

Protocol Theory 15.4.2003

1. Compress and decompress "mississippi" with LZ77 of dictionary size 8 and buffer size 4.
2. The probabilities of a, b, and c are $1/4$, $1/2$, and $1/4$ respectively. Encode "acba" with arithmetic coding. Generate the binary code.
3. Explain the working principle of nonlossy and lossy JPEG image compression.
4. Encode 10010011 with one error correcting Hamming coding, change the second bit from the beginning of the encoded string and decode.