CMSC 204

Huffman Lab

1. Create a Huffman Tree and generate the codes for each character of the following input:

create a huffman tree

For consistency:

1. If same frequency – put in priority queue alphabetically; put space before other characters of the same frequency
2. Add subtrees to end of group with same priority
3. Lower number has higher priority (goes to front)

A graph with numbers and lines

Description automatically generated

Now encode “create a huffman tree”

|  |  |  |
| --- | --- | --- |
| Char | Freq | Code |
| C | 1 | 0000 |
| H | 1 | 0001 |
| M | 1 | 0010 |
| N | 1 | 0011 |
| U | 1 | 010 |
| F | 2 | 011 |
| R | 2 | 1000 |
| T | 2 | 1001 |
| A | 3 | 101 |
| Sp | 3 | 110 |
| E | 4 | 111 |

1. Based on the following Huffman tree and binary sequence, what is the text



1110011101101111111010001100010001100100

Huffman tree