PPL Lab (PCC-CS-391) Assignment for 22/01/2024

1. Write an Ocaml function `enc (c:char) (off:int): char` which encodes a character `c` by the given offset (`off`) and returns the encoded character. An encoded lowercase character remains a lowercase character. An encoded uppercase character remains an uppercase character.

   If `c` is not an alphabet, then it is returned unchanged.

   Given offset is <u>not</u> necessarily a positive integer.

2. Write a one line function `encstr (s:string) (off:int): string` which encodes the given string s by the given offset `off`. Use the help of the `enc` function you wrote in Q.1 above.

   Same restrictions (as in Q.1 above) apply to the encoding of all characters in s.

3. Write a variation of your function in Q.2 above which encodes a given textfile instead of a string. Call this function `encfile`. For this function the s would represent the string representing the name of a textfile in the current folder. And instead of returning the encoded string (from the file contents), it will simply create the encoded textfile with the same name as the given textfile name but with an extension '.enc' added as a suffix. For example, if 'abc' is the input file name, the output file name would be 'abc.enc'. This also means that the function returns `unit`.

[Note:] For solving the above problems, you may use these library functions: Char.code, Char.chr, String.map