Technical Assignment
Replace Utility

Goals

- Develop a C application for replacing strings within a file.

Details

For this assignment, you must develop, using C language, a simple **command-line** utility called *replace*. A concise specification for the `replace` utility is as the following:

Specification of the `replace` Utility

- NAME:
  `replace` - looks for all occurrences of string *from* and replaces it with string *to*. It is possible to specify one or more files on which to perform the replace operation(s) in a single replace command.

- SYNOPSIS
  `replace OPT <from> <to> -- <filename> [<filename>]*`

  where `OPT` can be zero or more of
    - `-b`
    - `-f`
    - `-l`
    - `-i`

- COMMAND-LINE ARGUMENTS AND OPTIONS

  `from`: string to be replaced with string `to`.
  `to`: string that will replace string `from`.

  `filename`: the file(s) on which the replace operation has to be performed.

  `-b`: if specified, the `replace` utility creates a backup copy of each file on which a replace operation is performed before modifying it.

  `-f`: if specified, the `replace` utility only replaces the first occurrence of string `from` in each file.

  `-l`: if specified, the `replace` utility only replaces the last occurrence of string

`from` in each file.

`-i:` if specified, the `replace` utility performs the search for string `from` in a case insensitive way.

● EXAMPLES OF USAGE

Example 1:
```
replace -i Howdy Hello -- file1.txt file2.txt file3.txt
```

would replace all occurrences of "Howdy" with "Hello" in the files specified. Because the "-i" option is specified, occurrences of "howdy", "HOwdy", "HOWDY", and so on would also be replaced.

Example 2:
```
replace -b -f Bill William -- file1.txt file2.txt
```

would replace the first occurrence of "Bill" with "William" in the two files specified. It would also create a backup copy of the two files before performing the replace.

Example 3:
```
replace -f -l abc ABC -- file1.txt
```

would replace both the first and the last occurrences of "abc" with "ABC" in the file specified.

Instructions
1. Your code should be able to handle strings that start with "-" or "--".
2. Commit and push your code to a public github repo. You should commit all your code, libraries, and specific IDE project file in case we want to load your source into the same IDE.
3. Provide a short README.md file with any instructions we need to load your code into your chosen IDE or to run your utility.
4. Send us the repo URL so that we can clone your code.