**Assessment task 1**

**Requirements**

You are required to write a script to generate a username and calculate and display a times table based on user input.

The system will have a menu which will present the user with two choices:

Option 1 — will generate a username in the format of first initial and last name. The user will be prompted to enter their first and last name.

Option 2 — calculate and display a times table based on user input.

Option 3 – Exit program(alert – thanks for using)

The menu is required to run until the user enters the quit option.

**Instructions (do not include this in your Technical Manual)**

You may either embed your script within the HTML page or link to an external file. If you use an external file create a folder called task 1, inside this create a folder for your scripts called js. Your HTML file should be inside the task 1 folder and not the js folder.

**Detailed design**

|  |  |  |
| --- | --- | --- |
| **name** | **scope** | **description** |
| me | Global | Used to store name which is then used in alert boxes for each option |
| choice | Local to function menu() | Used in conjunction with prompt to hold value of input box from user. Will be in the form of two separate words separated by a space |
| user | Local to opt1() function | Used in conjunction with prompt to hold value of input box for name input |
| user\_name | Input parameter of create\_name() function | Parameter which holds the value of user from opt1() function and used throughout function create\_name() |
| string 1 | Local to create\_name() function | Variable used to store substring – first character of user\_name |
| len | Local to create\_name() function | Variable used to store length of username. Needed to manipulate username |
| pos | Local to create\_name() function | Variable to hold the position of the space between username |
| string2 | Local to create\_name() function | Variable to hold the substring of all characters after the space |
| count | Local to times\_table() function | Variable to hold start of for loop |
| user\_input | Input parameter of times\_table() function | Variable to hold user input |
| result | Local to times\_table () function | Variable to hold calculation of count and user input |
| display | Local to times\_table function | Variable to hold string of calculation output |

|  |  |
| --- | --- |
| **Name** | **Description** |
| menu() | Displays options to web page and displays a prompt for input. Repeats indefinitely until the user select the quit option. Methods will be called dependant on user input |
| opt1() | Displays an alert printing the value held in me variable and message informing that this is option 1. Then prompts for a name to be entered in the box. This is in the format of a first name and a last name and is stored in the variable user. The create\_name() method is then called passing the variable user as a parameter |
| opt2() | Displays an alert printing the value held in me variable and message informing that this is option 2. Calls times\_table() method |
| create\_name(username) | Carries out string manipulation on the parameter username. It extracts the first character then extracts the text after the space and joins the two to create the username. |
| times\_table() | Carries out iteration and calculation based upon user input to generate a times table. User prompted to enter a number between 1-12. Alert prints out times table based upon user input. E.G user enters 12, 12 times table printed in and alert box (1-12) |

**Module design**

1. enter your name into box

2. display detail of options to webpage

loop

3. prompt for and read value for choice

4 act on user choice

while choice is not 3 to end loop

**Level 2**

1. enter your name into box

2. display detail of options to webpage

do

3.1 prompt for and read value for choice

3.3 switch choice

case 1

4.1 call method opt1

break

case 2

4.2 call method opt2

3.4 while choice is not equal to 3 (quit option)

opt1()

4.1.1 print alert – me + “This is option 1”

4.1.2 prompt for and read value for user

4.1.3 call create\_name() passing user as parameter

opt2()

4.2.1 print alert – me + “This is option 2”

4.2.2 prompt for user to enter a value

4.2.3 Perform calculation to calculate times table based upon user input

4.2.4 Print times table in an alert box

5 create\_name(user)

5.1 assign first character of username to string1 using substr(0,1)

5.2 find length of username and assign to len

5.3 find position of the space in username using indexOf(" ")

5.4 assign substring of username staring at character after space to the end using substr(pos+1)

5.5 concatenate string 1 and string 2 and store in username

5.6 print welcome message to username in alert

**Test strategy**

All testing will be white box as it will be tested by the developer.

The system will be tested as it is developed. Methods will be created and the control of the program will be tested before any functionality is created. This will make use of stub testing which will be a simple output message.

Functionality will be tested in isolation once the method is completed. The results of this testing will be documented on the test logs. Functions will be tested to ensure that they are reliable on a standalone basis.

Once the entire program is completed performance testing will be carried out to ensure that the program meets the requirements and also that the execution is acceptable.

**Test log sheets**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Subroutine Name** | **Test Case** | **Test Data** | **Expected Result** | **Actual Result** | **Comments** |
| menu() | Enter a name in input box | gillian | Name accepted and displayed in welcome message | As expected |  |
|  | Menu option 1 | 1 | Message informing that this is option 1 with your name. | As expected |  |
|  | Menu option 2 | 2 | Message informing that this is option 2 with your name. | As expected |  |
|  | Menu option 3 | 3 | System exits and return to web page | As expected |  |
| opt 1 and create\_user | Create a username from two words | Pepe Bunny | Prompted to enter a name which is then displayed in an alert as PBunny | As expected |  |
| opt 1 and create\_user | Create a username from two words | Pepe Bunny Rabbit | Prompted to enter a name which is then displayed in an alert as PBunny | Not as expected | Creates a username with pbunny but has the word rabbit spaced from the username |
| opt 2 | Display times table based on user input set up | 6 | Times table based upon 6 calculated and displayed in alert box | As expected |  |

Test Screen Shots

Graphical user interface, application, Teams

Description automatically generated

Graphical user interface, application, Teams

Description automatically generated

Graphical user interface, application, Teams

Description automatically generated

Graphical user interface, application, Teams

Description automatically generated

Graphical user interface, application, Teams

Description automatically generated

Graphical user interface, application, Teams

Description automatically generated

Graphical user interface, table

Description automatically generated