



Figure 2: Encoding the phrase using that tree, result is 148 bits

4. How many bits are used to represent the most frequent character in your message?
5. What is the most number of bits used to encode any character in your message?
6. Use the tree you produced to encode the entire message you were given. How many bits are used, in total?

The technique in the rest of this document refers to using sticky notes and only drawing the tree at the end. Either way, the result should be the same. (The sticky notes were a little harder to manage on video.) If you were able to get your tree and answer the six questions above then you're done – submit as follows.

How to submit

Take a photo of the tree you drew that represents your variable-width Huffman encoding. Try to make it as legible as possible – redraw on a fresh sheet of paper if needed.

Write your answers to the six questions into a text document – the formats .doc, .docx, .txt, or odt are all fine.

Upload both files to [this dropbox for assignment 1](#).