**Introduction**

The objective of this assignment is to create a hangmanesque game in python. The wordbank is scraped from a website and stored in a Microsoft Excel file. A random word is selected from the Excel file and the user attempts to guess the word one letter at a time. They can make five wrong attempts before the game is lost.

**Table of Functions**

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| **Function Prototypes** | **Purpose** |
| Scrape\_website()  Download website using requests.get  Create a BeautifulSoup object using downloaded website  Search use BeautifulSoup’s select() to search html for 1000 most commonly used wor4ds  Split() words into list  Return list | Scrape the 1000 most commonly used English words from a website and return them in a list |
| Setup\_excel(list)  Create new Workbook()  Create variable to hold active sheet  For x in range len(list)  Fill column A with list from previous function  Save workbook  Return sheet | Send the 1000 words to an Excel spreadsheet, store in column A, return sheet object so workbook can be accessed later |
| Get\_random\_word(sheet, length)  Generate random int from (0, length)  Go to cell “A” + random int, grab value attribute  Return word | Grab and return a random word from the excel spreadsheet |
| Validate\_guess(guess)  If the length of guess is not 1  Return false  If not alphabetic  Return false  Else  Return true | Take an inputted guess from the user and make sure it’s a single, alphabetical letter |
| Update\_scoreboard(guess, attempts, word, list)  If guessed letter is in word  For x in range(length of word)  If letter in word matches guessed letter  Replace corresponding value in list with  guessed letter  else  decrease number of attempts left by 1  print new number of attempts  print(join(list)) to changes in progress  #Note: find out how to change existing output | Update the program’s output to show changes in number of attempts and correctly guessed letters |
| Final\_message(attempts, guessed\_word)  If there are 0 attempts for guessed\_word is False  Print “You lost!”  Else  Print “You won!” | Print a message depending on whether the user won or lost the game |
| Main()  Entries = scrape\_website()  Sheet = setup\_excel()  Random\_word = get\_random\_word()  Attempts = 5  Guessed\_word = False  Progress = [“\_” for x in range(len(random\_word))]  Create scoreboard using a few print function  While there are attempts left and words isn’t guessed  Get input guess from user  If validate\_guess()  Update\_scoreboard()  Else  Print “Invalid attempt”  Final\_message | Pull together above functions to create the hangman game |

**Program Snapshots**

When the program is started

**A black screen with white text

Description automatically generated**

when “a” is entered

**A black screen with white text

Description automatically generated**

when “;” is entered

A black screen with white text

Description automatically generated

When “z” is entered

A black screen with white text

Description automatically generated

When the number of attempts reaches 0, program exits

A black screen with white text

Description automatically generated

When the word is guessed correctly , program exits

A black screen with white text

Description automatically generated

**Group Members & Respective Roles**

* Riley (implemented web-scraping and excel-related functionalities)
* Kylie (implemented game mechanics)