**Appendix 1: Test Log**

**Student Number: 13014362**

**Student Name: Federica La Marca**

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| **Test number** | **Test case** | **Test data** | **Expected result** | **Actual result** | **Comments** |
| *Number corresponding to design from the level 2 design.* | *Description of test* | *Data entered to test the program* | *Narrative describing what should happen* | *Narrative describing what actually happened* | *What you did to fix the error* |
| 1.1 | Check to see that menu loop works | Option = 1 | Should enter username part. | Displays message option 1 |  |
| 1.2 | Check to see that menu loop works | Option = 2 | Should enter password part. | Displays message option 2 |  |
| 1.3 | Check to see that menu loop works | Option = 3 | Stop the program. | No errors program terminates |  |
| 3.1 | Check to see if function getForename returns a string | Name = Federica | Function should return Federica | Federica returned correctly |  |
| 3.1 | Check to see if function getSurname returns a string | Name = blank | Function should cause an error | getSurname returned a blank | Need to create an error loop to catch a non-entry |
| 3.1 | Check to see if function getSurname returns a string | Name = 123 | Function should cause an error | getSurname returned a number | Need to create an error loop to catch a number |
| 3.1 | Check to see if function getSurname returns a string | Name = La Marca | Function should return La Marca | La Marca returned correctly |  |
| 3.2 | Check to see if string is capitalised | Name = Federica | Name is converted to FEDERICA | Name was correctly converted |  |
| 3.2 | Check to see if first character is copied from name | Name = Federica | Initial contains F | Name was correctly converted |  |
| 3.2 | Join forename and surname together | Forename = Federica  Surname = La Marca  Initial = F | Username should contain FLA MARCA | Username was successfully created |  |
| 3.4 | Check to see if getNumber returns an integer | Nos = 4 | Functions returns the value 4 | Function correctly returns number |  |
| 3.4 | Check to see if calcFactorial returns a number | Factorial = 24 | Functions returns the value 24 | Function correctly calculates factorial |  |
| 3.4 | Check to see if display returns the correct answer | Factorial = 24 | Functions returns the value 24 | Correct display |  |
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**Appendix 2: Data Dictionary – variables**

**Student Name: Federica La Marca**

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| **Variable Name** | **Data Type** | **Scope (global/local)** | **Description** |
| *Name of the variable used in the program* | *Java data type* | *Whether the variable is global or local (need to define what it is local to)* | *Narrative describing what the variable is used for in the program* |
| kboard | Scanner | Global | Used to allow user input from the keyboard |
| Forename | String | Local to getforename | Used to store the value of the forename entered |
| Surname | String | Local to getsurname | Used to store the value of the surname entered |
| Initial | Char | Local to displaydetails | Used to store the first character of the forename |
| Nos | Integer | Local to getNumber | Used to store the value of the number entered |
| Factorial | Integer | Local to calcFactorial | Used to calculate the factorial of the number entered |
| Forename | String | Local to main | Used to store the forename |
| Surname | String | Local to main | Used to store the surname |
| Dummy | String | Local to main | Used to strip unwanted return characters for the keyboard entry |
| choice | Integer | Local to main | To store the option entered by the user – used to determine whether to create a user name or a password |
| Nos | Integer | Local to main | Used to store the number |
| Factorial | Integer | Local to main | Used to store the factorial |
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**Appendix 3: Data Dictionary - functions**

**Student Name: Federica La Marca**

**Student Number: 13014362**

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| **Functions Name** | **Returning Value** | **Parameters Required** | **Description** |
| *Name of the function in the code* | *This is the type of value the function will return* | *This will define the type and the name of the parameters which will be required to make this function operate correctly* | *Narrative detailing what the function will do. It should detail any input/output requirements, calculations and a description of any constructs (selection/iterations) used* |
| getforename | String | Void | Will prompt the user to enter a forename |
| getsurname | String | Void | Will prompt the user to enter a surname |
| displaydetails | Void | String, String | The user forename and surname will be passed to the function. Will capitalise the forename and ‘remove’ the first character and then concatenate the surname which has also been capitalised |
| getNumber | Int | Void | Will prompt the user to enter a number |
| calcFactorial | Int | Int | Will calculate the factorial |
| display | Void | Int, Int | Will display the factorial |