

NAME:

STUDENT NUMBER:

## VQG Assignment 2--Ch 5, Ch 15

From textbook: **Visual Quickstart Guide (VQG): HTML & CSS**  
Save this file in your VQG folder, then follow the instructions below.

**PART 1: Chapter 5: Images:** Answer the following questions in the space

1. **Graphics terms:** Briefly define each of the following graphics terms:

1. Lossy format - a compression algorithm that produces a file that is not identical to the original
2. Lossless format - compression that reduces a file's size with no loss of quality.
3. SVG – scalable vector graphics that allows you create graphics that can scale up or down without compromising quality.
4. Alpha transparency - A range of opacity makes it possible to create graphics that fade away or have smoother edges
5. Index transparency – a transparency designator that states if a color is set to index transparency on , it will not display allowing whatever is below it to show through.

2. **Graphics file types:** Do a Google search to find more about these file formats. Explain what the abbreviations mean and briefly describe each type.

1. JPG - Joint Photographic Experts Group – a lossy compression type that gets files incredibly small but loses some image quality.
2. PNG – Portably Network Graphics – It is a superior replacement to the GIF in that it has better compression and supports a larger pallet of color.
3. GIF – Graphics Interchange Format – Uses a lossless format compression style, but only supports 256 color.
4. WebP – Web Performance – It is a lossy compression style that is designed for web page images and files. It is smaller than PNG, GIF, and JPG while still maintaining image detail and color.

3. Why is JPG preferred for color photos in websites? What is the disadvantage of the JPG format?

JPG is preferred for color photos because of the size of the files and how easily it can be transferred via modem or other internet connection methods. The main drawback to this file type is the loss of detail or lossy format.

4. List the graphic formats which:

1. Support alpha transparency - PNG
2. Support only 256 colors – GIF and PNG-8
3. Support 16 million colors – JPG, PNG-24, PNG-32
4. Have NO transparency support - JPG
5. Support simple animation – WebP, GIF

5. List and describe the differences between the 3 PNG formats:

- PNG-8 – used for logos, patterns, and other graphics that uses index transparency and 256 colors.
- PNG-24 – Used for logos, patterns, and other graphics that uses rich-color graphics and uses index transparency.
- PNG-32 - Used for logos, patterns, and other graphics that uses rich-color graphics and uses alpha transparency.

6. List several guidelines for how large images should be for your website. What is the recommended maximum width if you must display a large image on a web page?
If your page has a lot of large images, create miniatures and allow your visitor to view the larger images. Their width should be no more than 600 pixels.
7. What are the three tips presented in the summary on page 139?
<ul style="list-style-type: none"> <li>• Save most photographs in the jpeg format, while saving most images that have fewer colors in PNG.</li> <li>• Create alpha transparent images with PNG-8 or PNG-32 .</li> <li>• Reasonable image sizes make your image file sizes smaller.</li> </ul>
8. Describe the difference between Apple’s <b>Retina</b> display and regular display:
The Apple Retina display has four times as many pixels than a regular display of the same size.
9. Explain the purpose of alternative text ( the <b>alt</b> attribute):
The purpose of the alternate text is to give the viewer something to see if the image does not load for whatever reason. In addition this is will be read by a screen reader for the visually impaired.
10. a. What is a <b>favicon</b> and how can you create one for your website? The favicon (favorite’s icon) is the small icon associated with a website. You can create it by saving an image with ICO format, favicon.ico
b. What two sizes are favicons? 16x16 and 32x32
c. Open these websites, then describe the favicons for:
1. Our college SFCS website: our school logo, an orange and blue globe.
2. Amazon: An orange box with a white a and smiley face arrows.
3. The NFL: The NFL shield letters.
11. <b>Color</b> : See pages <b>182</b> and <b>183</b> and this web site: <a href="http://www.w3schools.com/cssref/css_colornames.asp">http://www.w3schools.com/cssref/css_colornames.asp</a> to define these terms about color and answer these questions:
1. Predefined colors: 16 basic color keywords.
2. RBG: Red, blue, and green. These colors can be adjusted and shifted to make a wanted color.
3. Hexadecimal: numerical values joined together by a #.
4. How many predefined color names are there: There are 16 initial predetermined colors.
5. There are 17 standard predefined colors. Which one is missing from <b>VQG page 182</b> ? Orange
6. What character must be at the beginning of hex color numbers? #
7. What is the hex value for the predefined color <b>Teal</b> ? #008080
8. What is the hex value for the predefined color <b>DarkOrchid</b> ? #9932CC

## PART 2: Hexadecimal-to-Decimal Color Conversion

Several style selectors we will learn to use, such as **rgb** and **rgba**, use decimal values for the red, green, and blue numbers; they do not accept hexadecimal color numbers. What do you do if your web color scheme values are hex and you need to use one of these selectors that do not accept hex? You must translate the hex color number into three decimal values for red, green, blue. Luckily, there are many ways to do this conversion, but a quick method is to use the **Windows Calculator**, which is a free Windows Accessory. Here is how:

### Hex to Decimal: Suppose the hex number to be translated into decimals is: **#da63f0**

1. Open the Windows calculator (from ALL PROGRAMS, look in the ACCESSORIES folder).
2. From the VIEW menu of the calculator, switch to the PROGRAMMER view (if you have an older version of the Windows calculator with no PROGRAMMER view, use the SCIENTIFIC view).
3. Click on **HEX** to switch from decimal to hexadecimal.
4. Enter the first two digits of your hex color number; this is the red value. For the number above, **#da63f0**, this is **da**.
5. Now click **DEC** to translate the hex to a decimal number. For this example, the **da** translates to **218**.
6. Click the **C** button to clear the calculator.
7. Click on the **HEX** button again.
8. Now enter the next two digits (the green value), which in this case is **63**, then click on the **DEC** button and you will get **99**.
9. Use the same procedure on the last two digits, in this case **f0**, which translates to **240**.
10. **Result:** The **rgb** value of **#da63f0** is **(218, 99, 240)**.

### Decimal to Hex:

You can also use this procedure in reverse to translate a decimal rgb number into a hex value. For example, if you have **rgb(203, 134, 76)**, click **DEC** in the calculator, enter **203**, then click **HEX**. The result is **cb** in hex. In the same way the **134** is **86** hex and the **76** is **4c**, so the complete hex is **#cb864c**.

**IMPORTANT NOTE: Maximum 2-digit hex for digital color is ff. Maximum decimal is 255.**

Convert the following values (*the first ones are done for you*):

Hex Color Number	Decimal RGB	Decimal RGB	Hex Color Number
#c5f734	(197, 247, 52)	(145, 205, 80)	#91cd50
#0945c7	( , 69, 199)	(255, 255, 255)	#FFFFFF
#6ce387	(108, 227, 135)	(67, 100, 253)	#4364FD
#26fa0f	(38, 250, )	(99, 179, 155)	#63B39B
#b29c23	(178, 156, 35)	(133, 45, 204)	#852DCC
#cc67fe	(204, 103, 254)	(114, 71, 224)	#7247E0

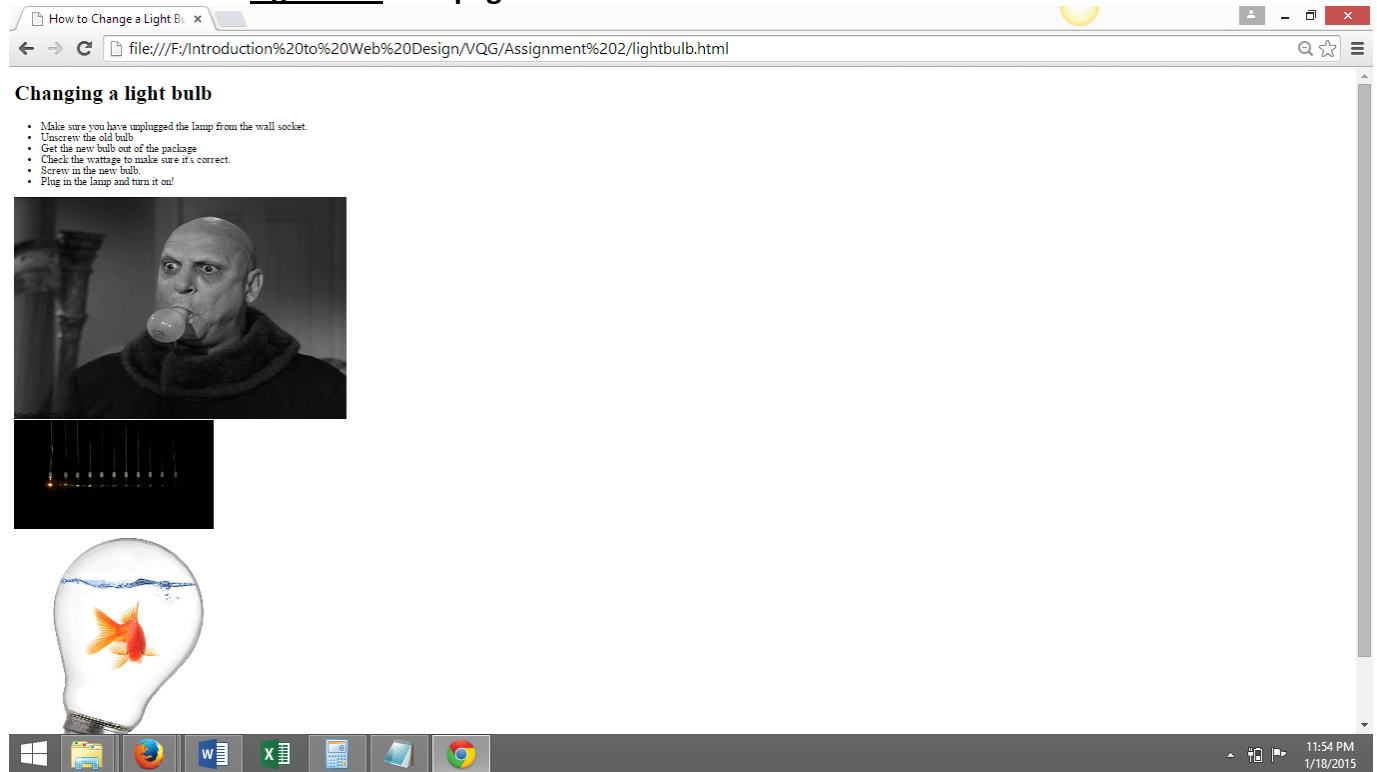
**PART 3: Chapter 15 Lists** : See **VQG Chapter 15, pages 389-393** to describe each of these types of HTML lists:

1. Ordered list – A list where the item list is critical to the list’s meaning.
2. Unordered list – Used when the order of list items isn’t tied to the list’s meaning.
3. Description list – List where items are described or defined.
4. Which of these list types is used most often on web pages? - Unordered List (UL)

5. **Markers:** Describe these types of list markers (you will learn how to use markers in CSS):
- Circle** – open circle
  - lower-alpha** – lowercase alphabet (a, b, c)
  - upper-roman** – uppercase roman numeral (I, II, III)

**PART 4: WEB PAGE:** Follow these instructions from **VQG CHAPTER 15: Lists** to create a new web page.

**Screenshot of the Light Bulb web page rendered in CHROME:**



**PART 5: WEB PAGE "Template":** Follow these instructions to use your LIGHT BULB program as a template for new web page which will display your grocery list.





**Screenshot of the Grocery List web page rendered in CHROME:**

What to Put on a Grocery x

file:///F:/Introduction%20to%20Web%20Design/VQG/Assignment%202/grocerylist.html

**Grocery list bulb**

- eggs
- bread
- milk
- cereal
- butter
- oatmeal
- juice
- vanilla
- lettuce
- tomatoes

Windows taskbar: File Explorer, Internet Explorer, Word, Excel, PowerPoint, Chrome. System tray: 12:13 AM 1/19/2015

**1. Comments in HTML:** See **page 86** for how to create comments in HTML code. What are your comment lines in the light bulb and grocery list programs?

Grocery list: Lucky charms, farmers brown eggs, Gallon milk jug, Cooked bacon  
 Light bulb – Uncle Fester lights up!, Newton’s Cradle, Goldfish in a Light Bulb

**2. PDF:** When you have completed this assignment, save this file as usual, then save as a **PDF** file in your **VQG** folder (**press F12 for SAVE AS**, then choose **PDF** from the SAVE AS TYPE dropdown list).

**NOTE:** You will upload your PDF file, share with your instructor, and link to your index page when you have learned to do this.