**Application Development Report**

VM domain **URL:** appdev@ml-lab-f559081f-7c2f-49ec-acb5-7752519d4ae9.ukwest.cloudapp.azure.com

VM Port: 62835

VM Password: Fozia786

URL of my website created: <http://127.0.0.1/index.html>

Source of data set used URL: <https://www.kaggle.com/datasets/alikashif1994/police-recorded-crimes-of-england-and-wales?resource=download>

From the original data source, Manchester was not used as it was not provided in the data source. After all the testing was done in the implementation log, the data inside the database was reset to the original data provided.

The website can visualise all the data saved in the database, as well as generate charts and visualisations of specific crime types and specific counties chosen by the user. Up to six different types of charts and visualisations can be generated with the data provided from the database. The website allows the user to add a new case and amend existing data, by committing the changes the new data is changed in the database and in all the visualisation the user chooses to generate.

**Implementation Log**

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| --- | --- | --- |
| Date | Time Spent | Work Done (Problems encountered, Solutions and Testing Done) |
| 09/05/2022 | 9:00am – 6:00pm | The first task I did was choosing my data source that I was going to use. After researching I found this data source that gives the crime rate from July 2019 to June 2021. This is the link to the file: <https://www.kaggle.com/datasets/alikashif1994/police-recorded-crimes-of-england-and-wales?resource=download>  I made a database design which I showed to Maqbool and he approved of. This is the database design I made:    I started off by turning this design into tables within the database:        After creating these tables I then imported all the data from the CSV files into each table:  To test that all the data was in the files correctly I opened each file and read through it. Here are some of the data I looked at to make sure they were inputted correctly. The first test carried out is in the is the Counties table it should have a total of 42 counties:    The counties table has 42 counties: **Test Passed.**  The next test was to make sure that the typeOfCrime table had the correct number of crime types which is 22:    To test that the Crime Data was successfully inputted I went on the putty command terminal and selected the table in mysql. The table should have 924 entries as there are 22 crime types and 42 counties which when timed together is equal to 924.      The database has 924 entries: **Test Passed.** |
| 11/05/2022 | 2:00pm – 6:00pm | I went through all the books api to understand how it worked and how the rest api was programmed. I deleted all the functionality I was not going to use such as the edit, add and delete functionality. After I did this I then was messing around with the table I was editing the code, but my changes were not reflecting on the web page even though the var/www/html directory had committed those changes. After looking through the sources function on the website I discovered the web page was not reflecting. The first method to resolve this was that I tried to hard reset the page. I used this article to figure out how to hard reset a page: <https://www.howtogeek.com/672607/how-to-hard-refresh-your-web-browser-to-bypass-your-cache/>. After using ctrl+shift+R the web page successfully committed the changed. The changes I made was removing the add button and in the table adding a new column called “Total Cases” and also removed the edit and delete buttons: |
| 12/05/2022 | 4:00pm –  8:12pm | Today I was going to edit the books api to show my data within the tables. The first task I did was I edited the whole api to suit my database table of “crimeData” when I finished editing this I pushed it to putty and ran the code. Error:  I got an error saying that the data could not be found.  Solution:  After looking around I realised in the db.info file I did not change the database, the website was trying to find a table within a database that didn’t exist. After I changed this the problem went away.  To test it was working I ran the website but I got this Error:    After looking in the networking section I realised that the website was not receiving any data from the database:    Solution:  When calling data from the database I wrote the wrong names for the headings of the tables once I edited that the database displayed the correct data:    After this displayed the next thing I was going to do was display the county table. I copied the code I used to get the crime data from the database but changed it to suit the county table within the database. One of the major changes I made was rather than counting the parameters the system reads the parameters to see which table is being called by name.  When I ran the code this is the Error I got:    This is what the network within the console said the problem was:    Could not fix the error. |
| 14/05/2022 | 5:00pm –  9:00pm | Fix one:  First I changed the parameter one so it was pulling data from the counties table to display all the cases per county.    Changes to totalCrime which is the name within the database  After making this change it worked got the county table:  Graphical user interface, application  Description automatically generated  For my first window I am going to only display the total crime of all the counties meaning I did no need to get the CountyID from the database. So I am going to stop my code from getting it and just getting the County Name and Total Crime:  First I removed the County ID form the County class:    Next I changed the query that gets the data from the database:    Then I changed the table that displays the data:    When I pushed the changes the code worked how I intended and the changes were successful:    I am going to have three tabs displaying total data, county specific data and crime specific data. For these I need two more html files so I created the following:    To allow the user to switch between these tabs easily I created options on the top black bar the code to create this was:    This is how it looked once added: |
| 15/05/2022 | 1:00pm –  6:00pm | The first task today I did was I added a combo box and button that allows the user to select a county and pull up all their crime data:  A computer screen capture  Description automatically generated with medium confidence  Then I added code that will pull all the data depending on what county the user selects. After I did this I ran my code and got the following error:    Solution: I forgot to add an ; at the end of the new parameter I made after I added the ; and ran it the problem was gone. Then there was a new error:    When I went to line 83 I realised my while statement was wrong:    Which I changed to this:    I still had an error where my website was pulling all the data from the database not the requested one:    Solution:  After looking at my code I realised when I was writing the case in the switch case I forgot to add the ‘break;’ meaning the case was not ending and was on an infinite loop. After I changed this the code was working on how I intended it to:    The next task I was going to do is the same as the one before but this time it lets the user select the crime type and displays all the counties stats for that particular crime.  The first step was making a combo box that the user can select the crime type from:  Graphical user interface, application  Description automatically generated  I had to re write the code for pulling data since in switch case 3 there were two different requests that can be sent there. To solve this I added an if statement within the case 3:  Text  Description automatically generated  After writing this code I had to test to the county specific data to make sure the code was working. I selected a county and pressed search and it worked the program got that data from the database and displayed it:  Table  Description automatically generated  After this is started writing the code that pulls the data depending on what crime the user selects. This is the first error I got after I wrote the code and pressed search:    Solution:  I misspelt the name of the class that I made to store the data that is gotten from the database. Once I changed this and ran the code that error was gone but I got a new error:  Graphical user interface, application, Word  Description automatically generated  Solution:  After having a deeper look at the code, I realised I misspelt the name of the array that holds all the data within the class. After I changed this the code worked. To test and make sure it worked I selected violence without injury and the data should match the data stored with mysql which it did meaning the code was working properly:  Table  Description automatically generated |
| 16/05/2022 | 9:00am - 2:00pm | The plan for today is getting the home page visualising data and finished. The first task for today was figuring out how to turn the JSON data that I am receiving from the server into a barchart.  After doing research I found a useful article on W3Schools that explained how to use Charts.js, this is the link to the article: <https://www.w3schools.com/ai/ai_chartjs.asp>  To use these charts I had to first include the library to import all the charts which I did by writing the following code:    On the W3School page there is the code to create a bar chart which I copied into my javascript file. The first problem I got was that the sample data used to create the bar chart was hard coded in. The first solution I came up to change this was this:  Text  Description automatically generated  I pushed this and tested it:    **Test Failed**: the loop I wrote was replacing the data within the array rather than adding the data as a new entry every time. So I made the following changes:  Text  Description automatically generated  A picture containing scatter chart  Description automatically generated  Chart, waterfall chart  Description automatically generated  **Test Passed**  The bar chart successfully displayed but there was a problem, currently I have currently 42 counties all together, but my bar chart is displaying 21 counties missing 21 counties. To solve this I increased the width of the canvas that the bar chart is drawn on to:    After making these changes I pushed the new file to the virtual machine and commit the changes to test to see if the bar chart displayed all the counties now:  Chart, bar chart  Description automatically generated  **Test Passed**  Next, I need to add colour to the barchart. I added the following colours to an array and assigned them to the bars:    I committed these changes to test if all the bars were coloured in:  Chart  Description automatically generated  I realised that you must assign the colours for each bar manually in an array. So, I put all the colours in an array within a new loop that loops the number of counties there are and randomly assigns each one of the bars one of the colours available. To create this loop I needed to randomly select a colour every time the loop iterates through, to do this I found code that was online on this website: <https://www.programiz.com/javascript/examples/get-random-item> to select a random colour. This is what the code for the random colour loop looked like:  Text  Description automatically generated  I committed these changes to test to make sure all the bars were now coloured in:  Chart, bar chart  Description automatically generated  A picture containing text  Description automatically generated  **Test Passed:** the code was working as it was created to, randomly assigning all the bars a colour.  The final thing I did today was add an introduction that lets the user know what I am doing on the website and a link to the original data source which was used to create the visualisation. I wrote this in the html file and pushed the changes to test this:    **Test Passed**  This is how the home page looked now I finished it: |
| 17/05/2022 | 1:00pm – 6:00pm | Today I started to work on the County Specific Page:  First thing I did was I added a description above the user select combo box to let them know what and how to use the window:    Pushed the changes above. I am going to test the website to make sure these changes are appearing:    **Test passed**  Next I am going to create a bar chart that will display the data using the pulled information for the County. I used the same code as the one I used to display Total Crime bar chart. After I wrote the code I pushed the changes. To test that the bar chart is working I will go on the website select Dorset and it should display a coloured in barchart:  Chart, bar chart, waterfall chart  Description automatically generated  **Test Passed:** the bar chart is pulling the right information from the database and is displaying the right data. As well as assigning the chart colour dynamically.  For this tab I am going to display 3 different types of visualisations all together with one being Bar chart the next one will be Pie chart. The first step was creating a canvas for the pie chart:    Next I added a new function that will generate the pie chart. The code that I am using to generate the pie chart I got from this website: <https://www.w3schools.com/js/tryit.asp?filename=tryai_chartjs_pie>  Once I finished writing the code I had to test that it was working so I pushed the new code I added and displayed the county “City Of London” the program show display the barchart and the piechart with the same data:  Chart  Description automatically generated  **Test Passed:** The visualisations were created using the correct data from the database  I had a problem with the visualisation when testing it. When a user research data and then selects another county to research. When the user hovers over the table to view the specific data it keeps switching between the old county data and the new one.  Solution I found this article: <https://stackoverflow.com/questions/42788924/chartjs-bar-chart-showing-old-data-when-hovering>.  In this article the problem is that the new graph is drawing over the old one, to solve this problem I added new code that deletes the old graph before drawing a new one:  For the bar chart:    For the pie chart:    To test and make sure the changes work I pushed the changes and selected two different counties right after each other and then hovered over the graph to make sure it doesn’t change and only displays the data of the second selected county:  Chart  Description automatically generated  **Test Passed** |
| 18/05/2022 | 2:00pm –  7:00pm | The final graph for this section I am going to add is a line graph. The code I used for drawing the line graph can be found here: <https://www.w3schools.com/js/tryit.asp?filename=tryai_chartjs_lines>. First step I made the div to store the data then I assigned the pasted the code into a new javascript function and changed it to get the data from the JSON reply and display it:  Text  Description automatically generated  This is the code to display it:  Text  Description automatically generated  To test to make sure that the code is working I pushed the changes and ran the code:  Chart  Description automatically generated  Test Failed – the line graph did not display  Solution: I forgot to add the function call to the point where the program sends the data received by the database after adding this:  Text  Description automatically generated  I pushed the changes and tested the website to see if it displayed the line graph:  A picture containing table  Description automatically generated  **Test Failed –** The graph was displayed along with all the axis but wasn’t plotting the actual line graph.  Solution – the project could not work out the maximum and minimum the axis should be plotted since it was currently hard coded. I had to figure out how to work out the maximum and minimum of the axis dynamically. The website I used to figure out the code to dynamically get the min and max of an array is: <https://medium.com/@vladbezden/how-to-get-min-or-max-of-an-array-in-javascript-1c264ec6e1aa>.  This is how my code looked once I added this change:  Text  Description automatically generated  After I pushed these changes I loaded up the website to see if the graph loaded:  Chart, line chart  Description automatically generated  **Test Passed -** the graph display successfully. The problem is the values on the Y-Axis are overlapping making it unreadable. To solve this I found this article that had the solution to this problem: <https://stackoverflow.com/questions/68085377/chart-js-couldnt-add-the-margin-spacing-between-y-axis-labels>. After adding autoSkipPadding function:  Text  Description automatically generated  I ran the code to test to see if it solved the problem:  Chart, line chart  Description automatically generated  **Test Passed-** The Y-Axis is now clearer to read.  Done visualisations for this one |
| 21/05/2022 | 2:00pm – 7:00pm | Start of search by crime  The first visualisation I am going to do for this section is a Horizontal Bar Chart using Plotly.js. The first step to do this was importing the library to the crimeSpecificData.html. To do this I added the following bit of code:    I got the code for this bar chart from: <https://www.w3schools.com/ai/tryit.asp?filename=tryai_plotly_bars_horizontal>.  I pasted the code into a new function I made in my javascript file and edited it to suit my data that it was going to display:  Text  Description automatically generated  To test this code I pushed the changes and ran the code to see if the bar chart displays:  Graphical user interface, application  Description automatically generated  **Test failed:** Nothing displayed and there was no error messages.  I found a new website that had the code to plot the graph: <https://codepen.io/pen>. I edited my data to make it similar to the one on this website rather than the one from w3schools. I ran my code after doing this to test if the graph would appear:  Chart  Description automatically generated  **Test Passed:** The graph was not plotting all the data that I wanted, but there was still an error with the graph that it was not displaying all the county names that it was plotting. In the picture above it displays the 14 counties when theres 42 all together.  After doing some research I found this website: <https://plotly.com/javascript/setting-graph-size/>. Which taught me how to resize the graph manually and set the size in the script:  Text  Description automatically generated  After I made these changes I tested to see if the whole graph was showing by pushing the changes I made:  Chart, bar chart  Description automatically generated  **Test passed:** the whole graph displayed successfully with all 42 counties. |
| 22/05/2022 | 1:00pm – 5:00pm | The next visualisation I am going to do for this section is a donut chart using Charts.js. The code for this chart can be found on: <https://www.w3schools.com/js/tryit.asp?filename=tryai_chartjs_doughnut>. After editing the code to match the parameters for my data. I tested the code to make sure that it is working so I pushed the code and ran it:  Graphical user interface, application  Description automatically generated  **Test Failed:** there was an error when compiling the code and the code could not create the chart.  Solution: to fix this problem when looking through the code I realised that the container that I was currently clearing I was re naming the chart so when the code was trying to draw the donut chart the canvas not there. Once I fixed this to the charts name:    I committed the new changes and ran the code:  A picture containing chart  Description automatically generated  **Test Passed:** The changes worked and the donut chart was drawn successfully.  Before adding another data visualisation diagram, I added information about what the page is about:    I also added the following line of code which adds line breaks between the diagram and code to separate and make it easier to see everything. I found out how to do this from this link <https://www.codegrepper.com/code-examples/html/add+a+black+line+in+html>:    Once I committed these changes this is how it looked:  Chart  Description automatically generated  The next graph I was going to make for this section was the scatter plot graph to help visualise the data better. I am going to place this graph between the horizontal bar graph and the donut chart. For the code to generate this graph I am going to be using plotly.js and the code for this graph can be found at: <https://www.w3schools.com/js/tryit.asp?filename=tryai_plotly_scatter>  After adding this code to my js:    I ran the code to test and make sure it was displaying the data:  Chart  Description automatically generated  **Test Passed** |
| 23/05/2022 | 1:00pm – 4:00pm | I changed the lines currently they are pre appearing when ever you load the window:  Graphical user interface, text, application, email  Description automatically generated  I now am going to change it so the separator lines are generated when the charts are selected. To do this I removed the code for the line in the HTML and added a div to append to on runtime:  Text  Description automatically generated  In the javascript I found the code to add a line from this website: <https://stackoverflow.com/questions/18808626/how-to-write-inside-a-div-box-with-javascript> this is the code I added:    To test this I pushed the code before searching for a city there should only be two line breakers and after searching one should appear between the barchart and the search box:  Before  Graphical user interface, text, application  Description automatically generated  After:  Graphical user interface, application  Description automatically generated  **Test Passed**  I spent sometime adding line breakers between all the code in the menu. After adding the code I tested to make sure it works similarly as above but this time before searching there should only be 2 lines and after searching there should be one between all the graphs. New HTML code added to generate lines:  Text  Description automatically generated  Java Script code to draw lines on run time:      After committing the code I then tested the code to see if the lines appeared:  Before Searching:  Graphical user interface, application  Description automatically generated  After searching:  Chart  Description automatically generated with medium confidence  Chart  Description automatically generated  **Test Passed:** All the line separators were added. |
| 25/05/2022 | 1:00pm – 3:00pm | The next thing I did was the scatter graph is to small currently not displaying all the county names so I set the layout of the chart to make it bigger:  Text  Description automatically generated  I pushed this to test If all the county names were showing:  Chart, scatter chart  Description automatically generated  **Test Passed –** All 42 county names were displaying.  There is still an issue that the names of the counties are being cut off. I found this article which shows how to sort this issue: <https://stackoverflow.com/questions/36596947/long-tick-labels-getting-cut-off-in-plotly-js-chart>. I added the following code and it solved the issue:  A screenshot of a computer screen  Description automatically generated with low confidence  To test this I pushed the code and tested to see if the names were not being cutoff:  Chart, scatter chart  Description automatically generated  **Test Passed** |
| 26/05/2022 | 2:00pm – 6:00pm | The first task that I did was make the writing on the home page that explains the aim of the website much bolder easier to see and add a line break between the introduction and the graph. The code I added was this:    And    The <h3> makes the text bold  To test this I pushed the code to the virtual machine and ran the code to see if the changes were committed:  Chart, bar chart  Description automatically generated  **Test Passed**  Next I needed to edit the county specific page to add the line breakers and make the introduction text easier to see. These are the code changes I made:  I added <h3> to make the writing bold:    The Line breaks:  A screenshot of a computer  Description automatically generated with medium confidence  The div to generate the line breaks for the graphs:  Text  Description automatically generated  Code added in the javascript to generate the lines:        To test the product I pushed the code and ran it:  Chart, bar chart  Description automatically generated  Chart  Description automatically generated  **Test Passed:** all the changed and added line breakers and words successfully changed. |
| 27/05/2022 | 1:00pm – 5:00pm | I added one more tab that I forgot to add at the start which is the tab that allows the user to Edit the data in the database. I did this by adding a new html file called EditCrimeData. Then I linked it to the top tab bar:  Text  Description automatically generated  To test this I pushed the code to the vm and ran it:    **Test Passed:** The new option was added.  To make the selection box more readable I added the following CSS to it:  Text  Description automatically generated  In the html I added <br> which are new line breakers to separate the title and combobox and button and it looked like this:  Graphical user interface, text, application  Description automatically generated  I made the search button a different way to make it look more aesthetically pleasing. Currently I’m using a normal button that onclick works with no CSS. I changed this to a submit button that is bright green and the size of the textbox using the following code:    CSS for the button:  Text  Description automatically generated  To test that this changes were successfully implemented I pushed the changes and this was the result:  Graphical user interface, application  Description automatically generated  **Test Passed**  I did the same for the county pages search button aswell. |
| 28/05/2022 | 1:00pm – 4:00pm | I added the introduction to the web page of the “Add Crime” using the following code:    To test that these changes were implemented as intended I ran the code and this was the result  Text  Description automatically generated  **Test Passed**  Next I added the options that the user would select to add a new case. To add the new form this was the code that I added to create the form and the drop down boxes:  Text  Description automatically generated  Text  Description automatically generated  The first test I did to make sure this form was working is I implemented the code and ran it and the form should run:  Graphical user interface, application  Description automatically generated  **Test Passed**  Next test if the county combo box when clicked should display all the county’s saved:  A picture containing text, screenshot, monitor, electronics  Description automatically generated  **Test Passed**  The next test I did was checking that the combo box Crime Type had all the crime types they can search:  A screenshot of a computer  Description automatically generated with medium confidence  **Test Passed** |
| 30/04/2022 | 11:00am – 6:00pm | First I created this class in php that will store the county name and the crime type that the user enters, in which they wish to add a new crime case.  Text  Description automatically generated  This is the javascript code that I wrote. The code gets the inputted values from the 2 combo boxes once the users presses the Add button and assigns them to variables for use. The 2 new variables containing the user input are put into a new array which is sent to the backend to be delt with.  Text  Description automatically generated  This function was created to get the incoming data from the java script, decode the data assign it into an new array which is ready to be used by the back end.  Text  Description automatically generated  This is the code to add a new case into the database. The system decodes the data that is sent. Once the data is decoded it is assigned to local variables. There are 2 new local variables which are assigned to the current total number of cases of the county selected which is taken from the database. The other variable is assigned the total cases for that specific crime relating to that county which is taken from the database. The code then adds 1 case to each of them and sends back the variables to be added as the new figures for that county and crime cases.  Text  Description automatically generated  Text  Description automatically generated  Test current there is Avon and Somerset there is 45401 Violence against the person cases and 124865 total cases for the county. To test and make sure that the add function is adding a case when ever the user selects the Add button. We are going to Add a new case to Avon and Somerset for Violence against the person. After clicking the Add button the new figures for this county should be 124866 and the crime should be 45402:  After clicking the add button the system says:  Graphical user interface, application, Teams  Description automatically generated  The figures in the database:  Graphical user interface, application, website  Description automatically generated  And    **Test Passed** |
| 31/05/2022 | 1:00pm – 7:00pm | First thing I needed to do for the edit function is to generate a table with all the crime specific data from which the user can see and select which they would like to edit. The code to generate this table first requires requesting all the crime data from the database:  Text  Description automatically generated  This was the code in the database that gets all the data stores it and sends it back to the frontend to display:  Text  Description automatically generated  Once the data is sent to the front end the JavaScript creates a table to display the data with a edit crime button along side it:  A screenshot of a computer  Description automatically generated with medium confidence  To test and make sure that the code is doing as programmed, I pushed the code to the VM and ran it. The code should display a table with all the data pulled from the database in it and an edit button next to them:  Graphical user interface  Description automatically generated with medium confidence  **Test Passed**  Now I needed to program the edit button to get the specific data next to the button they pressed and place it into a form for the user to edit. First I created a request that would get all the data relating to the ID picked:  A screenshot of a computer  Description automatically generated with medium confidence  The system creates a request to the database that gets all the data for the ID requested and sends it back to the front end:  Text  Description automatically generated  Once all the data is received from the back end the system creates a new form with the details for the user to view:  A computer screen capture  Description automatically generated with medium confidence  To test and make sure this occurs, I pushed the code to the VM and ran it. For this test I am going to click Crime ID 4. The system should get all the data and display it in a form ready to view and edit:  Graphical user interface, text, application  Description automatically generated  **Test Passed** |
| 01/06/2022 | 1:00pm – 2:20pm | The first thing I did was to program the Cancel button. When pressed it generates the table again:    To test to make sure the button works: when the cancel button is clicked the table should generate again:  Graphical user interface, text, application  Description automatically generated  After pressing the button:  Table  Description automatically generated  **Test Passed**  Now I needed to program the edit button to edit the data to what the user wants. This is the code once the button is pressed it calls the editCrimeData() function with the ID entered:    This function gets the new variables containing the user input are put into a new array which is sent to the backend to be delt with.  Text  Description automatically generated  This function was created to get the incoming data from the java script, decode the data assign it into an new array which is ready to be used by the back end.  Text  Description automatically generated  This is the code that deals with the editing of data.Text  Description automatically generated  Text  Description automatically generated  To test to make sure that the code Is working, I pushed the code and tried editing Crime ID 2 to have 16 cases:  Graphical user interface, application  Description automatically generated  **Test Failed:** The reason that there was an error was because 2 variables had the same name. so I edited them:  Text  Description automatically generated  Solution was to change one of the variable names:  Text  Description automatically generated |
| 02/06/2022 | 10:00am – 7:00pm | Pushed changes I made last time and tested it by adding the following details:  County: Avon and Summerset:  Crime Type: [Death or serious injury caused by illegal driving](http://127.0.0.1/phpmyadmin/sql.php?db=uk-crime-data&table=typeOfCrime&pos=0&sql_query=SELECT+%2A+FROM+%60uk-crime-data%60.%60typeOfCrime%60+WHERE+%60crimeType%60+%3D+%27Death+or+serious+injury+caused+by+illegal+driving%27&token=b5af2bc8137913f9bb6e41891c8fc90c)  Old Value:    New Value should be 2:  Graphical user interface, text, application  Description automatically generated  Graphical user interface, application, Word  Description automatically generated  Crime Table:    **Test Passed**  Counties Table:    **Test Failed:** The value replaced the total crime rather than replacing adding to the existing value to form a new total.  To solve this problem I did the following:  Figure out what the problem is, so I commented out the code that was adding to the database and added echo statements that would tell me about the following variables declared:  A computer screen capture  Description automatically generated with medium confidence  After pushing the changes and trying to add I got the following error:  A screenshot of a computer  Description automatically generated with medium confidence  From this I can see that my $currentCountyTotalCrime is empty and so was $currentCountyCrimeSpecificTotalCases this meant that these queries were not returning anything they were empty:      Solution: I added the following code to assign the variables:  Text  Description automatically generated  To test that it was working as intended I put in echos to see if the mathematics made sense:  Text  Description automatically generated  I pushed the values and added 25 to homicide for Avon and Somerset. Currently they had 11. So first it should print out the new values inputted. Then the queries come into play and the first query should print out 124865 since that is the current total and 11 as that is the current size of the homicide. The next number should be 124865 since It is getting assigned to the variable to be used. The next number should be 124854 since it is subtracting 11 from it. The last number should be 124879 as we are adding the new 25 to it:  A picture containing text  Description automatically generated  **Test Passed.**  The new test is now going to store directly into the database using the same code. First I uncommented the code that is going to write into the database. I will be using the same values added 25 to homicide for Avon and Somerset currently they had 11 and the total is 124865. The database stats currently:  Text, application  Description automatically generated  Total crime database:  Graphical user interface, text, application, chat or text message  Description automatically generated  After pushing the changes and adding the values:  Graphical user interface, text, application  Description automatically generated  Graphical user interface, application  Description automatically generated  No errors on the website.  In the database:  Crime Table  Graphical user interface, application  Description automatically generated  Counties specific table:    **Test Passed: The data was updated as required**  **Test:** The changes made with the data are instantly reflected in the visualisations generated:        **Test Passed: The changes made were immediately reflected in the visualisation.** |
| 03/06/2022 | 1:00pm – 6:00pm | Now all the functionality was working. I decided to work on the CSS to make the website look better. The first change I implemented was adding a border around the Search and Add button with a different colour when you hover over the button. This is the code that I used:    After adding this code I pushed the changes and tested that there was a new border around the button:        **Test Passed**  The next aspect of this new code I tested was when hovering over the button it changes to black:        **Test Passed**  The next change was to change the edit button in the editCrimeData.html which currently looks like this:  Table  Description automatically generated  The new CSS changes the colour of the button and changes the colour when hovering over the button:    After pushing the changes. I tested the changes the first test was to make sure the button was changed as desired:    **Test Passed**  The next test was that when hovering over the button it changes the colour of the button to black and the text colour to white:    **Test Passed**  The final CSS change I made was to the button in the Edit window which currently look like this:  Graphical user interface, text, application  Description automatically generated  I changed these buttons to be bigger and black and white, when hovered over are filled in with a light blue background this was the CSS I wrote to commit this query:    After pushing these changes I loaded up the same form and the first test should reflect all the changes I committed:    **Test Passed**  The next test was to make sure when hovering over the 2 buttons they are filled I with a light blue background:      **Test Passed** |
| 05/06/2022 | 3:00pm – 7:00pm | The first thing I did was that I added more of a colour choice in the bar charts to be chosen currently there are only 5:    I added 5 more colours which I found the code from this website: <https://www.w3schools.com/colors/colors_groups.asp> :    After pushing these changes, I tested to make sure that the donut chart, bar chart, pie chart were adding more colours when displaying:          **Test Passed**  I commented out the code I wrote and finished writing my report and submitted the assignment. |