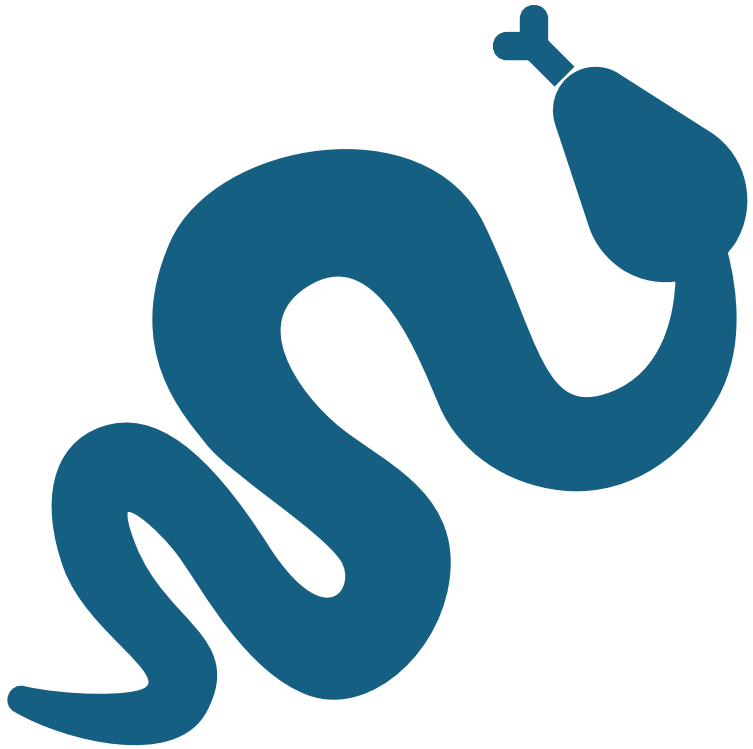


Lesson 6

Python Fundamental

Revisit

Text File Handling: Read, Create

Variable Scope: with block

Define a Function

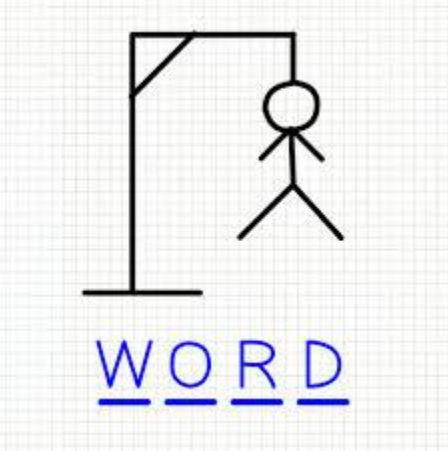
Project: Hangman Game

Technique We've Learned

- Random Library
- Decision Making: if-elif-else
- Logical Operators (==, !=, <, <=, >, >=)
- Boolean Operators (and, or, not)
- Boolean Values (True / False)
- range(start, stop, step) function
- Control Structure: for loop, while loop
- Text File Handling: create, write, append, read
- Define a Function

Develop Hangman Game

- Create a Hangman game:
  - Computer to pick a word from LIST
  - Give the player a hint
  - Player to guess the word one letter at a time
  - Allowed a limited number of incorrect guesses



https://poki.com/en/g/hangman

What We Need?

Define a list of word

Set number of attempts

Start a while loop for user to input a character until no attempts allowed and not bingo

If the letter in the word, print it out. If all letters match the word, print a “Congratulations” message.

Otherwise, deduct attempts. If attempts reaching zero, game over

1. Hangman – Pick a Word

Use data type **list** to store list of word

Use random library **random.choice(listOfWord)** to pick one word from the list

2. Hangman – Setup Variables

Variables we need:

Usage	Variable Name	Data Type	Initial Value
The word pick randomly	`answer`	String	Return a random word
User's guess	`guesses`	List	[]
Number of attempts	`attempts`	Integer	5 (mx 5 attempts)
Boolean of guess match status	`guess_matches`	Boolean	False

3. Hangman – Main Loop

Create	Create a while loop to execute for 2 conditions (using `and`): attempts > 0 and not guess_matches
Ask	Ask user to guess one character – make sure user only input 1 character
Append	Append the character to the list variable guesses
Subtract	Subtract a chance from attempts

3.1 Hangman – Main Loop Continue

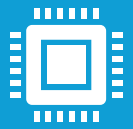
- Ask user input ONE character
- Append the letter to user guess variable
- Deduct attempts
- Loop through each character of the answer and compare with input letter
- Generate the prompt. Example, '_pp__' (for the prompt of apple)

3.2 Hangman – Main Loop Continue

Check if the prompt exactly match variable answer.

Assign True to variable **guess_matches** and print a congratulations message then exit the game.

Otherwise, show the prompt



At the end, if guess_matches is False after attempts reach the maximum number of attempts, print failure and game over message.

Exercise

No exercise for this week

If you didn’t finish hangman, finish it at home