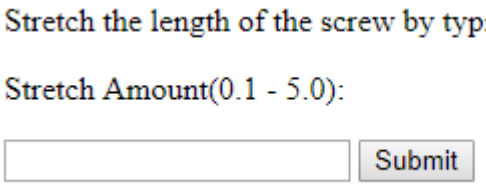
Users' Guide:

1) Basic shape:
    a. I have to 3D object, quad-dumbbell and spinning screw.
    b. Both objects could rotate and move. The quad-dumbbell could react to the mouse-dragging and mouse-clicking, and the screw will react to keyboard input.

2) Button interaction:
    a. Users could press "speed up" or "slow down" to control the speed of rotation for both objects.



    b. Users could input a length for the second and third part of the screw, and after press the "submit", the screw will continually stretch to that length.

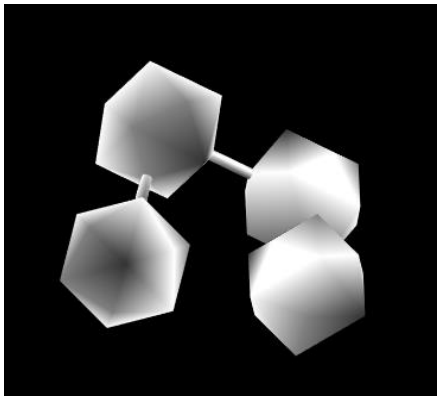
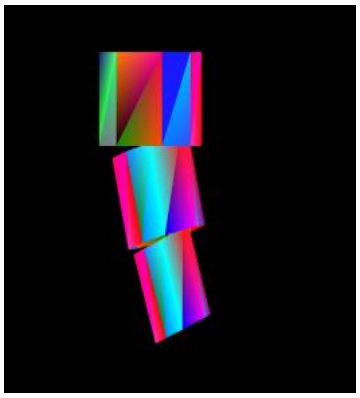


3) Mouse interaction:
    a. Users could click mouse on canvas, the quad-dumbbell will change its color.
    b. Users could drag mouse on canvas, the quad-dumbbell will change its position with user's mouse moving.
4) Keyboard interaction:
    a. Users could user "a", "w", "s" and "d" the fours keys to move the spinning screw, corresponding directions are left, up, down and right.

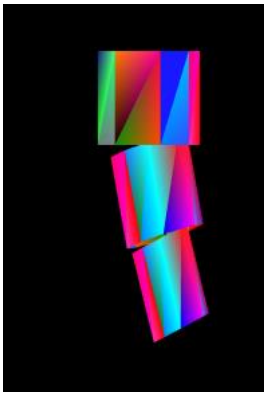
Result:

1) Basic shapes:

   Before any operation, the two objects are like below:

2) Length change and color change:
   a. After inputting a new number of length for the screw: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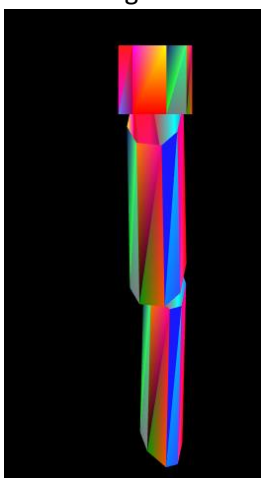
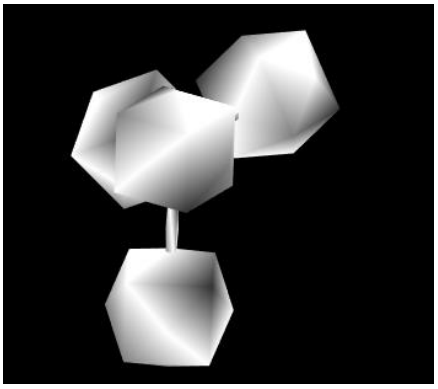


   b. After clicking on the canvas: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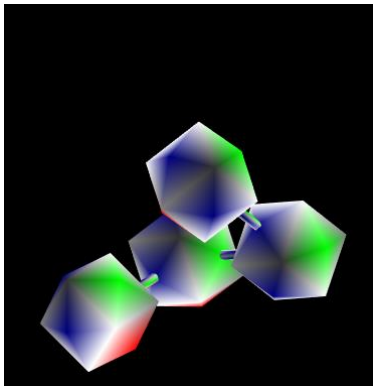
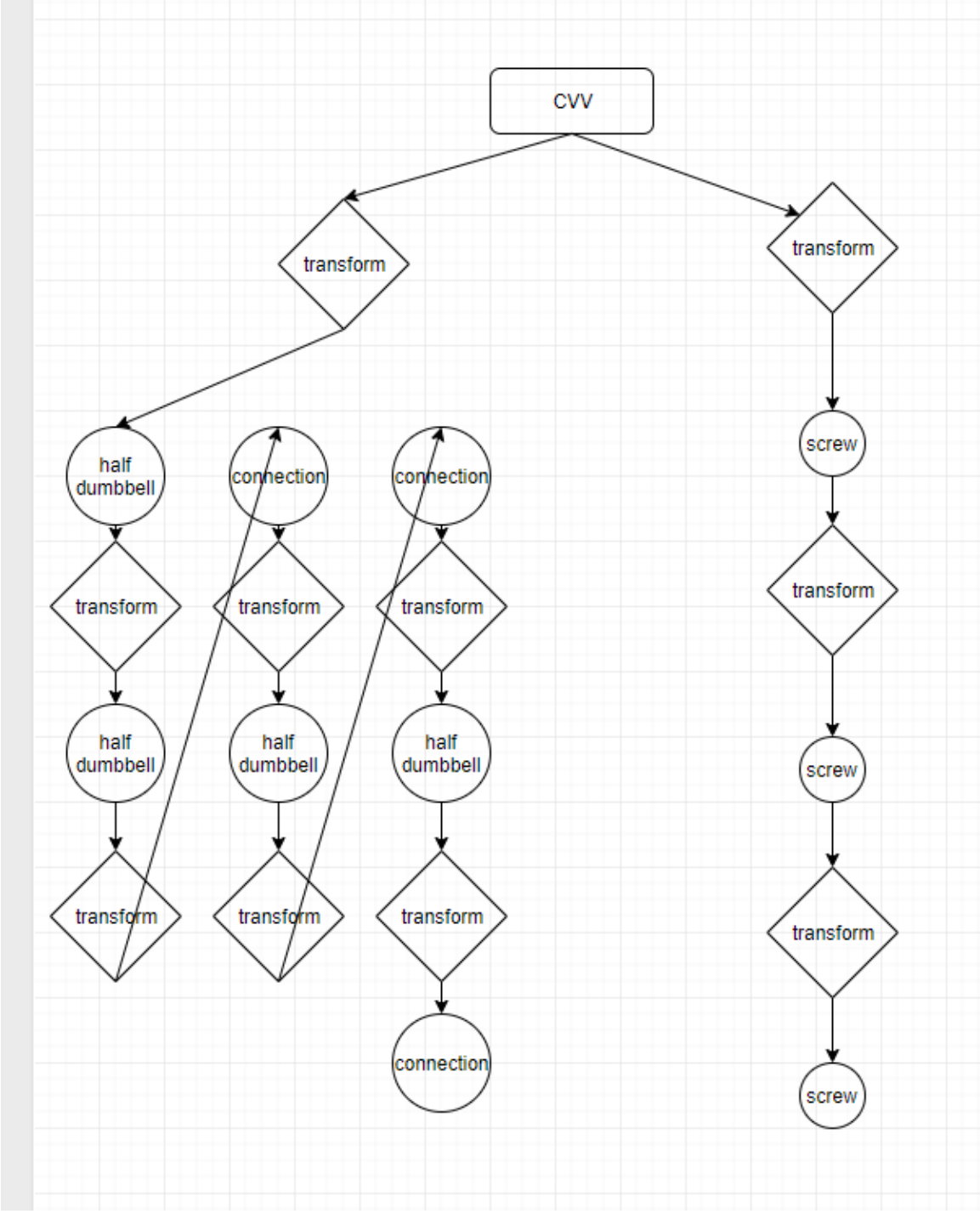


Scene graph：


CVV
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