

# CSE 4404 (Algorithm Lab)

## Huffman Coding Algorithm:

HUFFMAN( $C$ )

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

Input:    f:5    e:9    c:12    b:13    d:16    a:45

Output:

