

## Lab 08 - The Same As Before

### Instructions:

- The lab requires completing a few tasks.
- Your submissions must be submitted to the GitHub repository in the Lab08 directory.
- Cheating of any kind is prohibited and will not be tolerated.
- Violating and failing to follow any of the rules will result in an automatic zero (0) for the lab.

TO ACKNOWLEDGE THAT YOU HAVE READ AND UNDERSTOOD THE INSTRUCTIONS ABOVE, AT THE BEGINNING OF YOUR SUBMISSION(S), ADD A COMMENT THAT CONSISTS OF YOUR NAME AND THE DATE.

### Grading

Task	Maximum Points	Points Earned
1	2.5	
2	2.5	
<b>Total</b>	5	

Note: solutions will be provided for tasks colored blue only.

## Task 1

Your objective is to create a number-guessing game in Python. Your program **must**

1. Select a random integer between 1 and 100 inclusively to be the number.
2. Continually prompt the user to guess the number until the user guesses correctly or runs out of chances (maximum 10).
3. After each incorrect guess state if the user's guess was hot, warm, cold, or freezing which implies the user's guess was in a range of 5, 10, 20, or above 20 from the number, respectively.
4. If the user runs out of chances, state the number.
5. If the user guesses correctly, congratulate the user.

## Task 2

Your objective is to create a hangman game in Python. Your program **must**

1. Create an array initialized to the words "spare", "spark", "start", "smart", "store" and "stone".
2. Assign a string a random word from the array.
3. Initialize another string to -----. (this should be a list)
4. Continually prompt the user to guess a letter until the user guesses all the letters of the word or runs out of chances (maximum 3).
5. Before each prompt, display the second string with the valid guesses filled in.
6. Count an invalid or repeated valid guess as a chance.
7. If the user runs out of chances, display the word.
8. If the user guesses correctly, congratulate the user.

## Extra Credit

Your objective is to create a Tic-Tac-Toe game using functions in Python. The tokens for the players are X and O, respectively, and the grid has three tokens on each of the three rows with them separated by a comma as follows

```
V:V:V
V:V:V
V:V:V
```

where V is either a token or a blank. Your program cannot use global variables and **must**

1. Define a function that displays the game grid and the current player.
2. Define a function that continually prompts the user to enter a valid grid position until one is received where a valid grid position is a valid unoccupied grid coordinate, and then, populates the grid position with the current player's token.
3. Define a function that checks if a player won the game.
4. Define a function that checks if the game ended; either a player won or no more moves are available.
5. Define a function that initializes the game and runs until the game ends.