Writeup

Encode:

After running the compress.cpp file, the main function from it will call the encode function that is in HCTree.cpp interatively. Each time, the tree.encode() functions will pass two arguments to the encode function: one is the nextByte(a given symbol) and the second one is the fstream (or bitoutputstream). At first, the encode function will check if there is a tree and it will create one if there is no tree. Assuming there is a tree, then the function will travese up the tree and pushing 0 or 1 into the correct leaf. At the end, the function will output the correct encoded symbol into a file.

Decode:

if the file is not empty or the tree only have root, the decode function will take the input stream and traverse down the tree untile a leaave node is founded then return the symbol of that node.