

# Translate Words Challenge

## The task

Given a text file, replace all possible words in English to French using any programming language of choice

## What is the input?

The zip file (`TranslateWordsChallenge.zip`) has 4 files:

1. Instruction document (`Translate Words Challenge.pdf`)
2. A text file (`t8.shakespeare.txt`) that has more than one lakh lines
3. A find words list (`find_words.txt`) that has a 1000 words. The words in the list should be replaced with case being maintained.
4. The English to French dictionary (`french_dictionary.csv`) to do the look up

## What needs to be done?

1. Read the input text file, find words list text file and dictionary csv file
2. Find all words that is in the find words list, that has a replacement word in the dictionary
3. Replace the words in the input text file
4. Save the processed file as output

**NOTE:** Accuracy of the replace in terms of all occurrences, casing and special characters to be maintained

## What is the expected output?

1. Unique list of words that was replaced with French words from the dictionary
2. Number of times a word was replace
3. Time taken to process
4. Memory taken to process

# What to submit?

Submit a zip file. Please name your zip file according to the pattern given below:

`YYYYMMDD.surname.givenname.college.zip`

The zip file contains 4 parts:

1. `YYYYMMDD` - 4 digit year, 2 digit month (add 0 if needed), 2 digit date (add 0 if needed)
2. `surname` - your name
3. `givenname` - your father's name
4. `college` - full college name

**NOTE:** Replace any spaces in the filename with underscore ( `_` ) and use lowercase characters ONLY.

For example, if your name is **Suresh Kumar** and your father's name is **Selva Ganapathy** and you are from **ABC College of Engineering and Technology**, and you are submitting the file on **Feb 28, 2021** then zip file name should be

`20210228.suresh_kumar.selva_ganapathy.abc_college_of_engineering_and_technology.zip`

The zip file should contain the following files:

1. `performance.txt`
2. `frequency.csv`
3. `t8.shakespeare.translated.txt`
4. `githublink.txt`

## performance.txt

This file should contain just 2 lines of text and follow the exact text given below. The first line should have the time taken for the script to complete and the second line should have the memory used by your script. Please update the

Time to process: 0 minutes 0 seconds  
Memory used: 0 MB

**NOTE:** Please update the actual time taken to execute and memory taken. Do not leave it as 0

## frequency.csv

This file should have 3 columns, first “English Word”, second “French Word” and third “Frequency” and this should be the first line of the file. The first column should have the English word that was found, the second column should have the corresponding French word that was used to replace and the third column should have the number of times the word was replaced. For example, if the English word “abide” was replaced with “respecter” 10 times, then the file will look like

```
English word,French word,Frequency  
abide,respecter,10
```

## t8.shakespeare.translated.txt

This is the processed output file that contains the words translated to French

## githublink.txt

This file should just contain just the link to your repo (just 1 line) and nothing else, for example:

```
https://github.com/sureshkumar/exeter-coding-challenge
```