

Tasks for Processing 1D Lists

These tasks provide a basic introduction to iterating through lists and manipulating data elements:

1. Capitals Guessing Game:

- Create a list containing some world capitals
- Ask the user to guess a capital city.
- Loop through (**ITERATE**) the list and check if the user's guess matches any capital city in the list.
- If a match is found, print a success message. Otherwise, print a fail message.
- Allow for multiple guesses until the user wants to quit. (**REPETITION**)

2. Finding Vowels:

- Ask a user to enter a sentence
- Loop through (**ITERATE**) the sentence and check if each character is a vowel (a, e, i, o, u).
- Print the total number of vowels found in the sentence.

3. List Duplicates:

- Create a list containing some numbers, with duplicates.
- Loop through the list and create a new list that only contains unique elements (no duplicates).

4. List Statistics:

- Create a list containing exam scores for a class.
- Loop through the list and calculate the average, minimum, and maximum scores.
- Print the calculated statistics for the class.

5. Using related 1D lists:

- Create a list containing product names and a list containing their corresponding prices. Eg. Products= ["pen","pencil","protractor"] prices = [0.5,0.5,15.00]
- Ask the user to enter a product
- If the product is in the list display the price of the product else provide a relevant message

6. Basic Text Analysis:

- Create a list containing words from a user-provided sentence or short text.
- Loop through the list and calculate the frequency of each word (how many times it appears).
- Print the words and their corresponding frequencies.