1. Linux compression commands:

Here is the compression commands demoed in the class. Please find a linux terminal to practice the commands using different files.

Following links are recommended: <https://explainshell.com/> and https://tldr.sh/

7za a tensorflow-master

tar -zcf tensor.tar.gz tensorflow-master

tar -jcf tensor.tar.bz2 tensorflow-master

tar -Zcf tensor.tar.Z tensorflow-master

7za x tensorflow-master.7z

tar -Zxf tensor.tar.Z

tar -jxf tensor.tar.bz2

tar -zxf tensor.tar.gz

1. One method of reducing bandwidth use is to compress the data being transmitted. Let A = {a/20, b/15, c/5, d/15, e/45} be the alphabet and its frequency distribution. Compute the optimal coding for each character. What is the average number of bits/symbol of the codes?
2. Please describe the information exchanges and the actions taken for both server and client according to the diagram for delta compression.

Chart

Description automatically generated with medium confidence

1. One method of reducing bandwidth use is to compress the data being transmitted. Use the LZW algorithm to compress the string: BABAABAAA. Note that Uppercase A has ASCII value 65 in decimal. Draw diagrams to aid your explanation if appropriate.