

COSC 2336.S01
PROGRAM THREE

ASSIGNMENT:

Create a program, which will perform the following actions:

1. Create a class to control manipulation (input and output) of a random access file containing of set of text strings of varying length with the following format:
 - a) At the beginning will be a 4 byte integer having the number of strings in the file.
 - b) At the end will be an array of pairs of integers (**streamoff** for the offset from the beginning of the file to the start of the corresponding string and **size_t** bytes for the length of the string in bytes).
 - c) The number at the beginning will be followed by a set of strings of text. There is no special termination character at the end of a string.
2. The class will support methods with the following capabilities:
 - a) **Get** will have one 4 byte integer parameter (the index of the string to retrieve) and one string parameter to be filled in with the string read.
 - b) **Replace** will have one 4 byte integer parameter (the index of where the string will be written) and one string parameter containing the string to write. If the index to write is larger than the current largest index, insert a series of zero value indices (to indicate empty strings) into the array.
 - c) **Insert** will have the same parameters as **Replace** but instead of writing over an index, it will move all indices from the insert point on down by one and write the new string into the new space.
3. Test your class by allowing the user to enter the following from the keyboard:
 - a) **G** followed by an integer to read and print the string at the requested index.
 - b) **R** followed by an integer and a string to write a string at the requested index.
 - c) **I** followed by an integer and a string to insert a string at the requested index.

TURN IN:

- 1) An electronic copy of the .cpp and .h files in the project folder as created by Visual Studio. This will be emailed to the instructor with the subject line "COSC 2336.S01 – Program 3".
- 2) If you wish any feedback on your work, turn in a printed listing of the .cpp and .h files that you created.

DUE: 6 Mar 2020