

Addendum to Q1

An alternative to Q1 that makes writing Q3 easier (either approach is acceptable)

Write the following functions:

- A function with the signature `int letter_count(char *)`
 - that counts the number of letters in the string (characters between A/a to Z/z)
- A function with the signature `int * create_freq_table()`
 - that return an empty frequency table
 - i.e. a 1d array of 26 elements
 - each element should be initialized to zero
- A function with the signature `void add_letters(int * freq_table, char * string)`
 - each element of the array holds the numbers of times each letter (upper or lower case) occurs in the string that is passed in as an argument
 - i.e. the first index holds the count for 'a' / 'A', the second index hold the count for 'b' / 'B', etc.
 - The string is looked at character by character, and if the character is a letter, the appropriate count is updated

If you implement these functions, the function `frequency_table(char * string)` need not be written.

Addendum to Q2

In Question 2, the following is stated:

“Let `ENGLISH_FREQ[i]` (which you can also denote `EF[i]`)
be an array that stores the above table, where $i = 0$ to 25.

...

Note: the table should be a constant throughout your program.”

This implies that `EF` should be an array created using a `#define` macro and placed in a `.h` file. However, you cannot create an array using a `#define`.

There are two approaches to handling this ambiguity. You can create a global variable

```
int EF[26] = {0.08167, 1.492, 2.782, ...};
```

which, while not created by a `#define`, can be treated as a constant and so given an uppercase name; or you can use

```
#define EF {0.08167, 1.492, 2.782, ...}
```

and then implement a local array

```
int ef[26] = EF;
```

which can be passed into any function that needs it.

Either approach is fine.