Jevon Danaristo 2440043591

Pattern Substitution

There once was a man who had a sister, his name was Mr. Fister. Mr. Fister's sister sold sea shells by the sea shore. Mr. Fister didn't sell sea shells, he sold silk sheets. Mr. Fister told his sister that he sold six silk sheets to six shieks. The sister of Mr. Fister said I sold six shells to six shieks too!

1 = Mr. Fister

2 = Sold

3 = Shells

4 = six

5 = sea

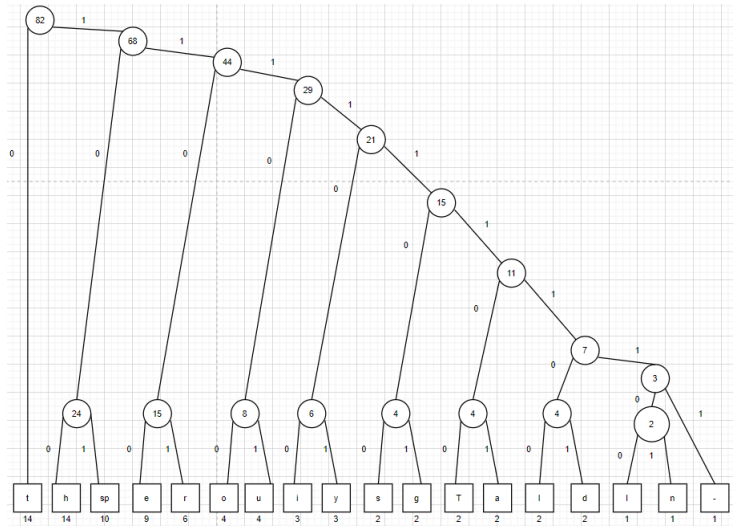
Reason: because those 5 words contain the most character combined with their frequency in the text thus making the compression much larger

There sp once sp was sp a sp man sp who sp had sp a sp sister, sp his sp name sp was sp 1. sp 1's sp sister sp 2 sp sea sp 3 sp by sp the sp sea sp shore. sp 1 sp sp didn't sp sell sp sea sp 3, sp he sp 2 sp silk sp sheets. sp 1 sp told sp his sp sister sp that sp he sp 2 sp 4 sp silk sp sheets sp to sp 4 sp shieks. sp The sp sister sp of sp 1 sp said sp I sp 2 sp 4 sp 3 sp to sp 4 sp shieks sp too!

311-232/311*100%=25,4% compression

Huffman Coding

No	Characters	Frequency	Binary code	Total bit
1	t	14×	0	14
2	h	14×	100	42
3	sp	10x	101	30
4	e	9×	1100	36
5	r	6×	1101	24
6	o	4×	11100	20
7	u	4×	11101	20
8	i	3×	111100	18
9	y	3×	111101	18
10	s	2×	1111100	14
11	g	2×	1111101	14
12	T	2x	11111100	16
13	a	2×	11111101	16
14	l	2×	111111100	18
15	d	2×	111111101	18
16	v	1×	1111111100	10
17	n	1x	1111111101	10
18	-	1x	1111111111	10



656-348/656*100%=47% compression

Limpel-Ziv

H|i|p|po|pot|o|m|on|s|t|r|os|e|sq|u|ip|ed|a|l|io|ph|ob|ia|

Number	Character	Encoder output
1	h	0H
2	i	0I
3	p	0P
4	po	3O
5	pot	4T
6	o	0O
7	m	0M
8	on	6N
9	s	0S
10	t	0T
11	r	0R
12	os	6S
13	e	0E
14	sq	9Q
15	u	0U
16	ip	2P
17	ed	13D
18	a	0A
19	l	0L
20	io	2O
21	ph	3H
22	ob	6B
23	ia	2A