COMP1536

Assignment #4

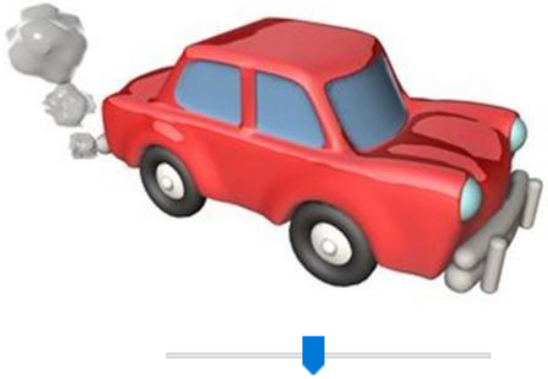
BRITISH COLUMBIA INSTITUTE OF TECHNOLOGY

School of Computing and Academic Studies *Due: Sun Nov 26, 2017 at 11:59 pm*

Your third assignment is to develop an animated canvas application. This assignment will be done in pairs of two individuals. Partners will be selected randomly by your lab instructor.

OVERVIEW

The HTML5 *<canvas>* element is used to dynamically draw graphics with JavaScript. It is merely a container for graphics. You must use JavaScript to actually draw the graphics. You can draw lines, paths, rectangles, arcs, and other shapes. In addition, you can also add text, images and colors to these shapes in a variety of ways. In this assignment, you shall draw a simple stationary car that appears to be three-dimensional (3D) and resembles the picture on the right side.



Your solution should not be exactly as the picture shown. Be creative and come up with a different drawing. You must, however, *animate the smoke* that is billowing out of the exhaust pipe.

You will notice an HTML5 *range* control under the picture. This control is used to either slow down the animation or make it go faster.

NOTE: It is NOT intended here that the 3D drawing of your car should be rotated. All that is meant by 3D is that your car should appear to have depth.

REQUIREMENTS

- Your solution must be based on the HTML5 *canvas* control
- The size of your canvas must be *300px – 800px wide* and *300px – 800px high*
- The car in your canvas must appear to be *3-dimentional*
- You must *animate* the smoke billowing out of the exhaust pipe
- You must add a *range* control that either slows down the animation or makes it go faster.
- The smoke animation should look natural and realistic
- The animation should be *continuous* and only stops when the web page is closed
- You are not allowed to simply add an image to the background of the canvas. This means that you must draw the car & smoke and subsequently fill them with appropriate colors using standard *functions* associated with the *canvas* control.
- Your web page should be named *index.html*.

- Be creative and ensure that your drawing is *colorful* and *neat* looking.
- All JavaScript and CSS must be placed in files external to your web page.
- Put the names (*LastName*, *FirstName* format) of team members in the page <title> tag.
- Your web page should not be bland. Add a suitable header and, instead of a *readme.txt* file, add content to your *index.html* page with the following information:
    - Your names, student numbers, email addresses, and set
    - What you have completed & what you have not completed
    - Any major challenges
- The best mark will be given to the most artistic solution with realistic smoke.

HTML

- Your car should NOT be identical to the one above. You are encouraged to be creative.
- Your HTML page must conform to HTML5 standards and will be tested using Google Chrome
- Use cascading style sheets for all formatting.
- Make proper use of HTML5 semantic elements
- Add appropriate comments to your JavaScript code

SUBMISSION:

- Your submission consists of a ZIP file named: "*FirstNameLastName(1)_FirstNameLastName(2)_set_assign04.zip*". (Example: *JohnDoe_JaneBond_1B_assign04.zip*)
- Your ZIP file will include the main HTML file, the JavaScript file, CSS file (optional), and any image files (*.jpg, *.gif, *.png). Any other file compression standard like .rar, .7z, etc… will not be accepted. Only the .zip standard is accepted.
- Submit your ZIP file into your lab's D2L dropbox folder for Assignment #4. Only 1 person per team will submit the assignments. If you submit more than 1 version of the assignment, then use version control at the end of the file name, i.e. [file name] ver1, [file name] ver2, etc.

MARKING GUIDE

COMP1536 assignment 4 marking guide: Set _____

Name 1: _____

Name 2: _____

Task	Max Mark	Actual Mark
3-D car drawing sufficiently creative	5	
Animation of smoke billowing from exhaust pipe	4	
Animation can be slowed down and speeded up	3	
JavaScript code well commented	1	
Content and layout of page	2	
TOTAL:	15	

If your submission does not comply with submission rules, then you will lose 10% of the mark. Also, if you work on this assignment individually (unless approved by your lab instructor) then you will also lose another 10% of the mark.