AUCSC 111 Lab Assignment 2

Important Notes

- Submissions that do not follow submission instructions will not be graded.
- Late submissions will incur a 50% penalty if submitted within 24 hours of the deadline. Submissions more than 24 hours late will not be accepted without formal justification

1. **Censor Function (4 points)**
   Write a function named `censor()` that takes the name of a file (a string) as input. The function should:
   - Open the file.
   - Read its contents.
   - Write the contents to a new file, `censored.txt`, with the following modification: Every occurrence of a four-letter word in the file should be replaced with the string `'xxxx'`.
2. **Example Usage:**

   ```
   censor('example.txt')
   ```

Notes:

- This function does not produce any output to the console but creates a new file `censored.txt` in the current folder.

Here are examples for **Question 1**:

`Input: example.txt`:

```
This is a test. The code must pass. Read the file and look. The task is easy.
```

After running the `censor('example.txt')` function, the new file `censored.txt` should be created with all four-letter words replaced by `'xxxx'`.

`Output: censored.txt`:

```
xxxx is a xxxx. The xxxx xxxx xxxx. xxxx the xxxx and xxxx. The xxxx is xxxx.
```

2. **String Manipulation (6 points)**

Given the following text assigned to variable s: s = '''It was the best of times, it was the worst of times; it was the age of wisdom, it was the age of foolishness; it was the epoch of belief, it was the epoch of incredulity; it was ... '''

Complete the following tasks in sequence:

(a) Write a sequence of statements to produce a copy of `s`, named `newS`, in which characters `.`, `,`, `;`, and `\n` are replaced by spaces. (1 point)

(b) Remove leading and trailing spaces in `newS` and keep the modified string named as `newS`. (1 point)

(c) Convert all characters in `newS` to lowercase. (1 point)

(d) Count and return the number of occurrences of the string `'it was'` in `newS`.
(1 point)

(e) Replace every occurrence of `'was'` with `'is'` in `newS`. (1 point)

(f) Split `newS` into a list of words and assign this list to `listS`. (1 point)

Submission Instructions

- Submit **one PDF file** (`firstName.pdf`) containing your code and outputs:
  - For Question 1: Provide the code and the content of both the `example.txt` and `censored.txt` files.
  - For Question 2: Provide the code and output for each part (a) through (f).
- Submit **two Python files**:
  - `q1.py` for Question 1.
  - `q2.py` for Question 2.
- **Submission format**:
  - Place the PDF and the two `.py` files in a folder named after your first name.
  - Zip the folder and upload it to eClass.

Grading Rubric (Out of 10)

1. **Censor Function (4 points total)**:
    - Correct file reading and writing: 1 point
    - Proper identification and replacement of four-letter words: 2 points
    - File creation (`censored.txt`) with correct output format: 1 point
2. **String Manipulation (6 points total)**:
    - (a) Correct replacement of specified characters: 1 point
    - (b) Proper removal of leading and trailing spaces: 1 point
    - (c) Conversion to lowercase: 1 point
    - (d) Accurate count of occurrences of `'it was'`: 1 point
    - (e) Correct replacement of `'was'` with `'is'`: 1 point
    - (f) Proper splitting of `newS` into a list of words: 1 point