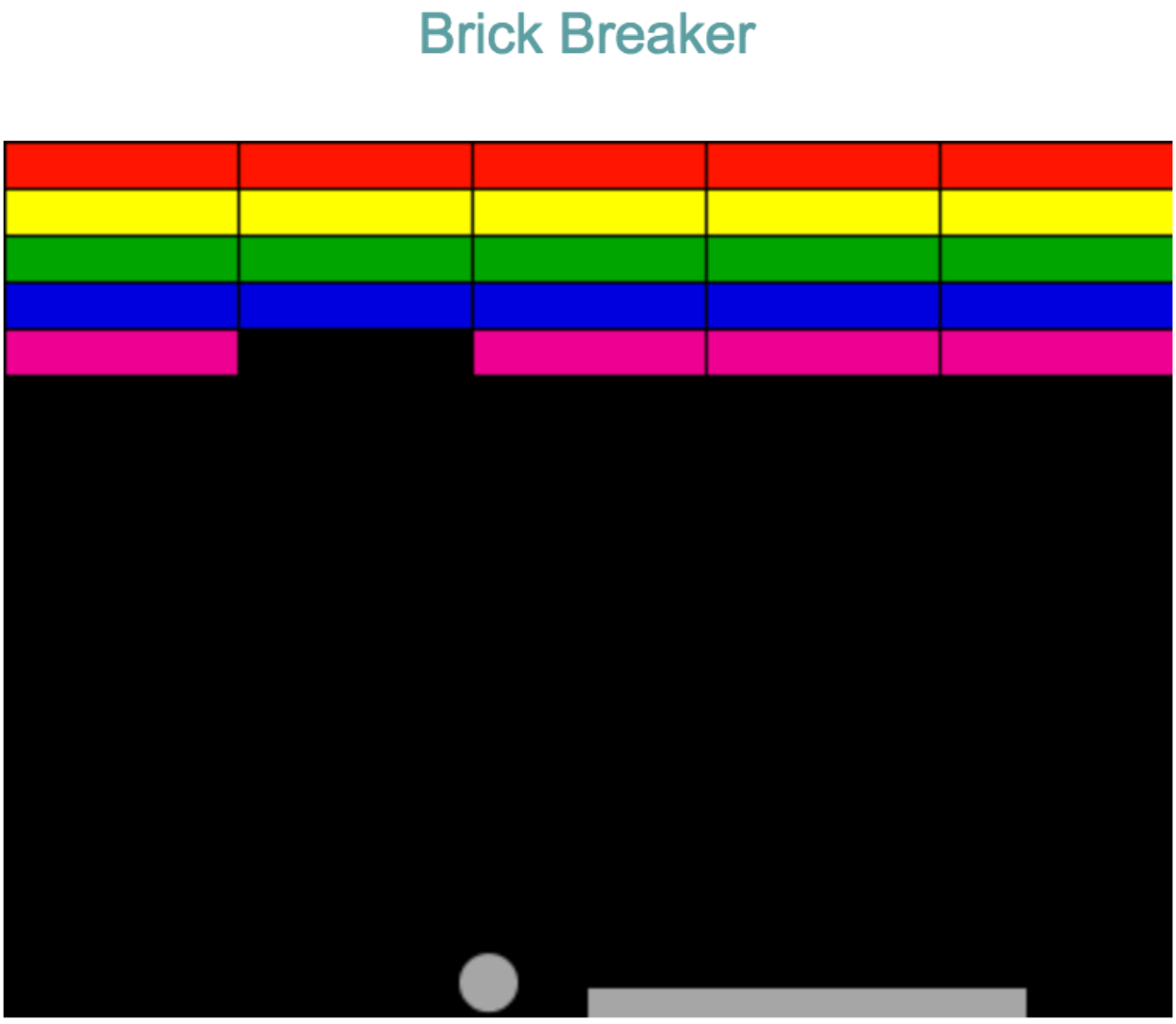
Development and Testing Document:

Has the design changed?

One element of the design that has changed is when the webpage responds to a decrease in size of the browser, the navigation bar stays as an unordered list. This is because the webpage still functions easily even at a smaller screen size. Also there are several ways to navigate around the more important pages, such as links in the footer that take the user to the accessibility page and the contact page.
All other design features have been included, such as the header being constant over every page, and that there is a right hand column in the main area for images.

JavaScript Game



For the game, I took inspiration, and help, from bill mills tutorial on the game brick breaker. However, I edited the JavaScript to make the game slightly harder by putting a constant on the acceleration, meaning that every time the ball hits the paddle, its speed increases by a factor of 1.03 times. this means that, overtime, the game becomes almost impossible to complete; to counter this, and to make the game more playable, I also increased the size of the paddle to around 1/3 the screen.

745 words

One problem I encountered, was that as the balls velocity increased, the refresh rate (of 10 milliseconds) was too slow to keep up with the balls interaction, leaving bricks unbroken even if the ball looked as if it had touched them. This was solved by increasing the refresh rate to 5 milliseconds.

Contact Form Security Issues:

The contact form isn't susceptible to Cross-Site Scripting as the form doesn't use JavaScript. However to combat XSS you can use escaping, so that any JS that's put into the field, won't execute.

HTML/CSS Templates:

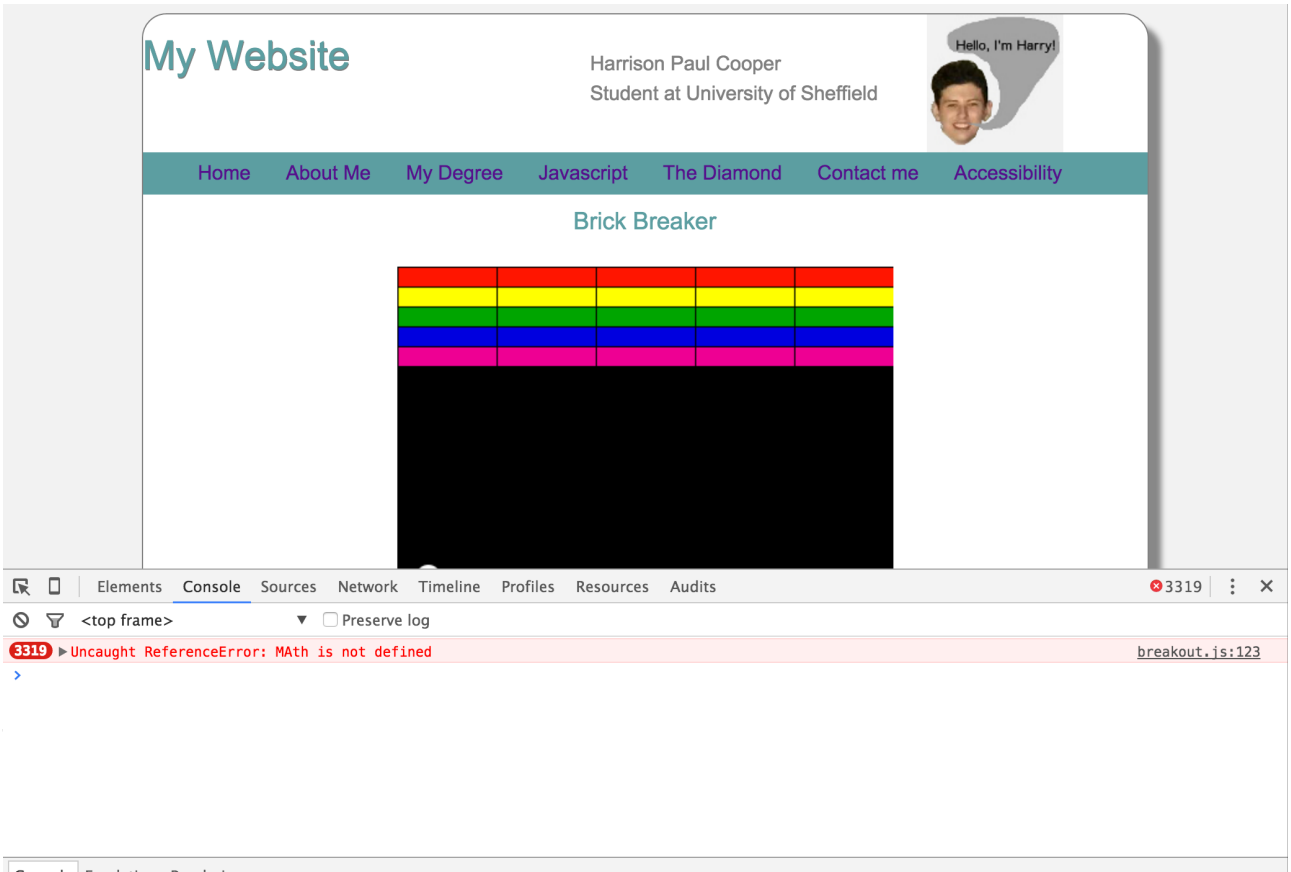
I used the reset css style because I wanted a 'blank slate', so that any web browsers that are unable to support my CSS or JS would still be able to have a pleasant time in navigating my website.
The CSS that I created has been made to allow every page on the website to respond fluidly to changes in browser size.

Optimisations:

For optimisation, I decreased the image quality, to decrease the file size, to decrease the time taken to load the page.

fallback strategies:

One fallback strategy I used was to give the browser different fonts to use; so even if an older browser is unable to display the preferred font, it can fall back and use a more common font. I implemented this into the CSS file "font-family: arial, sans-serif, Helvetica;" Here I gave two fallback fonts.
I used @media queries for when the screen became too small, this allowed for an aesthetically pleasing site, no matter what sized screen you display it on. As the screen gets to 640px, the Left banner disappears and leaves only the right banner. This keeps the identity of the page whilst not compromising on the look.
I put a max-width of 900px on the body. This means that as the browser size increases the aesthetic of the website doesn't degrade, and the text is located in a meaningful position (near the images and navigation bar) rather than on one line stretched out over the entire monitor, which would be more difficult to read.



debugging:

For debugging, I used the console within google chrome. This helped me to identify syntax errors, especially in the java script. This was useful as it gives the exact line in the code which is causing the error, allowing for quick fixes.
Another debugging tool I used was the elements tab in the google chrome inspector. This allowed me to see what each was doing and also allowed for certain CSS styles to be turned on and off quickly to see how each one affects the page.

Tests on different devices and browsers:

The website works on the latest version of google chrome, and safari. I would use “browser shots” to make sure that the website works on every current browser, however it requires a URL, which can’t be done without uploading the website to a server. This aside however, I believe that it will work on modern browsers. The older the browser, possibly the JavaScript will start to not work, along with some of the HTML5 semantics, such as <article>. I have addressed this on the accessibility page, stating that if the user is having these problems, they should update their browser.