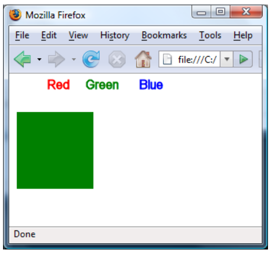
Lab 8 - JavaScript & SVG

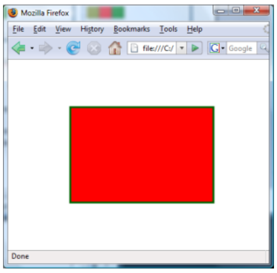
1. Either start from scratch or find the SVG skeleton code on Blackboard – and fill in the blanks!
   Make an SVG drawing that has three text words (Red, Green, Blue) and one large square (with an id=myRect).
   Now write a JavaScript function myRoleOver(evt, col) that appropriately changes the color of myRect when the user moves their mouse over the text.

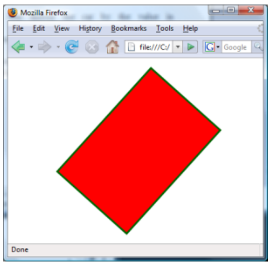


   Note. This is similar to the first task in lab 6; but here we are doing it in SVG!
   Remember, you'll need to add the JavaScript within SVG between the following tags.

```
<script type="text/ecmascript"><![CDATA[
…
]]></script>
```

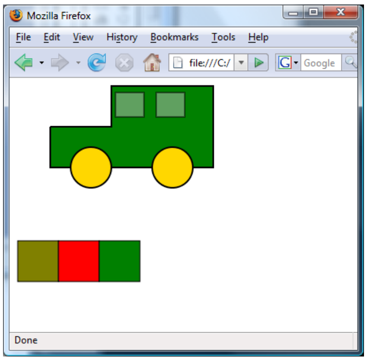
2. Use the skeleton code (on Blackboard), that draws a red SVG rectangle.
   Now add JavaScript that rotates that rectangle when it is clicked.

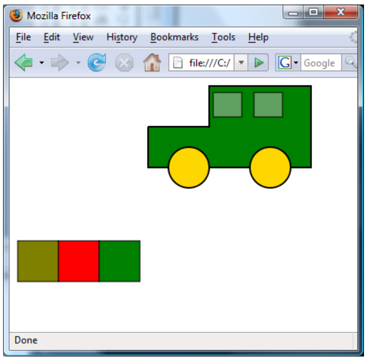




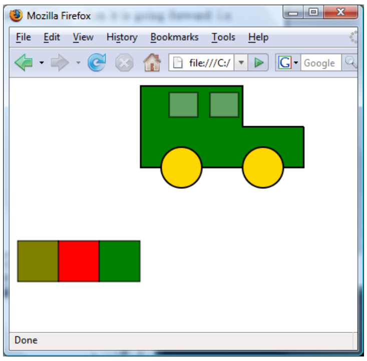
3. Extend task 2; such that (when it is moving) it stops when the user clicks on it, and then starts again when clicked again!

4. First load up the SVG car model (you did this in a previous lab). You are going to write some JavaScript to animate (move) the car left; stop the car; and move it right.
   - Add a <g> tag to the car, and label it with id=myCar.
   - Add three SVG rectangles (olive, red, green – for move left, stop, move right, respectively.
   - Write a JavaScript function `setupvars`(evt, val) to setup variables (i.e. ownerDocument and val to hold the currentPosition)
   - Write a JavaScript function `myanimate`() that moves the car by the value in currentPosition.
   - Appropriately add the functions to the onclick event of the rectangles.





5. Now extend 4; such that the car is facing in the correct direction when it is going in that direction: i.e. you will need to (at least) *scale* the car in the x plane by -1.



6. If you have finished all this; then look at adding & removing SVG parts. E.g. change task 5 such that the olive rectangle changes the wheels to squares; the red rectangle changes them to circles; and the green rectangle changes the wheels to triangles! Note. There are different ways to do this; one way could be to change the *opacity* of the objects.