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**CSE134B - Homework 3**  
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This document provides our findings and analysis of the two methods employed.

**Comparison between vanilla vs Framework.**

Using a framework was much easier to get a product up and running. Our team chose to use the PureCSS framework which focuses on being lightweight. Additionally the framework was easy to use to get a general product working because of the documentation online. For the early parts it seemed very cut and paste. It was also nice having a standard preset look for our website for buttons and list elements. However, as development went on and we wanted to edit the template we found editing the template very difficult because of the documentation wasn't easy for us to learn to edit to our liking. Also the style tags were being overwritten by the framework making our job even harder.

Using Vanilla CSS was a lot more time consuming because everything had to be written out and formatted. Additionally, like the professor said, the joints of where CSS and the HTML met were somewhat frustrating to deal with as there seemed to be multiple ways to do one thing. The Vanilla CSS was easier to get more control of earlier on but took a lot longer to get a general product running.

We came to the conclusion that for larger, functional websites, using a framework could have more benefits. Adding vanilla CSS to a large project for presentational purposes would be extremely tedious because it would require restructure of the entire project in order to apply css to multiple divs at once. However for smaller, static websites, particularly ones that are being created from scratch, all that is needed is simple html and css. Raw html/css implementation would also be more beneficial to beginners whereas frameworks require familiarity and experience. Some other things to consider are device and browser capabilities. If a website is primarily targeted towards mobile users, it would be more efficient to use limited css as opposed to large frameworks that could take up too much time and space on a device with limited capabilities. Basic css is also more reliable and supported across multiple browsers, so if you have a diverse target audience using Internet Explorer, Firefox, Safari and Chrome then the vanilla version would ensure consistency across all of your users.

Testing results below completed across PC, Mac, Galaxy Nexus, IE, Chrome and Firefox.

|                                                        | PC Browsers | PC Browsers | Android   | Android |
|--------------------------------------------------------|-------------|-------------|-----------|---------|
|                                                        | Framework   | Vanilla     | Framework | Vanilla |
| <b>Total Lines of Code</b>                             | 1785        | 1643        | 1785      | 1643    |
| <b>Lines of Code (signup.html)</b>                     | 59          | 56          | 59        | 56      |
| <b>Lines of Code (login.html)</b>                      | 53          | 57          | 53        | 57      |
| <b>Lines of Code (welcome.html)</b>                    | 55          | 78          | 55        | 78      |
| <b>Lines of Code (presidents.html)</b>                 | 538         | 354         | 538       | 354     |
| <b>Lines of Code (timeline.html)</b>                   | 692         | 696         | 692       | 696     |
| <b>Lines of Code (gallery.html)</b>                    | 120         | 150         | 120       | 150     |
| <b>Lines of Code (favorites.html)</b>                  | 167         | 132         | 167       | 132     |
| <b>Lines of Code (presidentprofile.html)</b>           | 101         | 120         | 101       | 120     |
| <b>Total Number of Files</b>                           | 54          | 53          | 54        | 53      |
| <b>Fully Loaded Byte Count (signup.html)</b>           | 57          | 42          | 57        | 42      |
| <b>Fully Loaded Byte Count (login.html)</b>            | 57          | 49          | 57        | 49      |
| <b>Fully Loaded Byte Count (welcome.html)</b>          | 63          | 42          | 63        | 42      |
| <b>Fully Loaded Byte Count (presidents.html)</b>       | 5994        | 6063        | 5994      | 6063    |
| <b>Fully Loaded Byte Count (timeline.html)</b>         | 66          | 52          | 66        | 52      |
| <b>Fully Loaded Byte Count (gallery.html)</b>          | 235         | 147         | 235       | 147     |
| <b>Fully Loaded Byte Count (favorites.html)</b>        | 1706        | 922         | 1706      | 922     |
| <b>Fully Loaded Byte Count (presidentprofile.html)</b> | 960         | 341         | 960       | 341     |
| <b>Total Hours Taken</b>                               | 11          | 19          | 11        | 19      |
| <b>Number of resources used</b>                        | 3           | 6           | 3         | 6       |
| <b>Fully Loaded Time (signup.html)</b>                 | 382ms       | 121ms       | 0.7s      | .9s     |
| <b>Fully Loaded Time (login.html)</b>                  | 307ms       | 126ms       | 0.7s      | .7s     |
| <b>Fully Loaded Time (welcome.html)</b>                | 177ms       | 158ms       | 0.9s      | .6s     |
| <b>Fully Loaded Time (presidents.html)</b>             | 1.1s        | 1.4s        | 2.5s      | 2.3s    |
| <b>Fully Loaded Time (timeline.html)</b>               | 218ms       | 151ms       | 1.1s      | .7s     |
| <b>Fully Loaded Time (gallery.html)</b>                | 434ms       | 430ms       | 1.0s      | .5s     |
| <b>Fully Loaded Time (favorites.html)</b>              | .9s         | .5s         | 1.1s      | 1.3s    |
| <b>Fully Loaded Time (presidentprofile.html)</b>       | .6s         | 414ms       | 1.0s      | .7s     |
| <b>Total Page Size (signup.html)</b>                   | 6.34KB      | 1.42KB      | 12.1KB    | 7.83KB  |
| <b>Total Page Size (login.html)</b>                    | 6.28KB      | 1.40KB      | 12.1KB    | 7.80KB  |
| <b>Total Page Size (welcome.html)</b>                  | 9.9KB       | 1.72KB      | 14.3KB    | 8.08KB  |
| <b>Total Page Size (presidents.html)</b>               | 5.82MB      | 5.89MB      | 5.79MB    | 5.86MB  |
| <b>Total Page Size (timeline.html)</b>                 | 13.3KB      | 4.94KB      | 17.6KB    | 11.2KB  |
| <b>Total Page Size (gallery.html)</b>                  | 187KB       | 103KB       | 185KB     | 106KB   |
| <b>Total Page Size (favorites.html)</b>                | 1.62MB      | 878KB       | 1.61MB    | 1.61MB  |
| <b>Total Page Size (presidentprofile.html)</b>         | 148KB       | 144KB       | 18.5KB    | 18.3KB  |