

Solo Wheel of Fortune

Starting from the provided `wof_analysis.py` template, program a variation of the game Wheel of Fortune for a single player. Wheel of Fortune is a phrase guessing game based on Hangman. Your single player version of the game will have four rounds. In each round, a phrase selected at random from the `phrases.txt` file will be presented to the player with each of the letters in the phrase displayed as underscores (punctuation and spaces are displayed unmodified). Beneath the phrase, a status bar should be displayed that contains three elements; a list of the unused consonants, a list of the unused vowels, and the sum of the player's cash earnings for the current round. During each round, the player will try to identify the phrase by taking one of the following four actions:

Spin the wheel If the player chooses to spin the wheel, the program should make sure there are consonants left to choose and then call a function named `spin_the_wheel` which returns at random a value from a virtual wheel that contains the following 21 spaces: five \$500, one \$550, four \$600, three \$650, three \$700, one \$800, one \$900, one \$2,500, and two 'BANKRUPT'. The cash values should be returned as numbers, 'BANKRUPT' should be returned as a string. If 'BANKRUPT' is chosen, the player's cash earnings for the round are set to zero and the turn ends. If a dollar amount is chosen, the player is asked to choose a consonant from the list of unused consonants. All occurrences of the guessed letter are revealed and the player earns the dollar amount of the spin multiplied by the number of times the guessed letter appears in the phrase. When the player is choosing a consonant, input should not be case sensitive, and if the player enters anything other than a consonant that has not already been used, the program should provide an appropriate error message and allow the user to try again.

Buy a vowel Vowels cost \$250. If the player chooses to buy a vowel, the program should make sure that there are vowels left to purchase and that the player has enough cash in the current round. Players cannot use cash earned in previous rounds to buy vowels at the beginning of subsequent rounds. The player is then asked to choose a vowel from the list of unused vowels. All occurrences of the guessed letter are revealed and the player's earnings for the round are reduced by \$250. When the player is choosing a vowel, input should not be case sensitive, and if the player enters anything other than a vowel that has not already been used, the program should provide an appropriate error message and allow the user to try again.

Solve the puzzle If the player chooses to solve the puzzle, they are presented a prompt displaying the phrase (with guessed letters revealed) aligned above a space to enter their guess. If the player guesses the phrase correctly, the round ends and they win the larger of their earnings for the round or \$1000. If the player guesses incorrectly, the round ends and the player earns nothing for that round. Attempting to solving the puzzle is the only way to end a round.

Quit the game Any time the main menu is shown, the player may choose to quit. If the player chooses to quit, their earnings for the current round are set to zero, then the program will display their earnings for the current round (\$0) and their total earnings for all rounds before the program ends.

The player can take as many turns in a round as necessary to solve the puzzle, but if they run out of consonants and vowels, the only options allowed should be solving the puzzle or quitting the game. At the end of each round, the program displays the player's earnings for the round before proceeding to start the next round. After the fourth round has finished or the player chooses to quit, the player's total earnings should be displayed.

Other than the function `spin_the_wheel` described above, you are free to design your program however you like. You may use object-oriented programming, but are not required to do so.

Test your program thoroughly. Format your program to match the samples below. Your output should exactly match the sample output, character for character, including all white space and punctuation. User input in the sample has been highlighted in **Pappy's Purple** to distinguish it from the program's output, but your user input does not need to be colored. Save your program as `solo_wof.py` and submit it. Screenshots are not required.

Terminal

```

$ python solo_wof.py
::::::::::::::::::::::::::::::::::::::::::::::::::::: ROUND 1 of 4 ::
::          _____ - _____          ::
:::::::::::::::::::::::::::::::::::::::::::::::::::::
::  BCDFGHJKLMNPQRSTVWXYZ  ::  AEIOU  ::          $0 ::
:::::::::::::::::::::::::::::::::::::::::::::::::::::
What would you like to do?
  1 - Spin the wheel
  2 - Buy a vowel
  3 - Solve the puzzle
  4 - Quit the game
Enter the number of your choice: 1
The wheel landed on $650.
Pick a consonant: a
Vowels must be purchased.
Pick a consonant: 5
The character 5 is not a letter.
Pick a consonant: spam
Please enter exactly one character.
Pick a consonant: l
I'm sorry, there are no L's.
::::::::::::::::::::::::::::::::::::::::::::::::::::: ROUND 1 of 4 ::
::          _____ - _____          ::
:::::::::::::::::::::::::::::::::::::::::::::::::::::
::  BCDFGHJK MNPQRSTVWXYZ  ::  AEIOU  ::          $0 ::
:::::::::::::::::::::::::::::::::::::::::::::::::::::
What would you like to do?
  1 - Spin the wheel
  2 - Buy a vowel
  3 - Solve the puzzle
  4 - Quit the game
Enter the number of your choice:

```

Note that incorrect input is handled and that 'L' is removed from the list of unused consonants.

Terminal

```
Enter the number of your choice: 1
The wheel landed on $700.
Pick a consonant: l
The letter L has already been used.
Pick a consonant: b
There is 1 B, which earns you $700.
:::::::::::::::::::::::::::::::::::::::::::: ROUND 1 of 4 ::
::          _B_____          ::
::::::::::::::::::::::::::::::::::::::::::::
::      DFGHJK MNPQRSTVWXYZ    ::      AEIOU      ::      $700 ::
::::::::::::::::::::::::::::::::::::::::::::
What would you like to do?
  1 - Spin the wheel
  2 - Buy a vowel
  3 - Solve the puzzle
  4 - Quit the game
Enter the number of your choice:
```

Note that when a correct choice is made, the letter is revealed in the phrase and removed from the list of unused consonants. The player also earned \$700 which is shown on the right of the status bar.

Terminal

```
::::::::::::::::::::::::::::::::::::::::::::::::::::::: ROUND 1 of 4 ::
::          _P_____ _ _____ _B_____ ::
::::::::::::::::::::::::::::::::::::::::::::::::::::::::::::::::::::
::      DFGHJK MN QRSTVWXYZ      ::      AEIOU      ::      $3,200 ::
::::::::::::::::::::::::::::::::::::::::::::::::::::::::::::::::::::
What would you like to do?
  1 - Spin the wheel
  2 - Buy a vowel
  3 - Solve the puzzle
  4 - Quit the game
Enter the number of your choice: 2
Pick a vowel: e
There are 4 E's.
::::::::::::::::::::::::::::::::::::::::::::::::::::: ROUND 1 of 4 ::
::          _PE_____ _ _E_E__E_ _B_____ ::
::::::::::::::::::::::::::::::::::::::::::::::::::::::::::::::::::::
::      DFGHJK MN QRSTVWXYZ      ::      A IOU      ::      $2,950 ::
::::::::::::::::::::::::::::::::::::::::::::::::::::::::::::::::::::
What would you like to do?
  1 - Spin the wheel
  2 - Buy a vowel
  3 - Solve the puzzle
  4 - Quit the game
Enter the number of your choice:
```

Note that even though there are four E's, the player pays a flat \$250. Also note the comma in the round earnings over \$1,000.

Terminal

```
Enter the number of your choice: 2
Pick a vowel: e
The letter E has already been purchased.
Pick a vowel: r
Consonants cannot be purchased.
Pick a vowel: spam
Please enter exactly one character.
Pick a vowel: $
The character $ is not a letter.
Pick a vowel: u
I'm sorry, there are no U's.
:::::::::::::::::::::::::::::::::::::::::::::::::::: ROUND 1 of 4 ::
::                _PE_____ _ _E_E__E_ _B_____ ::
::::::::::::::::::::::::::::::::::::::::::::::::::::
::      CDFGHJK MN QIRSTVWXYZ    ::      A IO      ::      $2,700 ::
::::::::::::::::::::::::::::::::::::::::::::::::::::
What would you like to do?
    1 - Spin the wheel
        2 - Buy a vowel
        3 - Solve the puzzle
        4 - Quit the game
Enter the number of your choice:
```

Improper vowel input is handled, 'U' is removed from the list of vowels and \$250 is deducted even though there are no U's.

Terminal

```

::::::::::::::::::::::::::::::::::::::::::::::::::::: ROUND 1 of 4 ::
::                _PE_____ A _E_E__E_ AB_OA_                ::
::::::::::::::::::::::::::::::::::::::::::::::::::::::::::::::::
::      D GHJK MN QRST          ::      I U      ::      $2,450 ::
::::::::::::::::::::::::::::::::::::::::::::::::::::::::::::::::
What would you like to do?
  1 - Spin the wheel
  2 - Buy a vowel
  3 - Solve the puzzle
  4 - Quit the game
Enter the number of your choice: 1
The wheel landed on BANKRUPT.
You lost $2,450!
::::::::::::::::::::::::::::::::::::::::::::::::::::: ROUND 1 of 4 ::
::                _PE_____ A _E_E__E_ AB_OA_                ::
::::::::::::::::::::::::::::::::::::::::::::::::::::::::::::::::
::      D GHJK MN QRST          ::      I U      ::      $0 ::
::::::::::::::::::::::::::::::::::::::::::::::::::::::::::::::::
What would you like to do?
  1 - Spin the wheel
  2 - Buy a vowel
  3 - Solve the puzzle
  4 - Quit the game
Enter the number of your choice:

```

The wheel landed on 'BANKRUPT' so the player's cash for this round is zeroed. Cash earned from previous rounds is kept but is not displayed.

Terminal

```

Enter the number of your choice: 1
The wheel landed on $550.
Pick a consonant: s
There are 3 S's, which earns you $1,650.
::::::::::::::::::::::::::::::::::::::::::::::::::::: ROUND 1 of 4 ::
::                SPE_____ A SE_ES_E_ AB_OA_                ::
::::::::::::::::::::::::::::::::::::::::::::::::::::::::::::::::
::      D GHJK MN QR T          ::      I U      ::      $1,650 ::
::::::::::::::::::::::::::::::::::::::::::::::::::::::::::::::::
What would you like to do?
  1 - Spin the wheel
  2 - Buy a vowel
  3 - Solve the puzzle
  4 - Quit the game
Enter the number of your choice:

```

Here there are three S's so the player earns $3 \times \$550$ which is equal to \$1,650. Note the comma in the spin earnings and round cash.

Terminal

```
What would you like to do?
 1 - Spin the wheel
 2 - Buy a vowel
 3 - Solve the puzzle
 4 - Quit the game
Enter the number of your choice: solve
solve is an invalid choice.
What would you like to do?
 1 - Spin the wheel
 2 - Buy a vowel
 3 - Solve the puzzle
 4 - Quit the game
Enter the number of your choice:
```

Invalid menu selections are handled.

Terminal

```
Enter the number of your choice: 3
Enter your solution.
  Clues: SPE_____ A SE_ES_E_ AB_OA_
  Guess: spending a semester abroad
Ladies and gentlemen, we have a winner!
You earned $1,650 this round.
::::::::::::::::::::::::::::::::::::::::::::::::::::::::::::::::::::::::: ROUND 2 of 4 ::
::                               -----  _ _ _ _ _  ::
:::::::::::::::::::::::::::::::::::::::::::::::::::::::::::::::::::::::::
::  BCDFGHJKLMNPQRSTVWXYZ  ::  AEIOU  ::  $0  ::
:::::::::::::::::::::::::::::::::::::::::::::::::::::::::::::::::::::::::
What would you like to do?
 1 - Spin the wheel
 2 - Buy a vowel
 3 - Solve the puzzle
 4 - Quit the game
Enter the number of your choice:
```

Solving displays the current state of the phrase aligned above the input area. Input is not case sensitive. If the cash earned for the round is less than \$1,000, it will be increased to \$1,000 for winning. The winnings for the round are displayed and the second round starts with the round cash set back to zero and the unused letters reset. Punctuation in the phrase is displayed from the beginning.

Terminal

```
Enter the number of your choice: 2
You need at least $250 to buy a vowel.
::::::::::::::::::::::::::::::::::::::::::::::::: ROUND 2 of 4 ::
::          -----  --  ---  -----          ::
:::::::::::::::::::::::::::::::::::::::::::::::::
::  BCDFGHJKLMNPQRSTVWXYZ  ::  AEIOU  ::          $0 ::
:::::::::::::::::::::::::::::::::::::::::::::::::
What would you like to do?
  1 - Spin the wheel
  2 - Buy a vowel
  3 - Solve the puzzle
  4 - Quit the game
Enter the number of your choice:
```

You must have at least \$250 to buy a vowel.

Terminal

```
Enter the number of your choice: 1
The wheel landed on $600.
Pick a consonant: l
There are 4 L's, which earns you $2400.
:::::::::::::::::::::::::::::::::::::::::::: ROUND 2 of 4 ::
::          __LL__  __ _LL-_____          ::
::::::::::::::::::::::::::::::::::::::::::::
::   BCDFGHJK MNPQRSTVWXYZ    ::   AEIOU    ::       $2,400 ::
::::::::::::::::::::::::::::::::::::::::::::
What would you like to do?
  1 - Spin the wheel
  2 - Buy a vowel
  3 - Solve the puzzle
  4 - Quit the game
Enter the number of your choice: 3
Enter your solution.
Clues: __LL__  __ _LL-_____
Guess: i don't know
I'm sorry. The correct solution was:
PULLING AN ALL-NIGHTER
You earned $0 this round.
:::::::::::::::::::::::::::::::::::::::::::: ROUND 3 of 4 ::
::          _____  __ _____          ::
::::::::::::::::::::::::::::::::::::::::::::
::   BCDFGHIJKLMNPQRSTVWXYZ    ::   AEIOU    ::       $0 ::
::::::::::::::::::::::::::::::::::::::::::::
What would you like to do?
  1 - Spin the wheel
  2 - Buy a vowel
  3 - Solve the puzzle
  4 - Quit the game
Enter the number of your choice:
```

Failing to solve the puzzle ends the round with no cash earned.

Terminal

```
Enter the number of your choice: 4
You earned $0 this round.
Thanks for playing!
You earned a total of $1,650.
```

When the game ends, either because the player quit or because they completed the fourth round, they are thanked for playing and their total cash earned over all rounds is displayed.

Terminal

```
..... ROUND 1 of 4 ::
::          SPENDING A SEMESTER ABROAD          ::
.....
::          ::          ::          $1,250 ::
.....
What would you like to do?
  1 - Spin the wheel
  2 - Buy a vowel
  3 - Solve the puzzle
  4 - Quit the game
Enter the number of your choice: 1
There are no more consonants to choose.
..... ROUND 1 of 4 ::
::          SPENDING A SEMESTER ABROAD          ::
.....
::          ::          ::          $1,250 ::
.....
What would you like to do?
  1 - Spin the wheel
  2 - Buy a vowel
  3 - Solve the puzzle
  4 - Quit the game
Enter the number of your choice: 2
There are no more vowels to buy.
```

When all of the consonants or vowels have been used, spinning the wheel and buying a vowel are no longer allowed. Also note that the player does not win the round just because the entire phrase is revealed. They still need to choose the solve option and correctly enter the phrase.