

# INLS 560 – Lab 4: Wheel of Fortune

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## Description

For this assignment, you will create a program that is a simple game of Wheel of Fortune

([http://en.wikipedia.org/wiki/Wheel\\_of\\_Fortune\\_\(U.S.\\_game\\_show\)](http://en.wikipedia.org/wiki/Wheel_of_Fortune_(U.S._game_show))). You can work in groups of two or three.

Here are the details:

1. Download a file named WheelOfFortune.py
2. Read in a file that has puzzles and store the puzzles in a list
3. Read in a file that has scores for the wheel and store the scores in a list
4. Choose a random puzzle
5. Display the puzzle to the user as underscores
6. Ask three players to enter their name
7. Tell the first player his or her name and score (initially the score is 0)
8. Ask the player to spin or solve the puzzle
  - a. If the player chooses spin, randomly choose a value from the list of scores
    - i. A value of -1 is Bankrupt and the player loses his or her turn and the score is set to 0
    - ii. A value of -2 is Lose a Turn. The player loses his or her turn.
    - iii. If the player gets a value other than -1 and -2, ask the player to buy a letter.
    - iv. If the letter is in the puzzle, display the puzzle with the letter showing
    - v. If the letter is not in the puzzle, the player loses his or her turn
    - vi. If the letter is already guessed, the player loses his or her turn (**this means you must use a list to keep up with previous guesses**)
  - b. If the player chooses solve the puzzle, ask the player to enter in the puzzle
    - i. Check to see if the player's input matches the puzzle
    - ii. If the player's input matches the puzzle, show the player his or her current score, and end the game
    - iii. If the player's input does not match the puzzle, the player loses his or her turn
9. If the player guesses a correct letter
  - a. Show the player his/her score
  - b. Display the puzzle with the letter the player guesses
10. If the player goes bankrupt or loses his turn

- a. Show the next player his/her score
  - b. Ask the player if he/she wants to spin or solve
11. Continue playing the game until a player solves the puzzle or guesses all letters

## Lab Specification

Write a python program with the following functions

- `spin_wheel (wheel_values)`
  - `wheel_values` is a list of wheel values
  - returns a randomly chosen `wheel_value` from the `wheel_values` list
- `choose_puzzle(wheel_puzzles)`
  - `wheel_puzzles` is a list of wheel puzzles
  - returns a randomly chosen `wheel_puzzle` from the `wheel_puzzles` list
- `is_guess_in_puzzle (user_guess, puzzle)`
  - `user_guess` is a string guessed by the user
  - `puzzle` is a string that represents the current puzzle
  - returns **True** if the `user_guess` is in the `puzzle`
  - returns **False** if the `user_guess` is **not** in the `puzzle`
- `compute_player_score( number_of_times_letter_is_in_puzzle, spin_value)`
  - `number_of_times_letter_is_in_puzzle` is the number of times a user's guess is in the puzzle
  - `spin_value` is the value the current player got when he/she spinned the wheel
  - computes the score of the current player
    - (the number of times the letter is in the word \* `spin_value`)
  - Returns the players score and adds this value to their current score
- `play_game(under_score_puzzle, puzzle, wheel_values)`
  - `under_score_puzzle` is the puzzle but the letters are replaced with underscores
  - `puzzle` is the puzzle with letters

- wheel\_values is the list of wheel\_values
- This function plays the game until the user solves the puzzle or all the letters are guessed (HINT: you should use a while loop to continue playing the game)

If a player's guess is in the puzzle, you must call the transform\_puzzle function to replace the underscore with the guess.

Example:

- puzzle\_with\_underscores\_and\_letters = transform\_puzzle(user\_guess, puzzle, under\_score\_puzzle)
- puzzle\_with\_underscores\_and\_letters = "".join(puzzle\_with\_underscores\_and\_letters)

The puzzle\_with\_underscores\_and\_letters variable contains letters and underscores

## Sample Interactions (Green is user input)

### Asking for the user's names, asking the user to spin or solve, showing the user guess a letter not in the puzzle, losing a turn

Player 1 please enter your name: *Jason*  
Player 2 please enter your name: *Shaun*  
Player 3 please enter your name: *Lamont*  
Jason  
The puzzle is \_ \_ \_ \_ \_  
You have 0 dollars  
What would you like to do Spin (spin) or Solve (solve): *spin*  
Your spin is: 300  
Please guess a vowel or a consonant: *s*  
Jason  
The puzzle is \_ \_ \_ \_ \_s  
You have 300 dollars  
What would you like to do Spin (spin) or Solve (solve): *spin*  
Your spin is: Lose Turn  
You lose and your turn.  
Shaun  
The puzzle is \_ \_ \_ \_ \_s  
You have 0 dollars  
What would you like to do Spin (spin) or Solve (solve): *spin*  
Your spin is: 350  
Please guess a vowel or a consonant: *l*  
Your letter is not in the puzzle  
Lamont  
The puzzle is \_ \_ \_ \_ \_s  
You have 0 dollars  
What would you like to do Spin (spin) or Solve (solve): *spin*  
Your spin is: 350  
Please guess a vowel or a consonant: *m*  
Lamont  
The puzzle is \_ m \_ \_ \_ \_s  
You have 350 dollars  
What would you like to do Spin (spin) or Solve (solve): |

### Guessing a letter already in the puzzle

Lamont

The puzzle is \_ \_ \_ \_ \_ s

You have 0 dollars

What would you like to do Spin (spin) or Solve (solve): *spin*

Your spin is: 350

Please guess a vowel or a consonant: *m*

Lamont

The puzzle is \_ m \_ \_ \_ s

You have 350 dollars

What would you like to do Spin (spin) or Solve (solve): *spin*

Your spin is: 900

Please guess a vowel or a consonant: *s*

Your letter s has already been guessed.

Jason

The puzzle is \_ m \_ \_ \_ s

You have 300 dollars

What would you like to do Spin (spin) or Solve (solve):

### Solving a puzzle

What would you like to do Spin (spin) or Solve (solve): *spin*

Your spin is: 300

Please guess a vowel or a consonant: *h*

Jason

The puzzle is a mother \_ ear a \_ her \_ u \_ s

You have 13300 dollars

What would you like to do Spin (spin) or Solve (solve): *spin*

Your spin is: 350

Please guess a vowel or a consonant: *b*

Jason

The puzzle is a mother bear a \_ her \_ u b s

You have 14000 dollars

What would you like to do Spin (spin) or Solve (solve): *solve*

Please enter the letters of the puzzle: *a mother bear and her cubs*

You win!

You won 14000 dollars total!

The phrase was a mother bear and her cubs