# Testing

## Splash Screen Testing

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Test No.** | **Area Tested** | **Value/s Tested** | **Expected Outcome** | **Actual Outcome** | **Fix** |
|  | Splash Screen | N/A | Check that the splash screen is displayed when the programme is run | As expected | N/A |
|  | Splash Screen | Return | Splash screen should clear, and the main menu of the programme should be displayed with a prompt to enter an option. | As expected | N/A |

## Main Menu Testing

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Test No.** | **Area Tested** | **Value/s Tested** | **Expected Outcome** | **Actual Outcome** | **Fix** |
|  | Main Menu | 1 | Add candidate menu should be displayed | As expected | N/A |
|  | Main Menu | 2 | Candidate list should be displayed | As expected | N/A |
|  | Main Menu | 3 | Update candidate menu should be displayed | As expected | N/A |
|  | Main Menu | 4 | Report menu should be displayed | As expected | N/A |
|  | Main Menu | 5 | Programme should exit | Not As expected. When 5 was entered, input was cleared from screen and nothing else happened | Changed case 5 to return 0; instead of break; |
|  | Main Menu | ttt | Programme should display error message | As expected | N/A |
|  | Main Menu | 100 | Programme should display error message | As expected | N/A |

## Add Candidate Screen Testing

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Test No.** | **Area Tested** | **Value/s Tested** | **Expected Outcome** | **Actual Outcome** | **Fix** |
|  | Enter Candidate forename | Callum | Input is accepted without any errors and new prompt is displayed | As expected | N/A |
|  | Enter Candidate surname | McLaughlin | Input is accepted without any errors and new prompt is displayed | As expected | N/A |
|  | Enter Candidate mark 1 | 77 | Input is accepted without any errors and new prompt is displayed | As expected | N/A |
|  | Enter Candidate mark 2 | 88 | Input is accepted without any errors and new prompt is displayed | As expected | N/A |
|  | Enter Candidate mark 3 | 88 | Input is accepted without any errors and new prompt is displayed | As expected | N/A |
|  | Enter Candidate mark 4 | 88 | Input is accepted without any errors and new prompt is displayed | As expected | N/A |
|  | Enter Candidate mark 5 | 99 | Input is accepted without any errors and new prompt is displayed | As expected | N/A |
|  | Would you like to add another candidate? Y/N | Y | Screen clears, and user is prompted to enter another set of candidate details starting with forename. | As expected | N/A |
|  | Would you like to add another candidate? Y/N | N | Programme returns to main menu screen | As expected | N/A |
|  | Enter Candidate forename | 66 | Error message should be displayed asking the user to try again and enter string | Not As expected. Input was accepted and written to the candidate list | Couldn’t fix string validation function |
|  | Enter Candidate surname | 66 | Error message should be displayed asking the user to try again and enter string | Not As expected. Input was accepted and written to the candidate list | Couldn’t fix string validation function |
|  | Enter Candidate mark 1 | tttt |  | As expected | N/A |
|  | Test that the candidate entered by the user is added to the candidate list |  | Inputs from user should add another new candidate to the candidate list with student no. being incremented automatically to 31. | As expected |  |

## Candidate List Screen Testing

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Test No.** | **Area Tested** | **Value/s Tested** | **Expected Outcome** | **Actual Outcome** | **Fix** |
|  | Display Candidate List option | 2 | Sort options screen appears prompting the user to choose a sort option. | As expected | N/A |
|  | Please enter an option: | 1 | Displays candidate list by forename (a-z) | As expected | N/A |
|  | Please enter an option: | 2 | Displays candidate list by surname (a-z) | As expected |  |
|  | Please enter an option: | 3 | Displays candidate list by average (Low-High) | As expected |  |
|  | Exit option | 4 | Exits to main menu screen | As expected |  |
|  | Please enter an option: | t | Error message prompts the user to enter an integer | As expected |  |

## Update Candidate Testing

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Test No.** | **Area Tested** | **Value/s Tested** | **Expected Outcome** | **Actual Outcome** | **Fix** |
|  | Which field do you want to search by? | 1 | New screen loads asking the user to enter the forename they wish to search by | As expected | N/A |
|  | Which field do you want to search by? | 2 | New screen loads asking the user to enter the surname they wish to search by | As expected | N/A |
|  | Which field do you want to search by? | 3 | Returns user to main menu | As expected | N/A |
|  | Which field do you want to search by? | t | Error message should be displayed asking the user to enter an integer. | As expected | N/A |
|  | Which field do you want to search by? | 55 | Error message should be displayed asking the user to enter a valid option. | As expected | N/A |
|  | Which field do you want to search by? | // | Error message should be displayed asking the user to enter an integer. | As expected | N/A |

## Reports Menu Testing

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Test No.** | **Area Tested** | **Value/s Tested** | **Expected Outcome** | **Actual Outcome** | **Fix** |
|  | Which report would you like: | 1 | Should write report out to text file named “CandidatesReferredReport.txt”. A confirmation that the report has been generated will also be displayed | As expected | N/A |
|  | Which report would you like: | 2 | Should write report out to text file named “CandidatesPassReport.txt”. A confirmation that the report has been generated will also be displayed | As expected | N/A |
|  | Which report would you like: | 3 | Should write report out to text file named “CandidatesMeritReport.txt”. A confirmation that the report has been generated will also be displayed | As expected | N/A |
|  | Which report would you like: | 4 | Should write report out to text file named “CandidatesDistinctionReport.txt”. A confirmation that the report has been generated will also be displayed | As expected | N/A |
|  | Which report would you like: | 5 | Should write report out to text file named “CandidatesGradesReport.txt”. A confirmation that the report has been generated will also be displayed | As expected | N/A |
|  | Which report would you like: | 6 | Should write report out to text file named “CandidatesOverallReport.txt”. A confirmation that the report has been generated will also be displayed | As expected | N/A |
|  | Which report would you like: | 7 | Exit to main menu screen | As expected |  |
|  | Which report would you like: | t | Error message should be displayed prompting the user to enter an integer. | As expected | N/A |

## Process Testing

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Test No.** | **Area Tested** | **Value/s Tested** | **Expected Outcome** | **Actual Outcome** | **Fix** |
|  | Add candidate input process | callum  mclaughlin  55  66  77  88  99 | When candidate fields are added in “Add Candidate” screen, the new candidate is then added to the candidate list. | As expected | N/A |
|  | Convert first char in forename to uppercase | callum | When the user enters the candidates forename in the add candidate menu, the first char of the forename will be forced to uppercase and this will be shown in the candidate list. | As expected | N/A |
|  | Convert first char in surname to uppercase | mclaughlin | When the user enters the candidates surname in the add candidate menu, the first char of the surname will be forced to uppercase and this will be shown in the candidate list. | As expected | N/A |
|  | Candidate number is incremented | callum  mclaughlin  55  66  77  88  99 | Candidate number should be incremented each time a new candidate is added to the candidate list through the add candidate menu. | As expected | N/A |
|  | Candidate average calculated and displayed correctly | Alex  Donnelly  40  70  55  74  80 | Candidate average should be worked out (63) and then displayed on the candidate list menu. | As expected | N/A |
|  | Sort by forename (A-Z) | 1 | Candidate list should be displayed and sorted by forename from A-Z | As expected | N/A |
|  | Sort by surname  (A-Z) | 2 | Candidate list should be displayed and sorted by surname from A-Z | As expected | N/A |
|  | Sort by average  (Low-High) | 3 | Candidate list should be displayed and sorted by average from Low-High | As expected | N/A |
|  | Exit. | 4 | Return the user to the main menu screen | As expected | N/A |
|  | Add candidate | Ree  Ree  3  4  55 | Input should be accepted and added to candidate list | Not as expected – The output messages were being highlighted in blue and when I returned to the menu the whole menu and text colour had changed  E:\Foundation Degree\Introduction to Programming\Assignment 2\Testing\Errors\Error2.png | Fixed the error by changing the “SetConsoleTextAttribute” in my SetCursor Function to match my system.color in the main method (Was 0x1B)  E:\Foundation Degree\Introduction to Programming\Assignment 2\Testing\Errors\Error2After.PNG |
|  | Update candidate forename | Update candidate no. 5 forename to  Paul | Candidate no.5 forename should be changed to Paul | As expected | N/A |
|  | Update candidate surname | Update candidate no. 5 forename to  Reid | Candidate no.5 surname should be changed to Reid | As expected | N/A |
|  | Update Mark 1 | Update candidate no. 5 mark1 to  0 | Candidate no.5 mark 1 should be changed to 0 | As expected | N/A |
|  | Update candidate Mark 2 | Update candidate no. 5 mark1 to  10 | Candidate no.5 mark 2 should be changed to 10 | As expected | N/A |
|  | Update candidate Mark 3 | Update candidate no. 5 mark1 to  20 | Candidate no.5 mark 2 should be changed to 20 | As expected | N/A |
|  | Update candidate Mark 4 | Update candidate no. 5 mark1 to  30 | Candidate no.5 mark 3 should be changed to 30 | As expected | N/A |
|  | Update candidate Mark 5 | Update candidate no. 5 mark1 to  40 | Candidate no.5 mark 4 should be changed to 40 | As expected | N/A |
|  | Update candidate Mark 5 | Update candidate no. 5 mark1 to  50 | Candidate no.5 mark 5 should be changed to 50 | As expected | N/A |
|  | Report Analysis Option 1 | 1 | Report should be written out to text file and user will receive a “Report Generated” message. | As expected | N/A |
|  | Report Analysis Option 2 | 2 | Report should be written out to text file and user will receive a “Report Generated” message. | As expected | N/A |
|  | Report Analysis Option 3 | 3 | Report should be written out to text file and user will receive a “Report Generated” message. | As expected | N/A |
|  | Report Analysis Option 4 | 4 | Report should be written out to text file and user will receive a “Report Generated” message. | As expected | N/A |
|  | Report Analysis Option 5 | 5 | Report should be written out to text file and user will receive a “Report Generated” message. | As expected | N/A |
|  | Report Analysis Option 6 | 6 | Report should be written out to text file and user will receive a “Report Generated” message. | As expected | N/A |
|  | Search by candidate forename | jason | Search by candidate forename when updating candidate details in the update menu | Not as expected – no matches are returned from the search because the entered name starts with a lowercase char.  E:\Foundation Degree\Introduction to Programming\Assignment 2\Testing\Errors\Error3.PNG | Added a line of code to my searchForename function that forces the first character of any string entered to a capital letter.  E:\Foundation Degree\Introduction to Programming\Assignment 2\Testing\Errors\Error3After.PNG |
|  | Search by candidate surname | donnelly | Search by candidate surname when updating candidate details in the update menu | Not as expected – no matches are returned from the search because the entered name starts with a lowercase char. | Added a line of code to my searchsurname function that forces the first character of any string entered to a capital letter. |