

You are expected to complete this exercise during your lab session, show the lab instructor your work, and submit it into the D2L lab site for COMP1536. If you do not finish, then submit whatever you have by 11:00 PM on the day of your lab for late marking. This will, however, cost you a deduction of 10% of the maximum mark.

The objective of this lab is to familiarize you with JavaScript, JavaScript arrays, and JavaScript debugging.

STARTUP

Start by downloading and extracting a file named *ChineseZodiacForLoopStartup.zip*. Rename the *ChineseZodiacForLoopStartup* folder to *LastName_Firstname_Zodiac*. You will find the following files:

- The *Images* folder contains 12 images that represent *Chinese Zodiac* animals. Notice that some images are in *GIF* format and others are in *PNG* format.
- Chinese_Zodiac_for_loop_1D.html* has the code that declares and initializes two arrays. The first array *SignNames* contains the Chinese Zodiac signs. The second array *SignImages* contains the Chinese Zodiac animal images. Here's a pictorial representation of both arrays:

SignNames 1D Array											
Rat	Ox	Tiger	Rabbit	Dragon	Snake	Horse	Goat	Monkey	Rooster	Dog	Pig

SignImages 1D Array											
rat.gif	ox.gif	tgr.gif	rbt.png	drgn.png	snk.png	hrs.gif	gt.gif	mnky.png	rstr.gif	dog.gif	pig.gif

- Chinese_Zodiac_for_loop_2D.html* has the code that declares and initializes a single array named *signs*. The *signs* array is essentially a two-dimensional array that holds both the 12 sign animal names and their respective animal image files. Here's a pictorial representation of the signs 2D array:

signs 2D Array											
Rat	Ox	Tiger	Rabbit	Dragon	Snake	Horse	Goat	Monkey	Rooster	Dog	Pig
rat.gif	ox.gif	tgr.gif	rbt.png	drgn.png	snk.png	hrs.gif	gt.gif	mnky.png	rstr.gif	dog.gif	pig.gif

YOUR MISSION


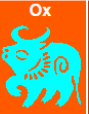

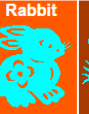


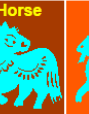
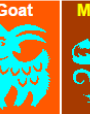

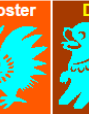

Write dynamic JavaScript for-loop(s) that display a table with the 12 Chinese Zodiac signs as column headings, and the years displayed below the appropriate column headings. Begin the table with the year 1912 and end with the current year. Get the current year from the JavaScript *Date()* object and do not hard-code it. You may need to use the modulus operator to determine the maximum number of columns for each row in the table.

Use the arrays in each HTML file that contains the appropriate sign and image names.

Additional requirements:

- Table should be 100% of the page width
- Use the *Arial* font.
- All text must be centered.
- All static and dynamically generated HTML markup must be well formed.
- All your JavaScript must be placed in a separate `.js` file
- All your styling must be placed in a separate `.css` file
- You cannot use `document.write()`. Use `document.getElementById()` instead.

CHINESE_ZODIAC_FOR_LOOP_1D.HTML

Chinese Zodiac JavaScript for loop (1D array)										
Rat	Ox	Tiger	Rabbit	Dragon	Snake	Horse	Goat	Monkey	Rooster	Dog
										
1912	1913	1914	1915	1916	1917	1918	1919	1920	1921	1922
1924	1925	1926	1927	1928	1929	1930	1931	1932	1933	1934
1936	1937	1938	1939	1940	1941	1942	1943	1944	1945	1946
1948	1949	1950	1951	1952	1953	1954	1955	1956	1957	1958
1960	1961	1962	1963	1964	1965	1966	1967	1968	1969	1970
1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982
1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994
1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006
2008	2009	2010	2011	2012	2013	2014	2015	2016		

<h2>

color: yellow

background: #ff5900

color: yellow












background: #a63a00

color: white

background: #ff5900

- Alternate columns with foreground on background colors: yellow on #a63a00 and white on #ff5900.

CHINESE_ZODIAC_FOR_LOOP_2D.HTML

Chinese Zodiac JavaScript for loop (2D array)										
Rat	Ox	Tiger	Rabbit	Dragon	Snake	Horse	Goat	Monkey	Rooster	Dog
										
1912	1913	1914	1915	1916	1917	1918	1919	1920	1921	1922
1924	1925	1926	1927	1928	1929	1930	1931	1932	1933	1934
1936	1937	1938	1939	1940	1941	1942	1943	1944	1945	1946
1948	1949	1950	1951	1952	1953	1954	1955	1956	1957	1958
1960	1961	1962	1963	1964	1965	1966	1967	1968	1969	1970
1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982
1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994
1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006
2008	2009	2010	2011	2012	2013	2014	2015	2016		

<h2>

color: white

color: yellow

background: #5c0fac

color: white

background: #8b42d6

- Alternate columns with foreground on background colors: yellow on #5c0fac and white on #8b42d6.

SUBMISSION

- Show your work to the lab instructor who will give you a mark on the spot.
- Zip all the files comprising your web site to filename `LastName_FirstName_set_week12.zip`. (example: `Doe_Jane_1B_week12.zip`) and upload it to the Week-12 drop-box in D2L.

HINTS:

- Remember to use the web developer tools of your browser (*F12*) to detect any JavaScript errors.
- The *Console* tab is most important for detecting any errors.
- Clear the cached page regularly in your browser by hitting Ctrl-F5 on your keyboard.

COMP1536 JavaScript Arrays lab exercise marking guide:

Name _____ Set _____

Task	Max Mark	Actual Mark
Dynamically generate 1D arrays into a table (Chinese_Zodiac_for_loop_1D.html)	4	
Dynamically generate 2D array into a table (Chinese_Zodiac_for_loop_2D.html)	4	
Layout of both tables	2	
TOTAL:	10	