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Assignment 6: Lempel-Ziv Compression

1 Introduction

For this assignment I will have to replicate a data compression method that is a bit more latest than Huffman and is currently a standard in the industry.

2 What I have learned?

The assignment required me to get in touch with data compression and I was able to understand the difference between huffman and lempel-zip methods. I was able to understand that lempel words on non fixed block lengths where as huffman only works on fixed block lengths. These differences were been more aware to me as I did huffman coding last quarter and this quarter I was able to understand this new method.

I primarily learned that this methods allows for virtually no data loss and cam compress at a exponential size and not fixed to certain sizes. I gained a better understanding for the LZ algorithm and how it compresses data. I used this video aswell to give me a better understanding "https://youtu.be/hHQgu4qILGs" .

2.1 Challenges I faced during the assignment

During this assignment I faced problems such as segmentation faults and floating point exceptions primarily. My segmentation faults primarily came from my is prime function which i had to debugg using gdb and print statements. To tackle infinite loops I took a tedious approach by placing print statements thought my code.

3 Personal Though

This assignment was a very challenging one. I had to refer to my last quarters work t understand what corner cases I need to tackle. I used the help from

TA's an Tutors to complete it which made it very helpful. I was also able to understand where such secure algorithms are used in the real world.