|  |  |
| --- | --- |
| Module name | Advanced Web Authoring |
| Assignment title | TMA |
| Student Name | Manea Valentin Cornel |
| Student ID number | 13601816 |
| Assignment due data | 15/06/2022 |

Grid Layout Critique

2022

# Browser compatibility (IE9)

The outer container of the website is designed mainly by using CSS GRID layout, which is a 2-dimensional technique highly supported by most of the browsers, but unfortunately it is not supported in IE9.

Because IE9 does not support GRID , the layout logic for IE9 browsers were created in a different style sheet called legacy.css, which is attributed to the markup with an Internet Explorer conditional comment, that will execute only for IE versions of the currently in-use browser if it is lower or equal to 9.

Text

Description automatically generated

# Mobile first approach

In order to obtain a flexible layout , that is highly responsive for all device types, one media query was introduced into the style, that serves as a breakpoint for the small devices and big devices.



The following wireframe represents the website layout, the first figure representing the layout before the media query validates true.

Graphical user interface

Description automatically generated

# Grid Techniques

## Template(Mobile)

Internet Explorer browsers IE10/IE11 does not fully support all grid layout techniques, and the supported techniques are prefixes with the -***ms-*** so called Internet Explorer prefix.

The following green box represents the grid logic used for the IE browser engines, while the red boxes represent the logic used to design the standard grid layout mostly supported by all the browsers.

A picture containing graphical user interface

Description automatically generated

## Row gaps and support condition (Mobile)

Internet Explorer browsers do not support grid row-gaps nor @support conditions. To imitate row gap logic a @support feature condition is used, where @support condition is completely ignored by IE engines.

The logic is straight forward, a position class selector is used to select all the direct children of the wrapper container in our case the grid layout, apart of the last 2 direct children(FOOTER and LINKS elements that do not require an extra gap/margin bottom).

If the browser supports row gap, a row gap of 1 rem is applied and all the previous logic related with the bottom margin is reset to 0.

Text

Description automatically generated

## Template (Tablet+ Laptop + Desktop)

Techniques used for layout design for the wider devices, conforms to the precedent mobile rules, with an extra specification on the maximum layout width, that is used to constrain de maximum size of the page. An extra padding of 1 rem is added for the wider devices, instead of margins, in order to avoid overriding the rules.

Text

Description automatically generated

## Trial and error (IE9 layout container)

The layout container designed for the browser with an IE version lower than 9, are designed through small layout increments of the rules, that resulted in a similar product, with the ones designed using grid layout technique.

# Layout techniques

## Float layouts

Float technique is very tedious and overwhelming, usually requiring trial and error approach. Floating methods are still used to maintain old browser compatibilities, but with a cost of increased development time, harder code to maintain.

## Flexbox

Flexbox is the float layout predecessor, is the best and the easiest technique mainly used in arraigning elements into a single dimensional layout. Its drawback consists in creating more complex layout that requires a more complex scheme not just in a linear fashion. For more complex designs nested flexboxes can be used.

## Grid (Advantages)

Grid layout takes care of both of its predecessor’s shortcoming, offering the flexibility of arranging component into a bidimensional layout, more specific in rows and column. Code resulting by using Grid, is easier to understand, easier to maintain and it is as flexible as it can get. Grid is a very powerful tool consisting in a very rich set of rules used to organize and adjust elements within the page.

## Grid (Disadvantages)

The main drawback of grid layout consists in creating an equal level of user experience across different versions of browsers. Browsers like Opera Mini and all the versions of Internet Explorer before 9 do not support Grid at all.

Other versions of browsers like IE10/IE11 just partially support GRID, with an extra usage of vendor specific prefixes, and sometimes completely different set of rules.