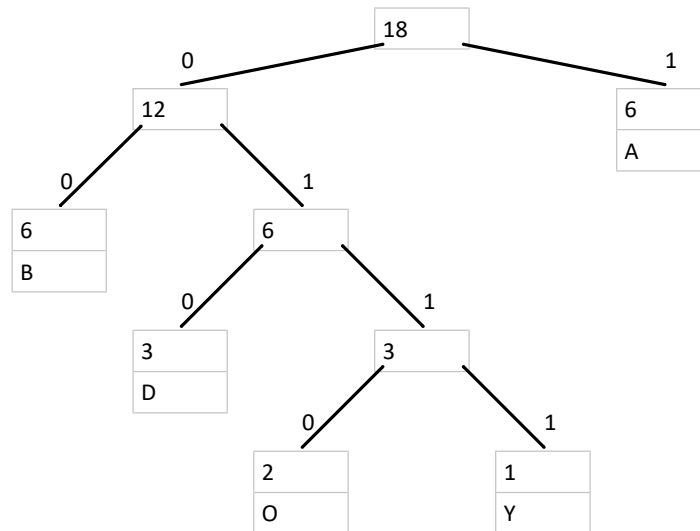


LZW & Huffman

29 March 2021 8:38 PM

1. Huffman: YABBADABBADABBADOO

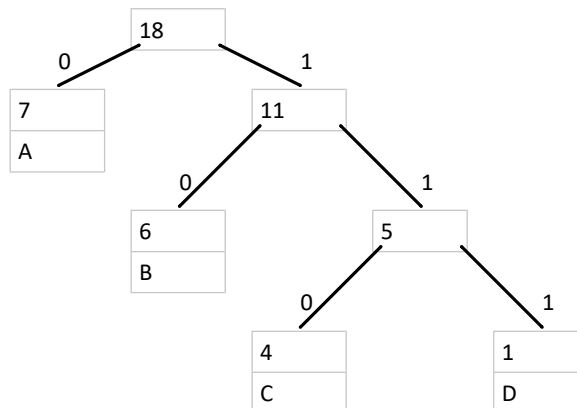
A - 6
B - 6
D - 3
O - 2
Y - 1



Huffman Encoded: 0111 100 00 1 010 1 00 00 1 010 1 00 00 1 010 0110 0110

2. Huffman: ABABABABCABCBCDAC

A - 7
B - 6
C - 4
D - 1



Huffman Encoded: 0 10 0 10 0 10 0 10 110 0 10 110 0 10 110 1110 0 110

3. LZW: YABBADABBADABBADOO

Iteration	s	c	Output	New Dictionary String
1	Y	A	89 (Y)	256 - YA
2	A	B	65 (A)	257 - AB
3	B	B	66 (B)	258 - BB
4	B	A	66 (B)	259 - BA
5	A	D	65 (A)	260 - AD
6	D	A	68 (D)	261 - DA
7	A	B		
8	AB	B	257 (AB)	262 - ABB
9	B	A		
10	BA	D	259 (BA)	263 - BAD
11	D	A		
12	DA	B	261 (DA)	264 - DAB
13	B	B		
14	BB	A	258 (BB)	265 - BBA
15	A	D		
16	AD	O	260 (AD)	266 - ADO
17	O	O	79 (O)	267 - OO
End			79 (O)	

LZW Compression: 89 65 66 66 65 68 257 259 261 258 260 79 79

4. LZW: YAS*YAGYAS*YASYASYASG

Iteration	s	c	Output	New Dictionary String
1	Y	A	89 (Y)	256 - YA
2	A	S	65 (A)	257 - AS
3	S	*	83 (S)	258 - S*
4	*	Y	42 (*)	259 - *Y
5	Y	A		
6	YA	G	256 (YA)	260 - YAG
7	G	Y	71 (G)	261 - GY
8	Y	A		
9	YA	S	256 (YA)	262 - YAS
10	S	*		
11	S*	Y	258 (S*)	263 - S*Y
12	Y	A		
13	YA	S		
14	YAS	Y	262 (YAS)	264 - YASY
15	Y	A		
16	YA	S		
17	YAS	Y		

18	YASY	A	264 (YASY)	265 - YASYA
19	A	S		
20	AS	G	257 (AS)	266 - ASG
End			71 (G)	

LZW Compression: 89 65 83 42 256 71 256 258 262 264 257 71