## Week 1:

For the week 1, I researched HTML, JavaScript and CSS tools and software. This included IDE’s that could be used to complete the project. This research allowed for new tools such as Atom to be located and used. I also spent the week trying to investigate different tools that could host the website however it was decided just to use the Aberystwyth servers

## Week 2:

This week I researched into the different game types and frameworks, from canvases to other third-party tools that could have been used. One of frameworks that was investigated was phaser, which is a game engine software built for the web. Canvas game where also investigated and tested with this week. Different game modes where also investigated, such as clicker games or games that use keyboard inputs. Creating dynamic visual effects in JavaScript where also attempted to be completed.

## Week 3:

For this week I researched databases and what databases type should be used. I picked MySQL, out of a short list that I made of MySQL and PostgreSQL. I chose to use MySQL as I felt it was better suited for the site and did not need a lot of the tools PostgreSQL offered me. This also allowed me to investigate other tools that could be used for the website. One being PhpMyAdmin, this software gives the user a GUI to control the database with. This is free to use software and would fit in well within the project.

## Week 4:

Week 4 investigated the tables that where on the website to show the students. The week started with me looking into different styles and types for the tables however, in the second half of the week I discovered DataTables, which is a table framework/skin. It allows the user to create tables and then add advanced functionality quickly and easily. Additions that DataTables added where features such as a search feature, or a sort by row feature. DataTables still used the basic table framework, however.

## Week 5:

This was the first week of creating the webpage. Through this I was testing different designs and colours that I thought would look good on the website. The three base pages where also created and their basic structure was added. None of the pages linked together at this point either and where still very much at the starting stage. No JavaScript of PHP worked at this stage and any that was there was basic. This week also saw the database being set up for me to use and fill in

## Week 6:

Week six I started on the game design for the project, within this week I did not get very far into the game, but I did get to the stage where when a user clicks on one of 6 boxes, the website shows the user what box was clicked. A random question was also made to generated to generate random numbers that came up on screen. The boxes also filled with random numbers but even if the user clicks the correct answer, the boxes numbers just changed and nothing else happened. Two different game modes where possible but the user was not able to choose which one to play. The game was changed from canvases and to use buttons at this point, canvases became too complex too quickly, e.g. animating them with always having to clear the canvas did not help this issue.

## Week 7

This week saw the questions and answers within the game working correctly. It also saw the creation of the score and question sections within the page. The difficulty was also able to be obtained from the database and sent to the document. The users score is now also sent to the database on completion and the user also gets to choose what game mode they want to play.

## Week 8:

During week 8 I investigated the staff page and its table. The week was mostly made up of filling in the table form the correct school the user goes too and setting users to view different account types depending if they are staff or admin. This also got to the point where a user could click on something within the table and an empty popup box appeared

Students only appeared to staff members, but all accounts appeared to the admins

## Week 9

The second week I spent time on creating the table to be more advanced. This included creating a form with the popup box that appeared. The pop-up box now fills up with data for the user they clicked on and gives 2 options if someone is a staff member and six if they are an admin

The staff can change the student’s difficulty and submit, but nothing else. They cannot even type in other boxes. The Admin however can type in all the boxes and they can also remove or change a user’s password which also changed the database. This also led to hashing being added to the website.

## Week 10:

Login week. This week was set about trying to create the login page and making it look very smart, since good first impressions are always wanted. The page needed to have 4 text boxes to enter data, one being for the school, one for username, another for password and the last for the admin school if they were an admin. The 4th on was originally going to be a pop up but due to the way the submit button runs, it was easier to do it that way. The login system needed to verify the passwords against the hash function, which worked correctly and as needed. The login page did go over due to the hash function however, it was only by a day, this was to do with me being a little confused with how it should have been implemented in the work, e.g. I used an if not when I should not of.

## Week 11:

This was testing week where I did the manual tests for the project. These tests looked at each page and tried to find any issues within them. An excel document was created for each page to track these tests and to state any issues within the page. This week also saw me do user testing, which is why this section over runs. Some users took longer than expected to complete and send back the forms.

## Week 12 and 13:

These are the report writing weeks for the project.