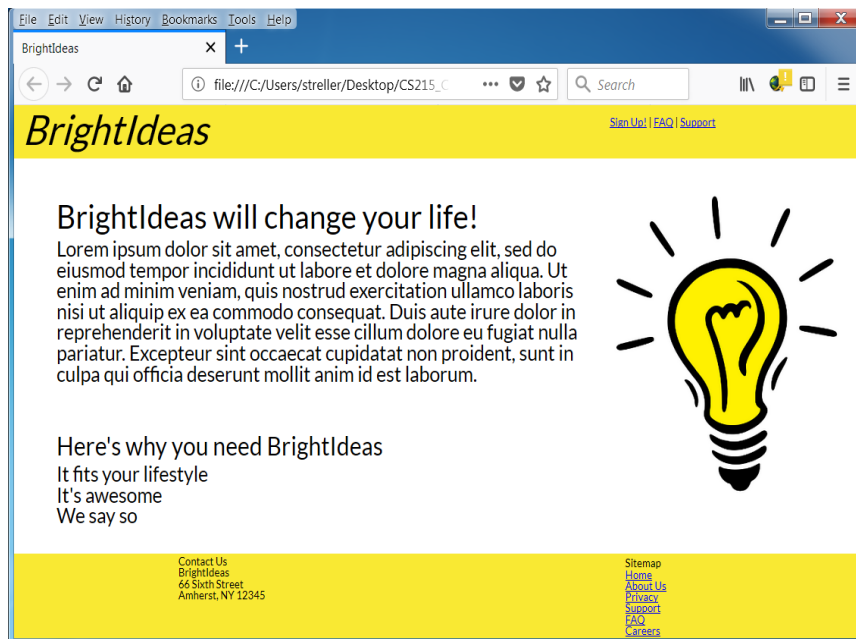


PROBLEM STATEMENT:

1. Gain experience with how an HTML document is displayed using Cascading Style Sheets (CSS).
2. Gain experience with cascading rulesets, and class containers, ID's, etc..
3. Responsive design.

Now that we are moving on to more “advanced” design, we need to redo our DOM structure from Lab01.

The following screen-shot illustrates the final web-page you are to create for this lab. Our goal is to create this three-row two-column design using CSS.



## CODE :

Create a directory called cs215Lab02. Copy the images directory containing brightIdea.png ( from Lab1) and place it in this directory. Now in the cs215Lab02 directory create a folder called css.

At this point within the cs215Lab02, you will have two directories called images and css.

Now obtain the provided cs215\_Lab02\_index.html and place it within the cs215Lab02 directory. Rename this file to index.html. Run the file.

Before styling the html, consider responsive design; add “code” in the head for

the viewport :

```
<meta name="viewport" content="width=device-width, initial-scale=1,user-scalable=yes">
```

the fonts to be used: add a link so that the page uses the google font-family Lato  
( this should be the first link to any external references in the head )

We will now create two custom cascading style sheets (css) one called reset.css and the other called style.css. to add “style” to our html page. In sublime create two files with the above names and save in the css directory. For the time being these are empty files.

Go to <http://meyerweb.com/eric/tools/css/reset> and copy paste the code there into the just created reset.css.

In your index.html add a link,(within the <head>) tag for this reset.css file which resides in the css directory ( the purpose of the reset file has been explained in class ). Run the html file – you will see that any previous formatting is removed.

Similarly, in the head, add a link for style.css.

As discussed, the basic grid layout here is as follows:

As a first design approximation, we attempted

header row
content row
footer row

Figure 1

Then, as a second refinement, we decided our grid should be

header_left	header_right
item content-left	item content-right
item footer_left	item footer_right

Figure 2

And our third and final design refinement

header_left	header_right	
item content-left	item content-right	
item content-left-top		
item content-left-bottom		
item footer_left	item footer_right	

Figure 3

**Note:** the cell in red is the item content-left. Within this cell, we have 2 cells, the top and bottom.

**Important Note:** the header, the content and footer all span 2 columns. header\_left , and header\_right only spans one column. Observing our third design (Figure 3), we see that we want to have unequal column widths. How to accomplish this? We create a grid within a grid. So we will create a grid within header, a grid within content-left and a grid within footer

**Note:** Now, all html file structures should be more-or-less divided into three sections: the header, the content, and the footer. To have certain elements behave nicely graphically ( explained later) we should divide the html structure into those three parts. To that end the rough form of the html should **ALWAYS** be of the form :

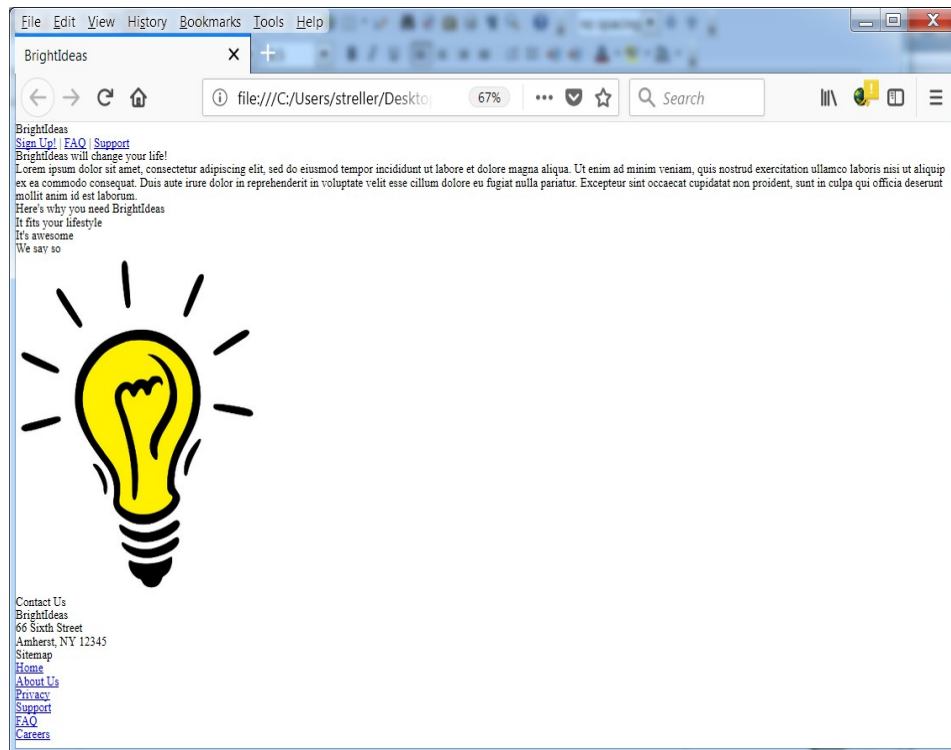
```
<body>
  <div class="container">
    <div class="header"> your header code here </div>
    <div class="content"> your content code here</div>
    <div class="footer">your footer code here </div>
  </div>
</body>
```

Thus container holds all the page content, which here, is split into 3 sections ( of course one may have more than 3 sections ).

Now to finish the **Structure Layer**

Now fill in the missing code for the index.html.

After successful addition to the html code, you should now have the following :



Next up is the **Presentation layer**

At this point, study the pdf's CSS Viewport Units and CSS Grid Layout from the CS215 Notes section of the course web-page.

Obtain the style.txt file; copy its contents into the style.css created earlier.

In the given style.css, note that both body and .item have

```
display: flex;
```

If you want you can think of this as short for “flexible” : this is for responsive design; the items will “flex” to fit the viewport

Notice all the provided entries in the style.css file : just about every class name ( from the html ) has an entry. By giving class or id names one can reference each attribute and therefore style each attribute individually.

Now from our grid layout design above we see that we have 3 rows and 2 columns. We must now create the grid and specify each row height and each column width. Since the layout is in the container, add

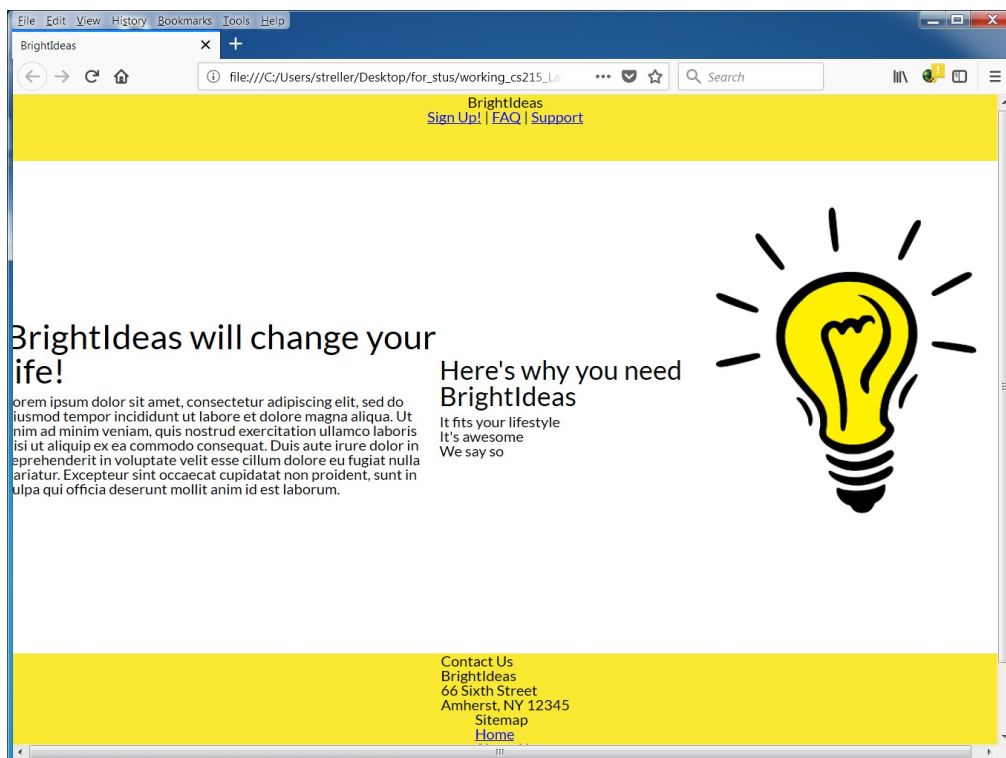
```
display: grid; /* create grid layout */
grid-template-columns: 68vw 32vw; /* 2 columns with specific width */
grid-template-rows: 10vh 74vh 16vh; /* 3 rows with specified height */
```

to the container rule. Why are we using vw and vh as our units ?

Now, already done for you is the specification for the row and column cell placement for each of .header .content-left, .content-right, and .footer.

**MAKE SURE it fits your lifestyle , etc is a list**

At this point we have :



Now observe the header, content and footer rows : everything is not separated as we want. See Figure 3 above. How to fix? We create a grid within each of the attributes See Important Note above. Specifically, we want to have .header contain a grid with one row and two columns.

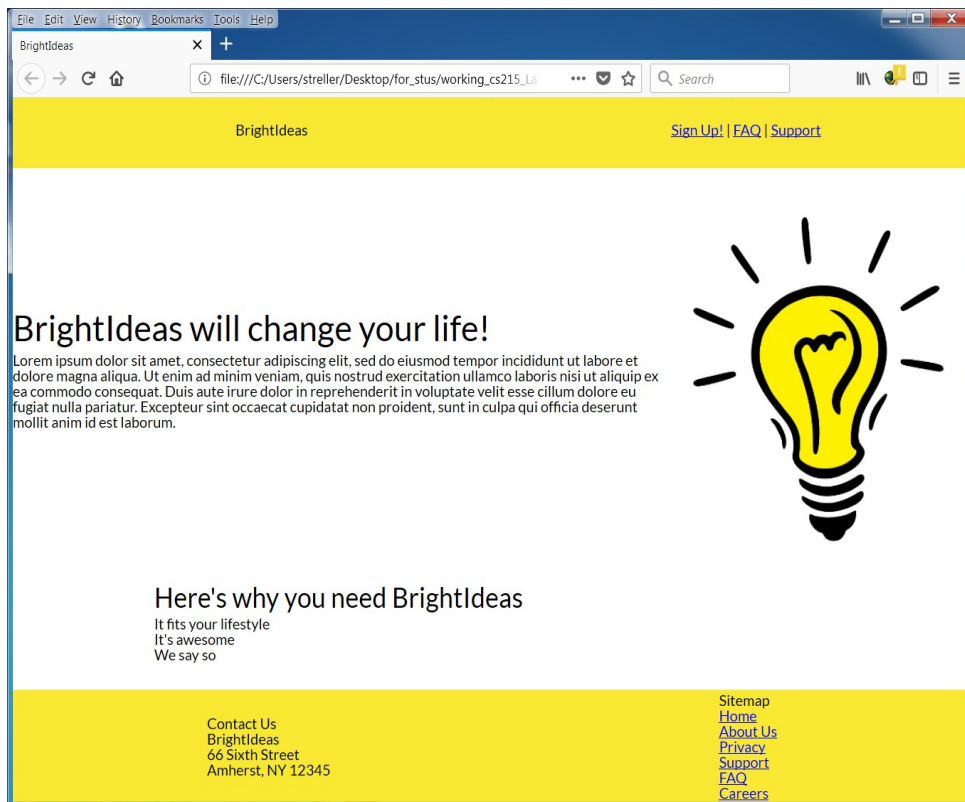
So in the style.css, under the attribute .header at the end, add the code

```
display: grid;
```

Dont forget to specify the column width and row height.

Do the same for .footer and content-left ( which has one column and two rows )

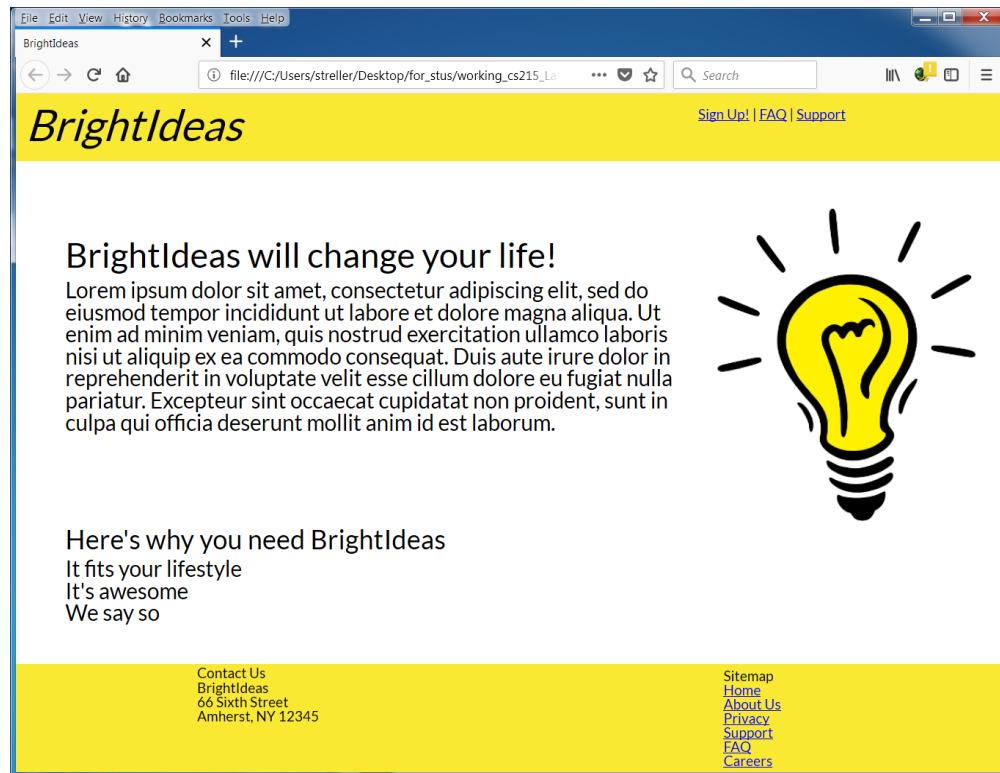
If done correctly you should now have



We are almost at our final design.

The final step is to specify width, font-size font-style, padding, text-align, etc. for .header\_left, .header\_right, .content-left, .content-left-top, etc.

The end result:

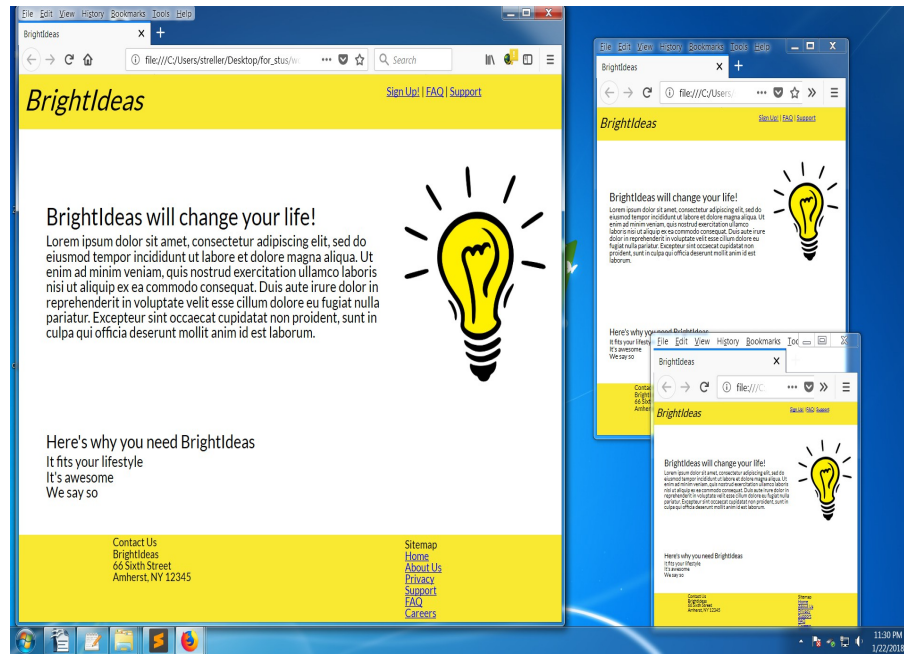


Error check ( *along the way* ):

You should have been using tidy for your html all the way through this lab. At the very least, it will format your code so one can see the various tags, ids, and classes clearly.

Run CSS Lint to “error check” your css file. An on-line “linter” can be found at <http://csslint.net>

Test your page for responsive design:



No scroll-bars !

Use Firefox Web Developer Responsive Design Mode to test on a variety of mobile devices

For example

iPhone 6s





## BrightIdeas will change your life!

Lorem ipsum dolor sit amet, consectetur adipiscing elit, sed do eiusmod tempor incididunt ut labore et dolore magna aliqua. Ut enim ad minim veniam, quis nostrud exercitation ullamco laboris nisi ut aliquip ex ea commodo consequat. Duis aute irure dolor in reprehenderit in voluptate velit esse cillum dolore eu fugiat nulla pariatur. Excepteur sint occaecat cupidatat non proident, sunt in culpa qui officia deserunt mollit anim id est laborum.



## Here's why you need BrightIdeas

It fits your lifestyle  
It's awesome  
We say so

Contact Us  
BrightIdeas  
66 Sixth Street  
Amherst, NY 12345

Sitemap  
[Home](#)  
[About Us](#)  
[Privacy](#)  
[Support](#)  
[FAQ](#)  
[Careers](#)

Galaxy S7

## BrightIdeas will change your life!

Lorem ipsum dolor sit amet, consectetur adipiscing elit, sed do eiusmod tempor incididunt ut labore et dolore magna aliqua. Ut enim ad minim veniam, quis nostrud exercitation ullamco laboris nisi ut aliquip ex ea commodo consequat. Duis aute irure dolor in reprehenderit in voluptate velit esse cillum dolore eu fugiat nulla pariatur. Excepteur sint occaecat cupidatat non proident, sunt in culpa qui officia deserunt mollit anim id est laborum.



## Here's why you need BrightIdeas

It fits your lifestyle  
It's awesome  
We say so

Contact Us  
BrightIdeas  
66 Sixth Street  
Amherst, NY 12345

Sitemap  
[Home](#)  
[About Us](#)  
[Privacy](#)  
[Support](#)  
[FAQ](#)  
[Careers](#)

## BrightIdeas will change your life!

Lorem ipsum dolor sit amet, consectetur adipiscing elit, sed do eiusmod tempor incididunt ut labore et dolore magna aliqua. Ut enim ad minim veniam, quis nostrud exercitation ullamco laboris nisi ut aliquip ex ea commodo consequat. Duis aute irure dolor in reprehenderit in voluptate velit esse cillum dolore eu fugiat nulla pariatur. Excepteur sint occaecat cupidatat non proident, sunt in culpa qui officia deserunt mollit anim id est laborum.



## Here's why you need BrightIdeas

It fits your lifestyle  
It's awesome  
We say so

Contact Us  
BrightIdeas  
66 Sixth Street  
Amherst, NY 12345

Sitemap  
[Home](#)  
[About Us](#)  
[Privacy](#)  
[Support](#)  
[FAQ](#)  
[Careers](#)

iPhone 7plus

## BrightIdeas will change your life!

Lorem ipsum dolor sit amet, consectetur adipiscing elit, sed do eiusmod tempor incididunt ut labore et dolore magna aliqua. Ut enim ad minim veniam, quis nostrud exercitation ullamco laboris nisi ut aliquip ex ea commodo consequat. Duis aute irure dolor in reprehenderit in voluptate velit esse cillum dolore eu fugiat nulla pariatur. Excepteur sint occaecat cupidatat non proident, sunt in culpa qui officia deserunt mollit anim id est laborum.



## Here's why you need BrightIdeas

It fits your lifestyle  
It's awesome  
We say so

Contact Us  
BrightIdeas  
66 Sixth Street  
Amherst, NY 12345

Sitemap  
[Home](#)  
[About Us](#)  
[Privacy](#)  
[Support](#)  
[FAQ](#)  
[Careers](#)

## BrightIdeas will change your life!

Lorem ipsum dolor sit amet, consectetur adipiscing elit, sed do eiusmod tempor incididunt ut labore et dolore magna aliqua. Ut enim ad minim veniam, quis nostrud exercitation ullamco laboris nisi ut aliquip ex ea commodo consequat. Duis aute irure dolor in reprehenderit in voluptate velit esse cillum dolore eu fugiat nulla pariatur. Excepteur sint occaecat cupidatat non proident, sunt in culpa qui officia deserunt mollit anim id est laborum.



## Here's why you need BrightIdeas

It fits your lifestyle  
It's awesome  
We say so

Contact Us  
BrightIdeas  
66 Sixth Street  
Amherst, NY 12345

Sitemap  
[Home](#)  
[About Us](#)  
[Privacy](#)  
[Support](#)  
[FAQ](#)  
[Careers](#)

### Create ReadMe file.

Create a file named ReadMe.pdf

In this document, insert your name at the top, and on the next line insert the assignment number (e.g., "Exercise #2-A").

Then enter any comments regarding the assignment and your program.

Then insert several window captures of windows showing the inputs and outputs from the execution of the program.

Be sure the ReadMe file is within your top level project folder.

Zip the project folder and all its contents.

Do not use spaces in the name of the file, use underscores or hyphens instead.

This zipped file is to be called LastName\_Lab\_02\_cs215.zip

Only zipped files are accepted.

Deliverables:

Submit, in lab, on 17 September 2019, hardcopies of your ReadMe.pdf , your html source and your css style.code. Must be stapled.

Also, send to [streller@ecc.edu](mailto:streller@ecc.edu) an email this the exact subject

cs215\_Lab\_02

In this email attached the above named zip file

LastName\_ Lab\_02\_cs215.zip

Due Date : 10am, 17 September 2019

The zip file must include your ReadMe. This file that contains your name at the top, the lab number, any comments regarding the assignment, and window captures to show the program execution. The ReadMe file must be in the top level project folder.

Grading will be based on **correctness of the html, css files** and how the page is rendered in a browser.