|  |  |  |  |
| --- | --- | --- | --- |
| **Must** | **Should** | **Could** | **Won’t** |
| * Choose random word * Check if letter is in word * Detect win or loss * Work on a laptop * Be free | * Text as AAA rated * Allow operation via keyboard * Deactivate letter after selection * Use family symbolism * Store no data | * Keep win/loss record * Don’t repeat correctly guessed words | * Share to social media * Have multiplayer |

**Prescribed Requirements**

|  |  |
| --- | --- |
| **Requirement** | **Criteria** |
| Choose random word | Application will be run 10 times to ensure different words are chosen |
| Check if letter is in word | Display chosen word in terminal and then click on letters in the word |
| Detect win or loss | Display chosen word in terminal and then purposely win and lose the game |
| Work on a laptop | Run the game on a laptop |
| Be free | Assets are checked to ensure they are open-source or royalty free |

**Self-determined Requirements**

|  |  |
| --- | --- |
| **Requirement** | **Criteria** |
| Text as AAA rated | Use readability tools to ensure AAA rating |
| Allow operation via keyboard | Check all buttons can be accessed using a keyboard |
| Deactivate letter after selection | Check that all letter buttons can only be clicked once |
| Use family symbolism | Ask testers if the symbols used are familiar |
| Store no data | Ensure no files are written to storage |

**get\_word**

|  |  |  |
| --- | --- | --- |
| **Input** | **Process** | **Output** |
| word\_file | BEGIN get\_word  word\_list = READ word\_file  word = NULL  WHILE word <= 3  word = SELECT RANDOM from word\_list  ENDWHILE  RETURN word  END get\_word | word |

**Check letter**

|  |  |  |
| --- | --- | --- |
| **Input** | **Process** | **Output** |
| word  guessed\_word  guess  gallows | 1 BEGIN check\_letter  2 in\_word = FALSE  3 INPUT guess  4 FOR count = 0 to LEN(word)  5 IF guess == word[count]  6 guessed\_word[count] = guess  7 in\_word = TRUE  8 ENDIF  9 NEXT count  10 ENDFOR  11 IF in\_word == FALSE  12 gallows = gallows + 1  13 ENDIF  14 DISPLAY gallows  15 DISPLAY guessed\_word  16 END check\_letter | gallows  guessed\_word |

**Check letter**

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Line** | **word** | **guessed\_word** | **in\_word** | **guess** | **count** | **gallows** | **Conditions** | **Input/output** |
| 1 | DIG | \_ \_ \_ |  |  |  | 3 |  |  |
| 2 |  |  | F |  |  |  |  |  |
| 3 |  |  |  | I |  |  |  | guess ? I |
| 4 |  |  |  |  | 0 |  | 0 < 3 ? is T |  |
| 5 |  |  |  |  |  |  | I == D ? is F |  |
| 9 |  |  |  |  | 1 |  |  |  |
| 4 |  |  |  |  |  |  | 1 < 3 ? is T |  |
| 5 |  |  |  |  |  |  | I == I ? is T |  |
| 6 |  | \_ I \_ |  |  |  |  |  |  |
| 7 |  |  | T |  |  |  |  |  |
| 9 |  |  |  |  | 2 |  |  |  |
| 4 |  |  |  |  |  |  | 2 < 3 ? is T |  |
| 5 |  |  |  |  |  |  | I == G ? is F |  |
| 9 |  |  |  |  | 3 |  |  |  |
| 4 |  |  |  |  |  |  | 3 < 3 ? is F |  |
| 11 |  |  |  |  |  |  | T == F ? is F |  |
| 14 |  |  |  |  |  |  |  | gallows = 3 |
| 15 |  |  |  |  |  |  |  | guessed\_word = \_ I \_ |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Line #** | **discount** | **price** | **Conditions** | **Input/Output** |
| 1 |  |  |  |  |
| 2 |  | 200 |  | price ? 200 |
| 3 |  |  | 200 > 100 ? is T |  |
| 4 | 200 \* 15 / 100 = 30 |  |  |  |
| 5 |  | 200 - 30 = 170 |  |  |
| 6 |  |  |  |  |
| 7 |  |  |  | price = 170 |
| 8 |  |  |  |  |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Line #** | **discount** | **price** | **Conditions** | **Input/Output** |
| 1 |  |  |  |  |
| 2 |  | 50 |  | price ? 50 |
| 3 |  |  | 50 > 100 ? is F |  |
| 6 |  |  |  |  |
| 7 |  |  |  | price = 50 |
| 8 |  |  |  |  |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Line #** | **x** | **xSquared** | **Conditions** | **Input/Output** |
| 1 |  |  |  |  |
| 2 |  |  |  | X, X Squared |
| 3 | 1 |  | 1 <= 3 ? T |  |
| 4 |  | 1 \* 1 = 1 |  |  |
| 5 |  |  |  | x = 1, xSquared = 1 |
| 6 | 1 + 1 = 2 |  |  |  |
| 3 |  |  | 2 <= 3 ? is T |  |
| 4 |  | 2 \* 2 = 4 |  |  |
| 5 |  |  |  | x = 2, xSquared = 4 |
| 6 | 2 + 1 = 3 |  |  |  |
| 3 |  |  | 3 <= 3 ? is T |  |
| 4 |  | 3 \* 3 = 9 |  |  |
| 5 |  |  |  | x = 3, xSquared = 9 |
| 6 | 3 + 1 = 4 |  |  |  |
| 3 |  |  | 4 <= 3? is F |  |
| 7 |  |  |  |  |
| 8 |  |  |  | ----------- |
| 9 |  |  |  |  |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Feature** | **Input** | **Expected Output** | **Actual Output** | **Action** |
| Entering date | 12/04/2022 | Value accepted | Value accepted | NA |
| Entering date | 35/13/2022 | Value rejected | Value accepted | Limit to valid dates |
| Entering date | 12/04/2035 | Value rejected | Value accepted | Limit to past dates |
| Entering email | info@test.com | Value accepted | Value accepted | NA |
| Entering email | Info.test | Value rejected | Value rejected | NA |

**check\_if\_adult(age)**

|  |  |  |  |
| --- | --- | --- | --- |
| **age** | **Expected Output** | **Actual Output** | **Action** |
| 10 | False | False | NA |
| 40 | True | True | NA |
| 17 | False | False | NA |
| 19 | True | True | NA |
| 18 | True | False | Check boundary cut-off |

|  |  |  |  |
| --- | --- | --- | --- |
| **Component** | **Concern** | **Data** | **Recommendation** |
| Database repopulation | Taking too long | 1 minute 20 secs to load | Only repopulate data upon update |
| UI Text | Too hard to read | Identified by 7/10 testers | Increase font size and contrast |
|  |  |  |  |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Category** | **Impact** | **Rating** | **Justification** | **Recommendation** |
|  |  |  |  |  |

|  |  |  |  |
| --- | --- | --- | --- |
| **Requirement** | **Criteria** | **Rating** | **Recommendation** |
|  |  |  |  |