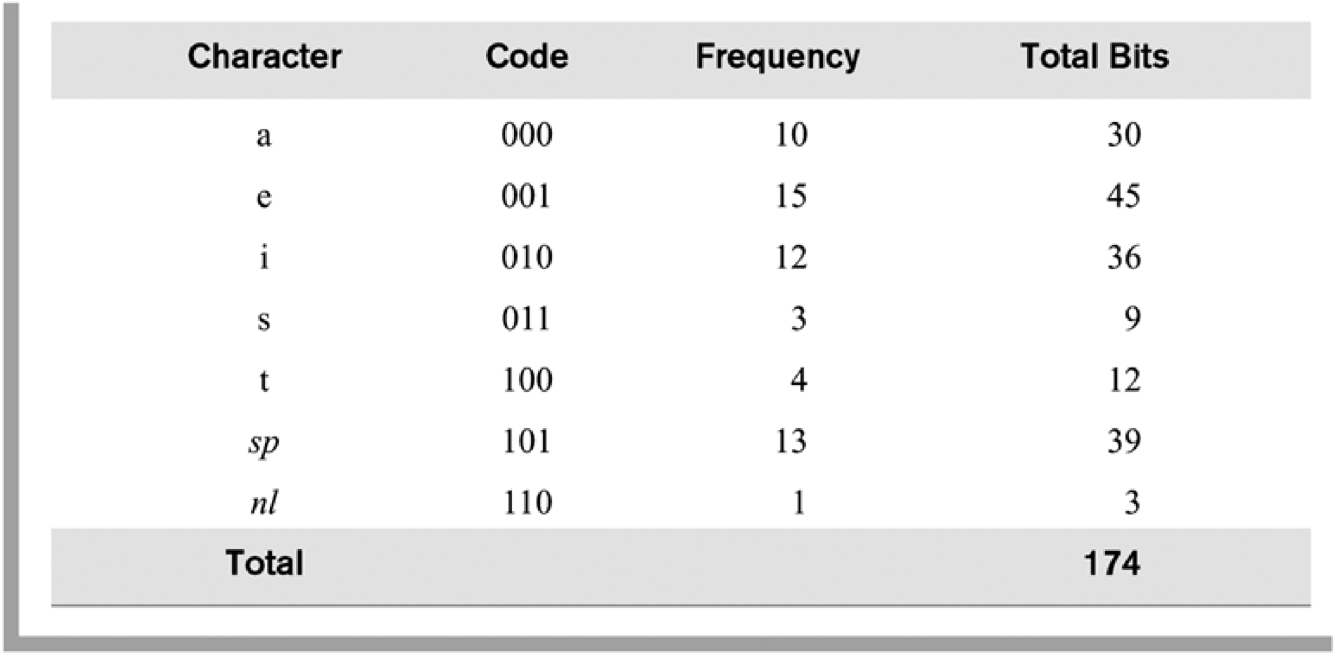


figure 12.1

A standard coding scheme

Character	Code	Frequency	Total Bits
a	000	10	30
e	001	15	45
i	010	12	36
s	011	3	9
t	100	4	12
sp	101	13	39
nl	110	1	3
Total			**174**

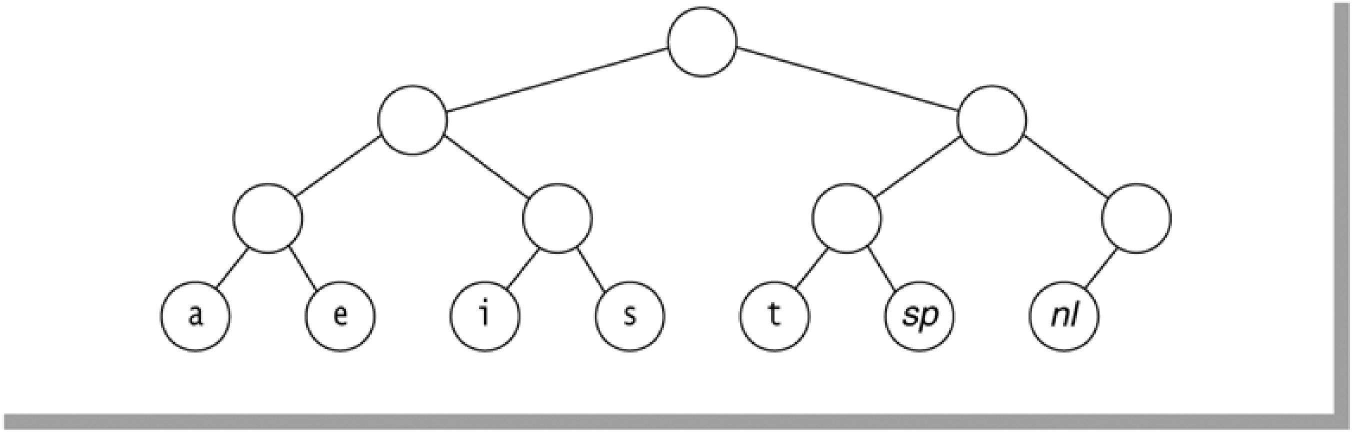


figure 12.2

Representation of the original code by a tree

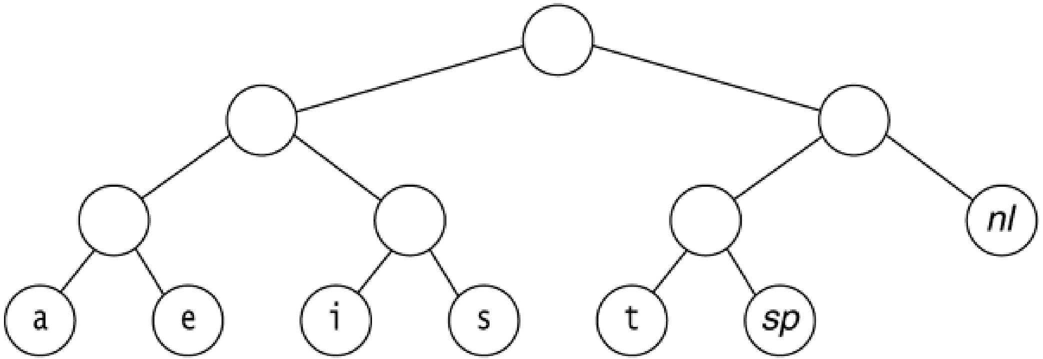


figure 12.3

A slightly better tree

figure 12.4

An optimal prefix
code tree

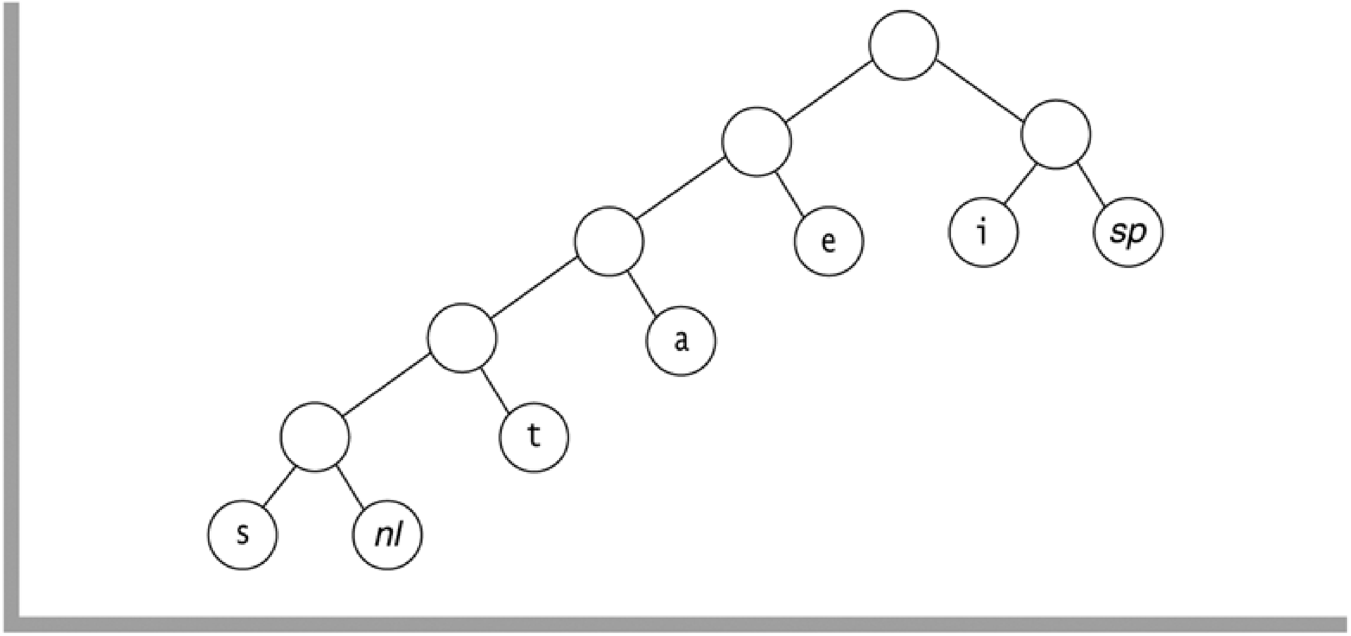
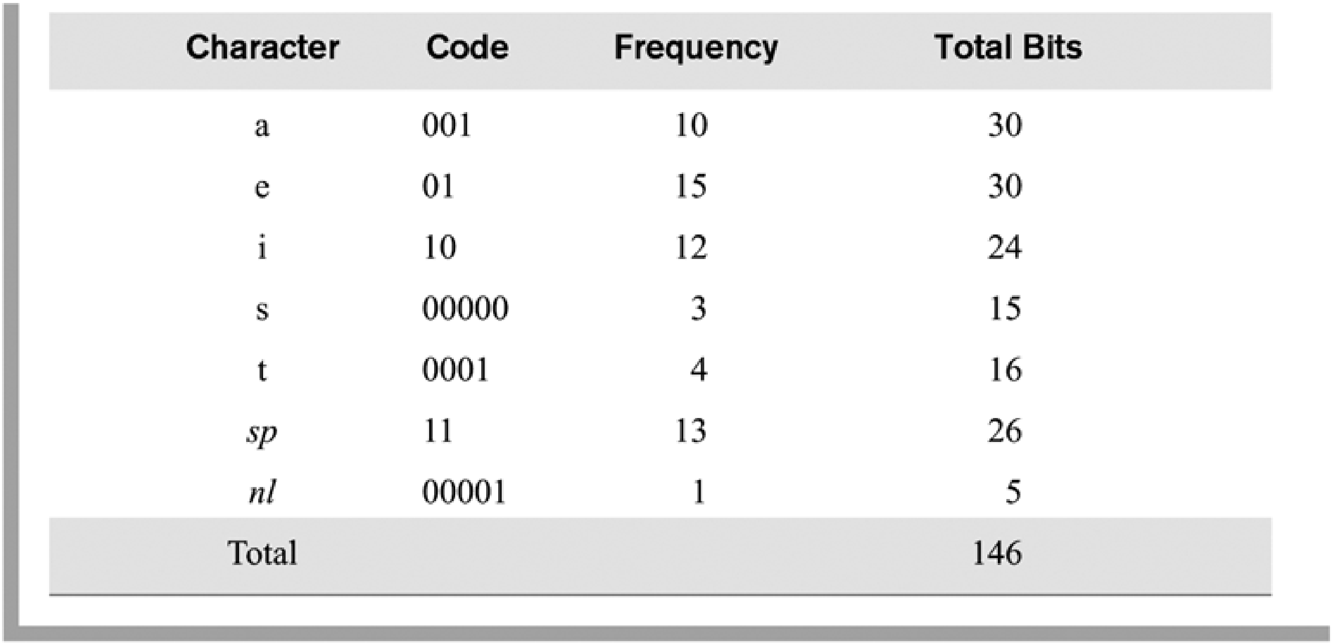


figure 12.5

Optimal prefix code



Character	Code	Frequency	Total Bits
a	001	10	30
e	01	15	30
i	10	12	24
s	00000	3	15
t	0001	4	16
sp	11	13	26
nl	00001	1	5
Total			146

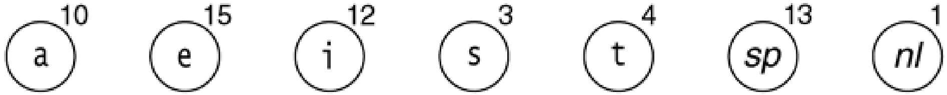


figure 12.6

Initial stage of Huffman's algorithm

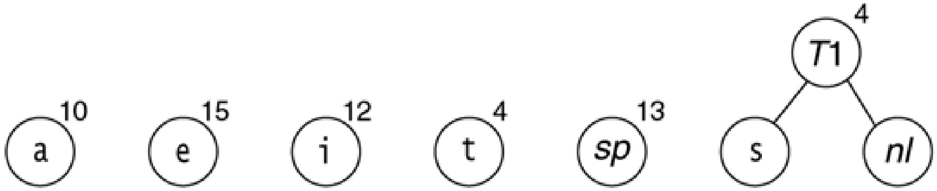


figure 12.7

Huffman's algorithm after the first merge

figure 12.8

Huffman's algorithm after the second merge

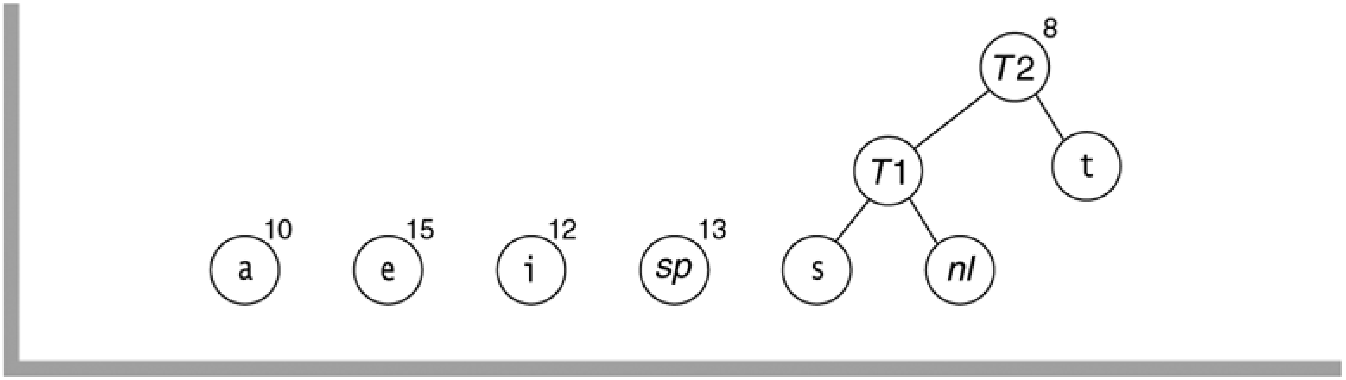


figure 12.9

Huffman's algorithm after the third merge

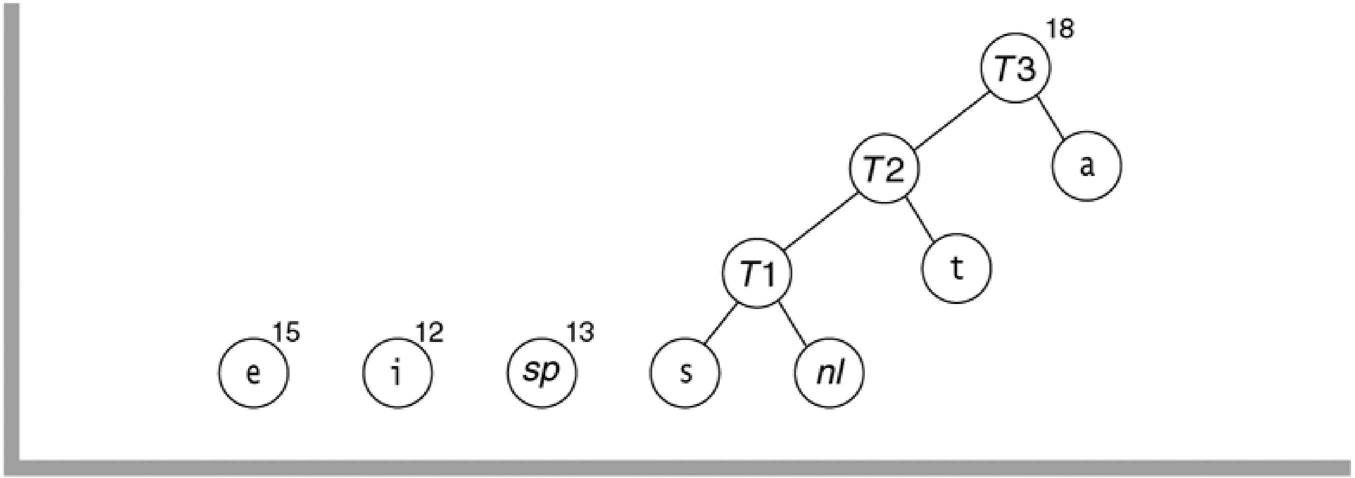


figure 12.10

Huffman's algorithm after the fourth merge

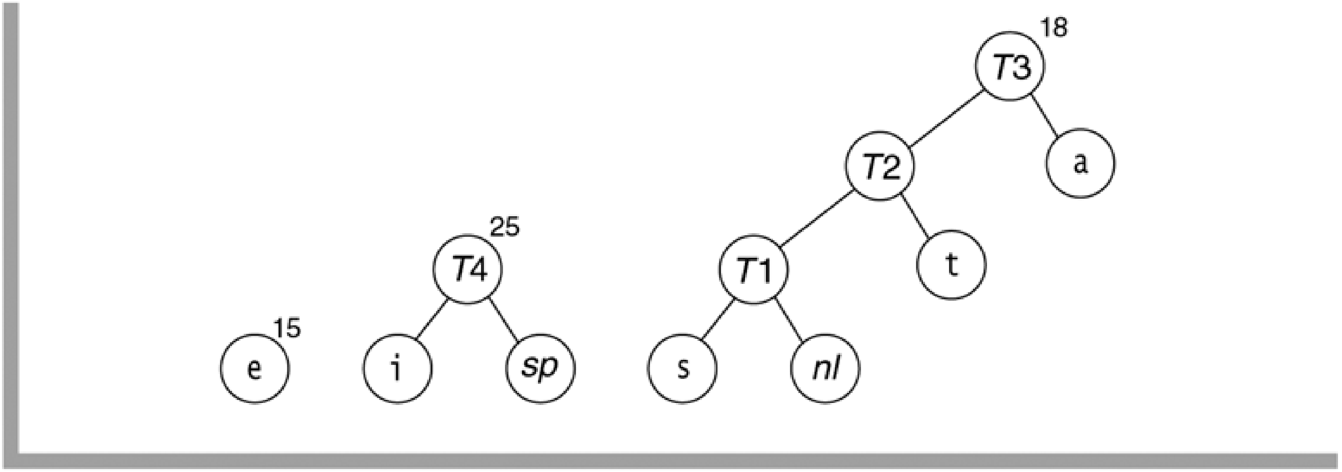
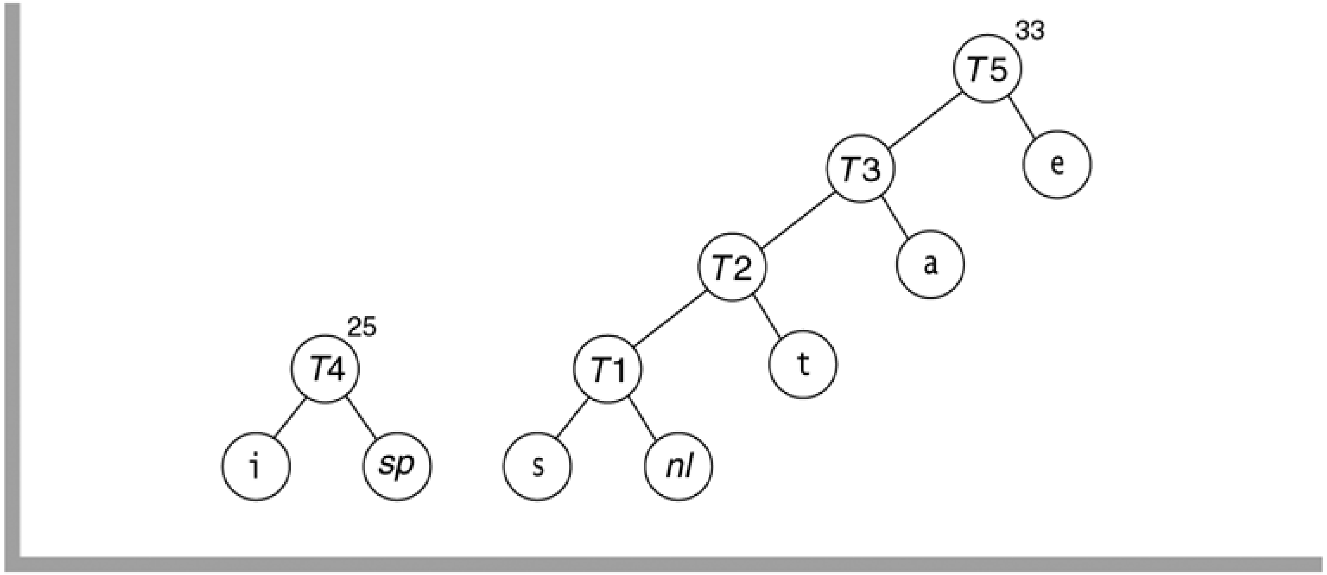


figure 12.11

Huffman's algorithm after the fifth merge



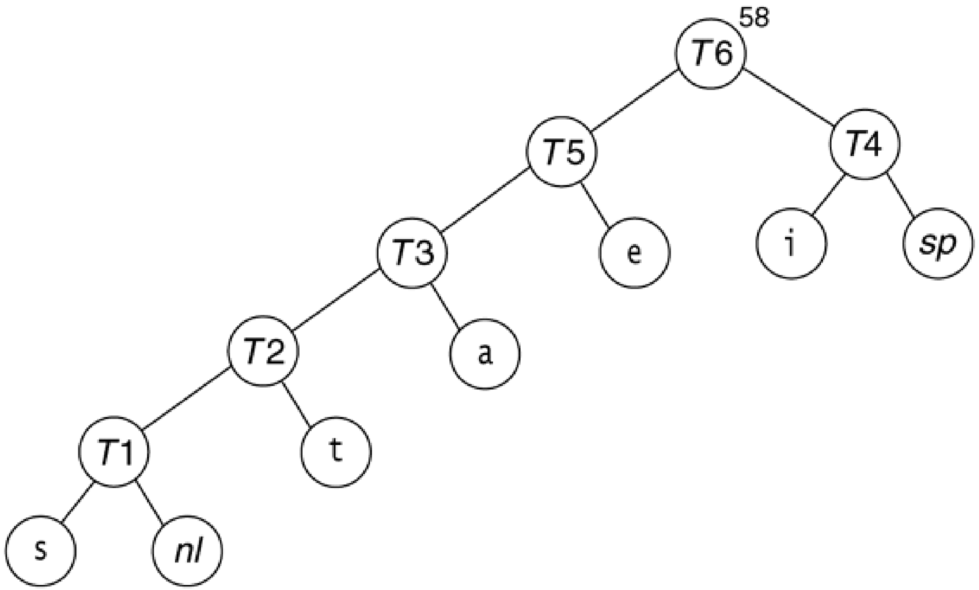


figure 12.12

Huffman's algorithm after the final merge