Tutorial 8 for
COMP 526 – Applied Algorithmics, Winter 2020

Problem 1 (Huffman code)

Compress the text $T =$ HANNAHBANSBANANASMAN using a Huffman code; give

1. the character frequencies,

2. a step-by-step construction of the Huffman tree,

3. the Huffman code, and

4. the encoded text.

5. Finally, compute the compression ratio of the result.

Problem 2 (Hamming code)

We consider the $4 + 3$ Hamming code from class.

1. Given the message 0101, determine the parity bits and the final transmitted block.

2. Is 1111111 a valid block, i.e., have (detectable) errors occurred?