7.7

1. Since all the codewords are unique it is a character code.

2. All characters but e and h have equal sized codewords. Therefore they are a prefix code. Since e and i are uniquely coded their union will also form a prefix code.

3. 0100 110 1000 01010 00001 00100
    n   o   t   b   a   d

     "notbad"
     Thanks!