

HUFFMAN(C)

```
1   $n = |C|$ 
2   $Q = C$ 
3  for  $i = 1$  to  $n - 1$ 
4      allocate a new node  $z$ 
5       $x = \text{EXTRACT-MIN}(Q)$ 
6       $y = \text{EXTRACT-MIN}(Q)$ 
7       $z.\text{left} = x$ 
8       $z.\text{right} = y$ 
9       $z.\text{freq} = x.\text{freq} + y.\text{freq}$ 
10      $\text{INSERT}(Q, z)$ 
11 return  $\text{EXTRACT-MIN}(Q)$     // the root of the tree is the only node left
```