Assignment 6

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1 What I learned

For this assignment I learned:

- How to use the Lempel-Ziv Compression algorithm and how we use a dictionary to record repeating patterns and therefore are able to use a code to reference those patterns and greatly reduce the number of bytes needed to write them out
- In LZ78 learned how to avoid writing code dictionary into compressed file; instead, we generate the dictionary on the fly when decompressing
- How to read and write a certain number of bytes using a repeated call to read() and write()
- How to do the buffered I/O by having a buffer in memory and then writing them only when needed
- How to write bits into a file using a buffer and then once the buffer is full write it out to a file
- How to use tries, create, navigate, and delete them to create a fast look-up dictionary for my compression
- How to use fstat to get file attributes including permissions and size
- How to get the bit length of an integer without using the log function
- There are little and big endian CPUs where that have different byte orders and looking through given functions learned to test endianness and how to byte swap