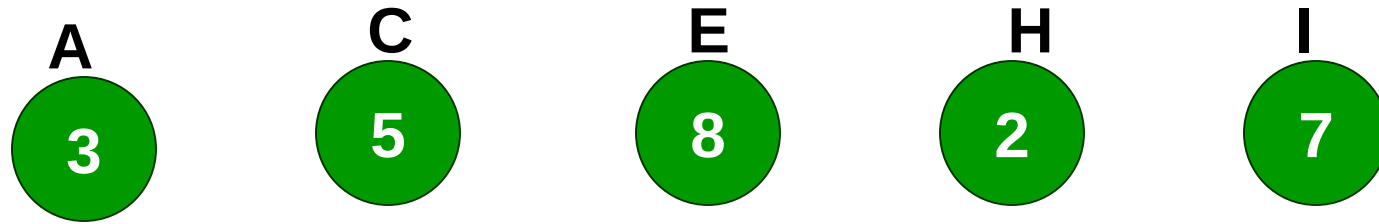
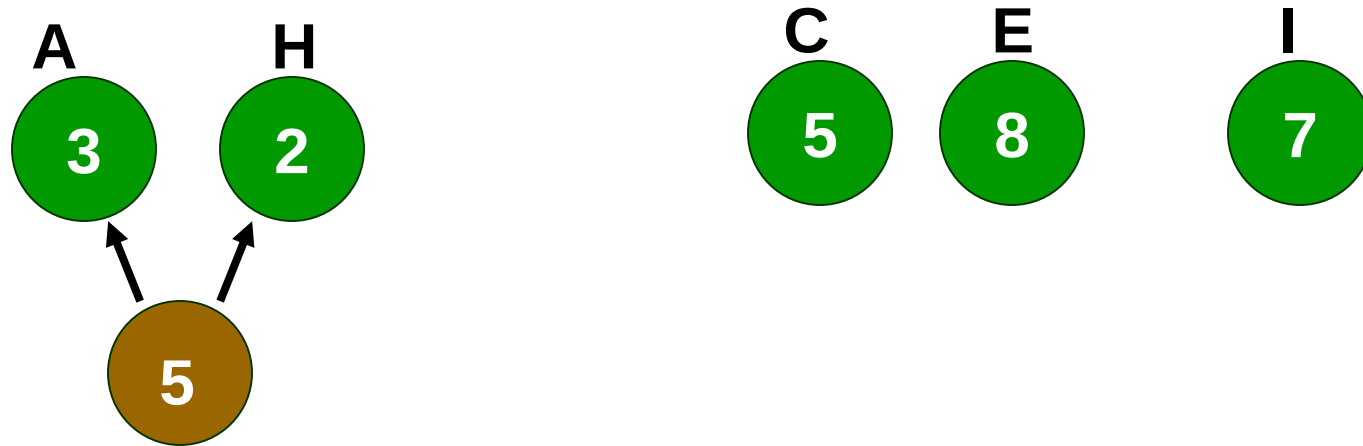


Compression & Huffman Codes

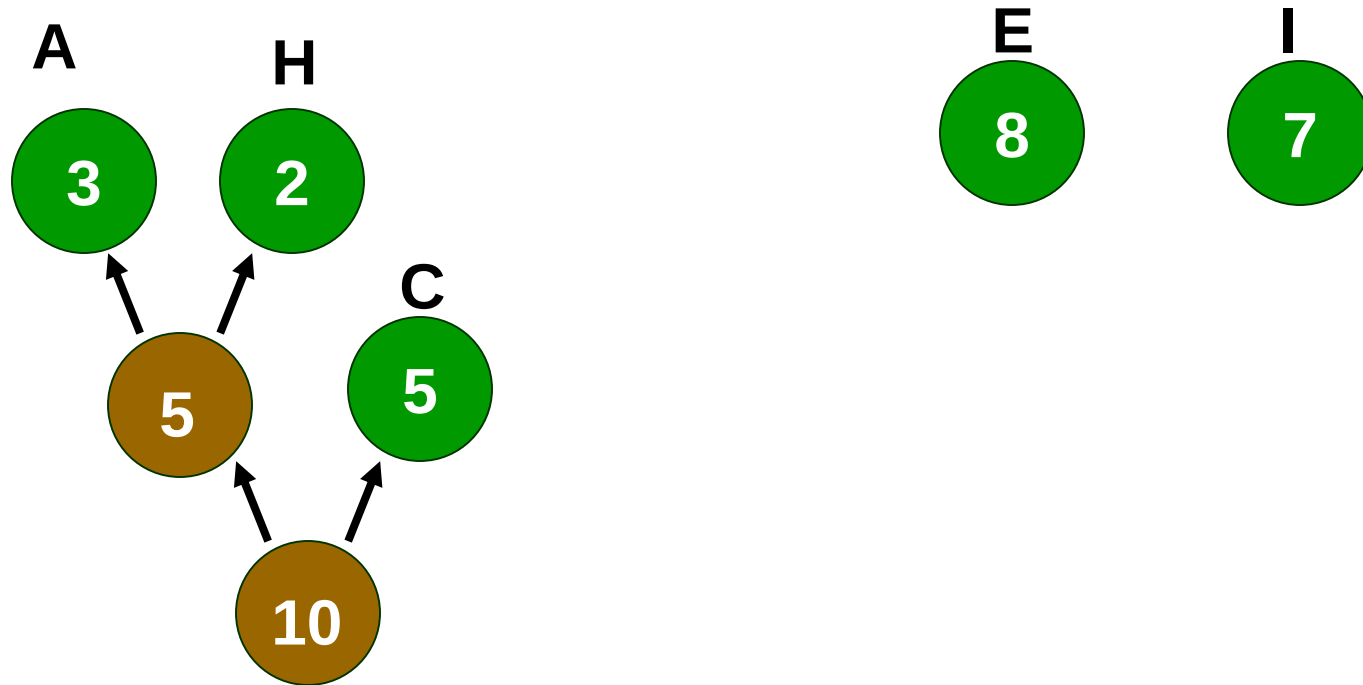
Huffman Tree Construction 1



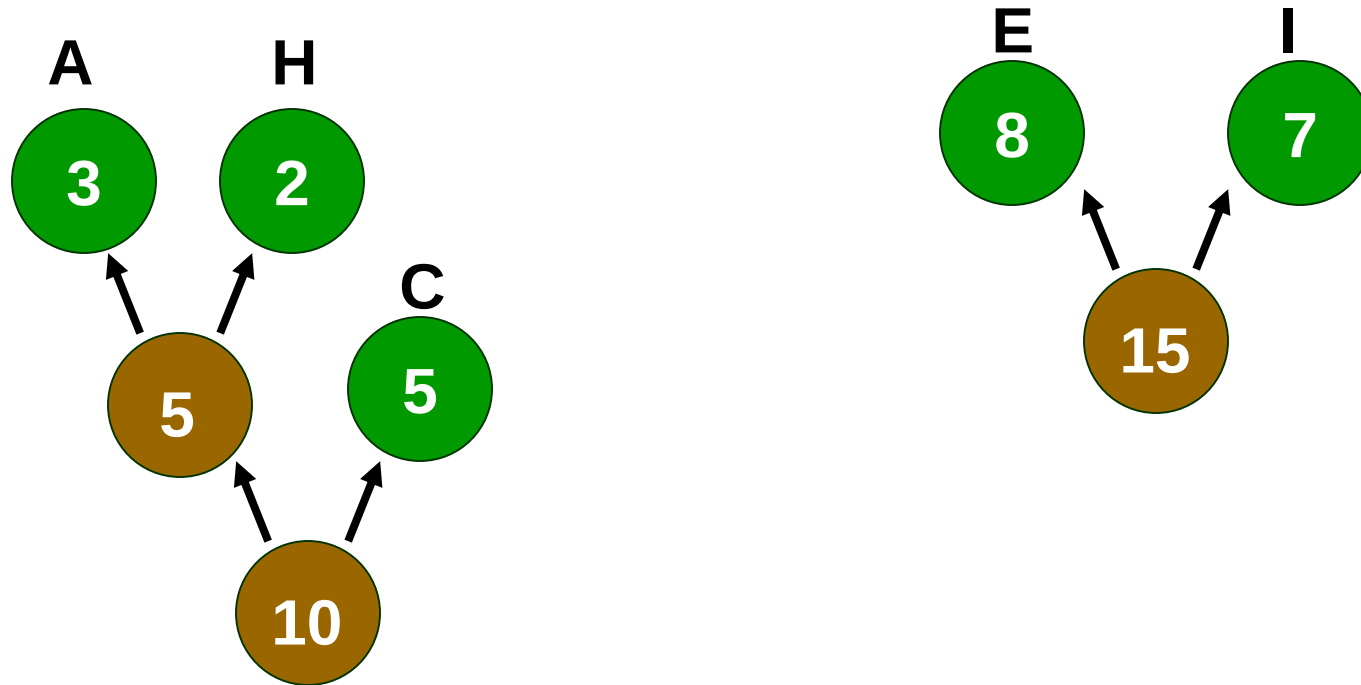
Huffman Tree Construction 2



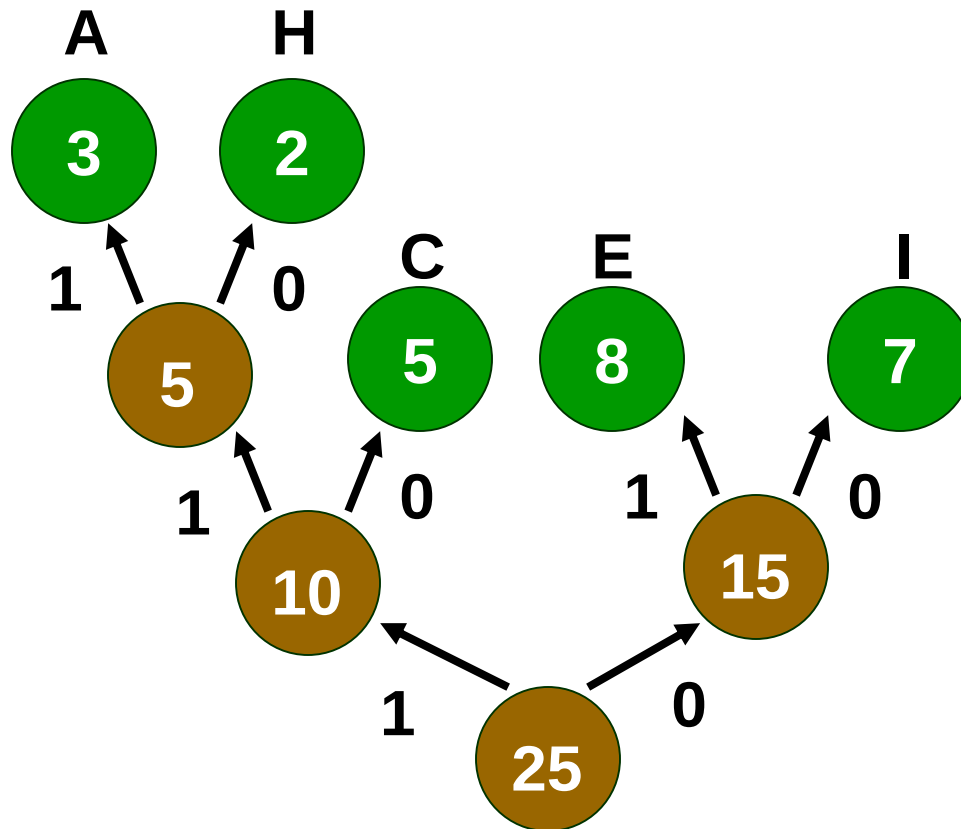
Huffman Tree Construction 3



Huffman Tree Construction 4



Huffman Tree Construction 5



E	=	01
I	=	00
C	=	10
A	=	111
H	=	110

Huffman Coding Example

■ Huffman code

E = 01

I = 00

C = 10

A = 111

H = 110

■ Input

■ ACE

■ Output

■ (111)(10)(01) = 1111001

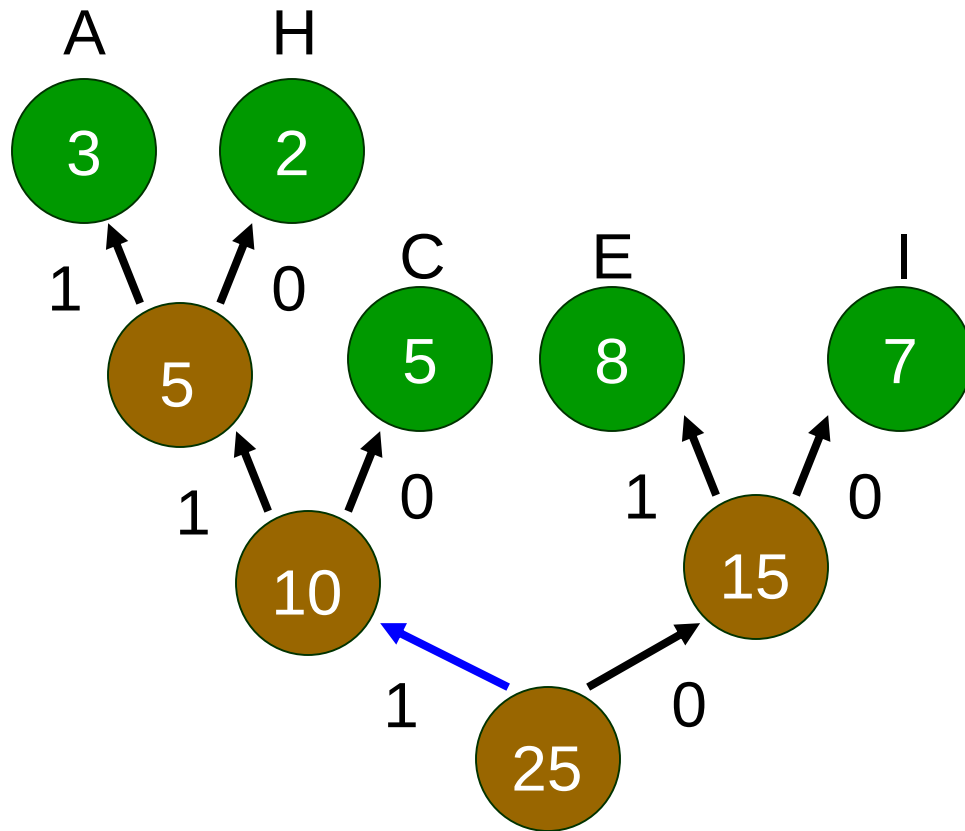
Huffman Code Algorithm Overview

■ Decoding

- Read compressed file & binary tree
- Use binary tree to decode file
 - Follow path from root to leaf

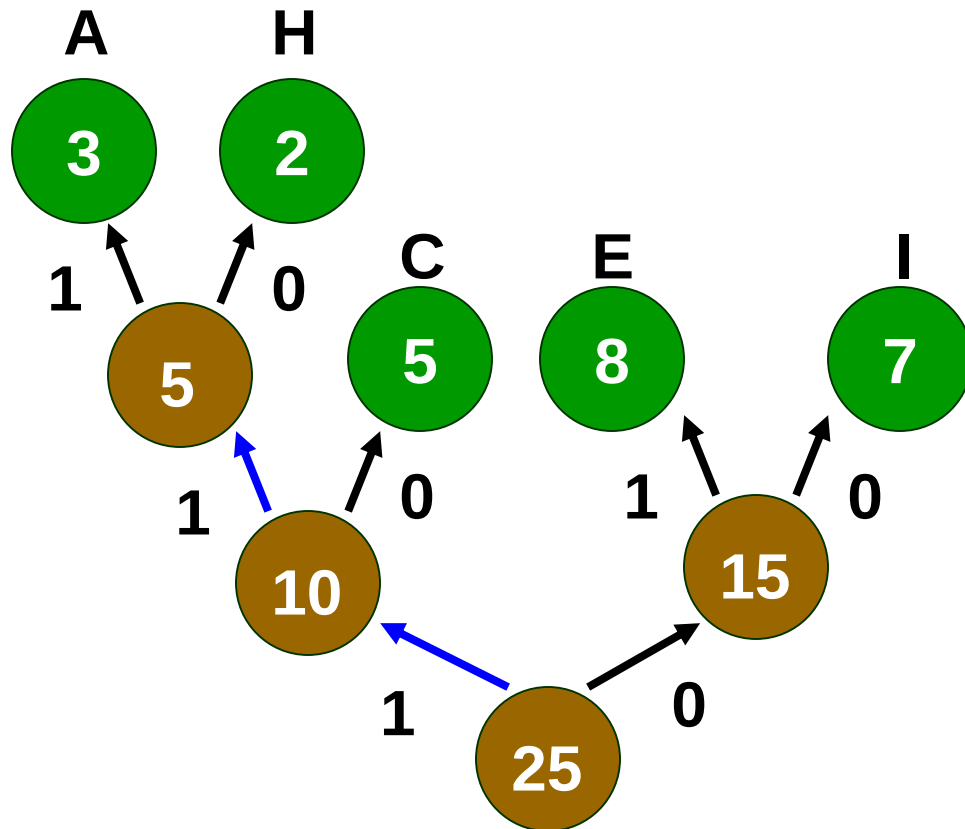
Huffman Decoding 1

1111001

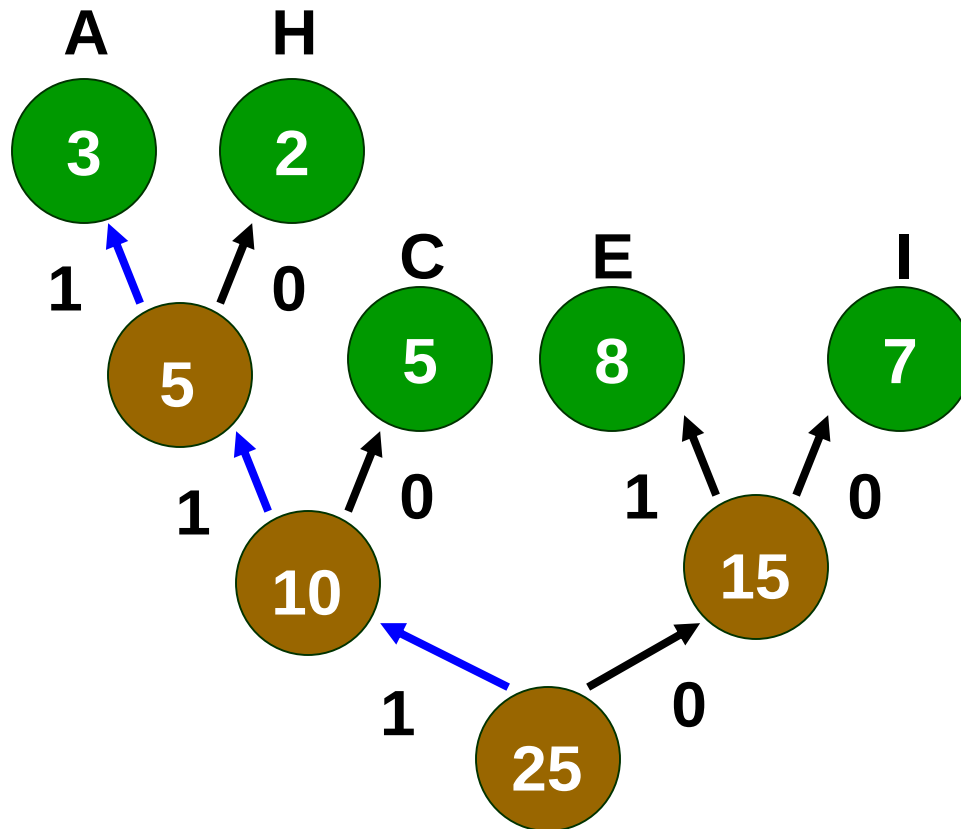


Huffman Decoding 2

1111001



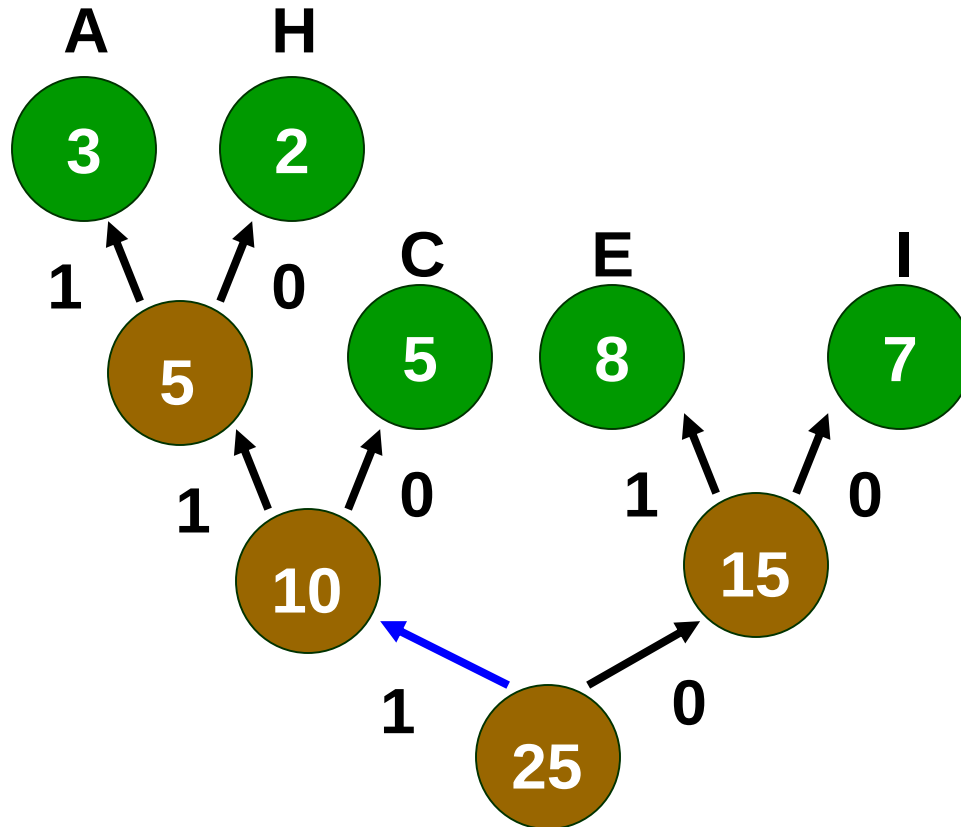
Huffman Decoding 3



1111001

A

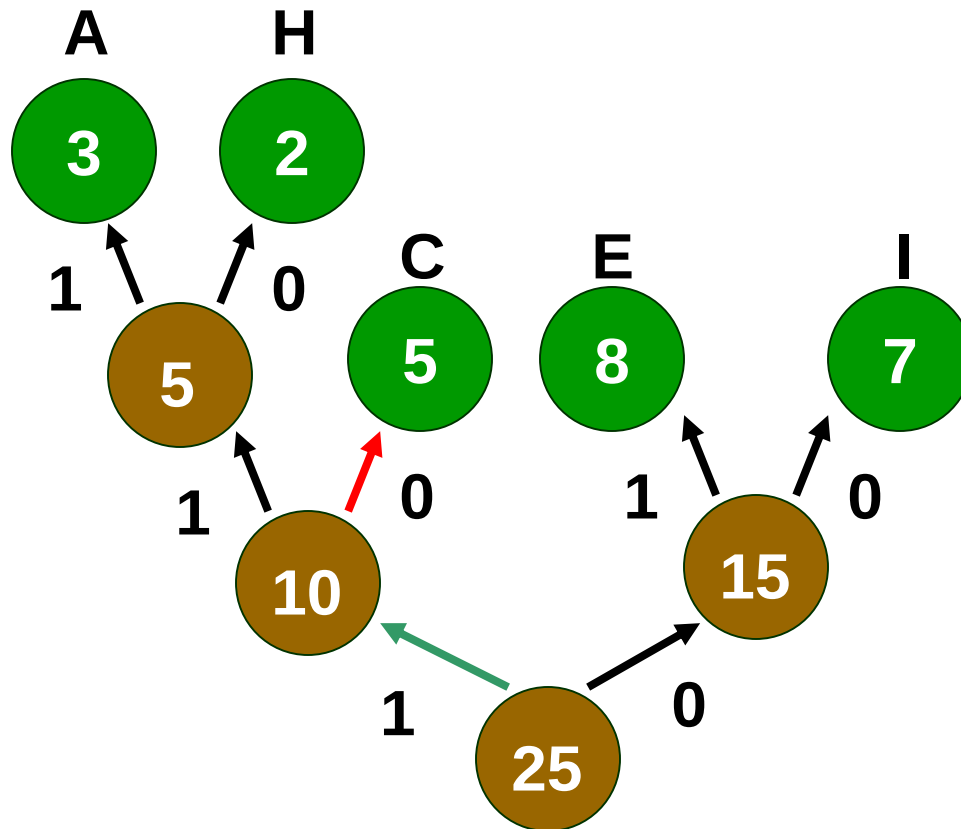
Huffman Decoding 4



1111001

A

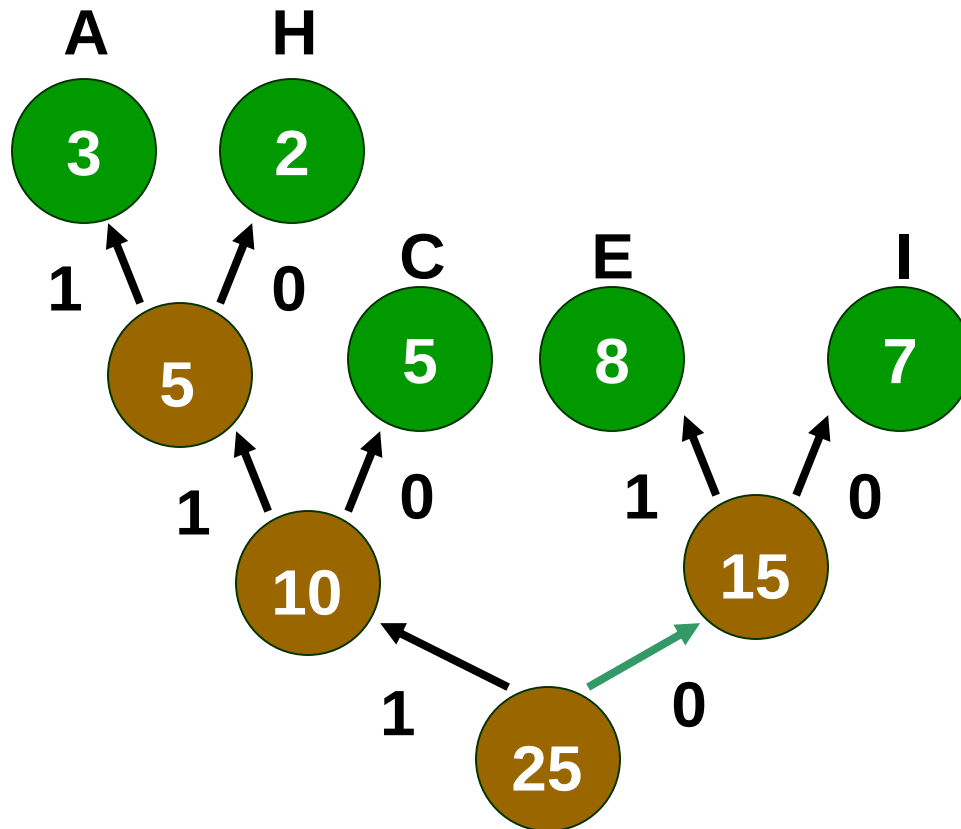
Huffman Decoding 5



1111001

AC

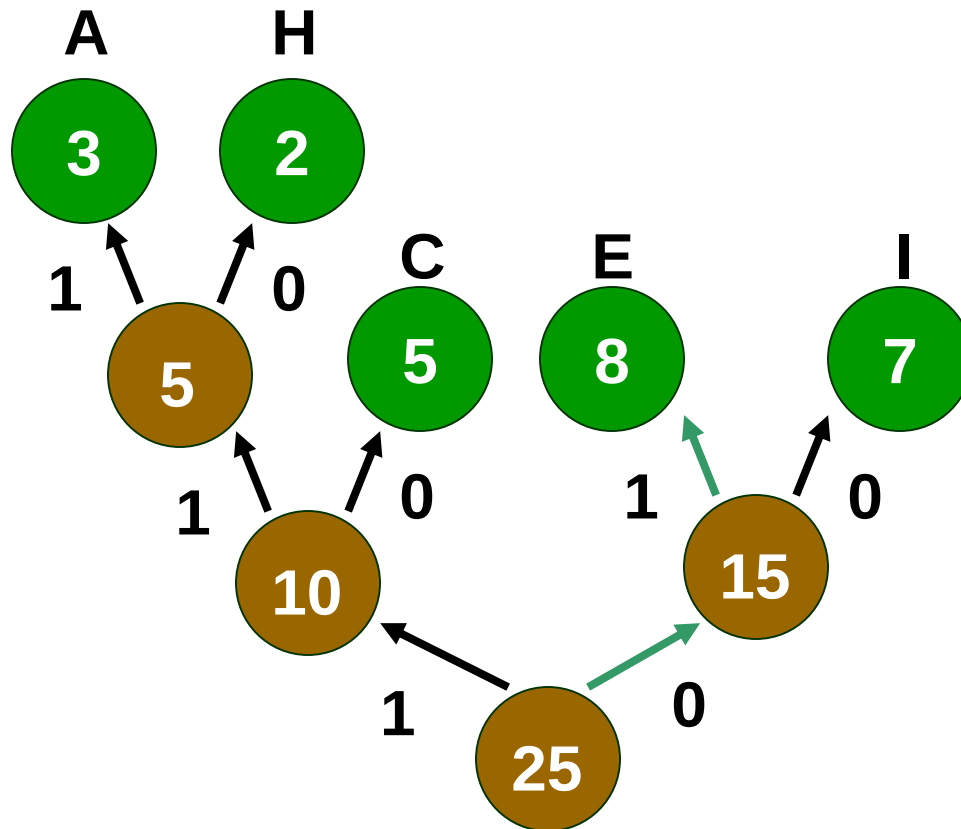
Huffman Decoding 6



1111001

AC

Huffman Decoding 7



1111001

ACE