Decipher

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Decrypting a message can vary in difficulty based on the complexity of the encryption key used when encrypting. In this assignment, the key was a fixed value, 8-bit one-time pad key which made the encode text flimsy and easy to break. Since each ASCII character, including "spaces" and "newline", was encoded to an 8-bit byte. Because we know that each group of 8-bits was "xor-ed" with this same key, we decide to use a brute force key checking method which proved to be efficient in deciphering our message. The code we used checks to see if the character create by the current key a valid/invalid character in the ASCII table. Then if it is "stop" and print the result. If it is not then increment the key by 1 and try again. From this we found that the correct key value of 110 yielded the excerpt we were seeking from *Moby Dick* by Herman Melville.

The excerpt from *Moby Dick* is:

> *Call me Ishmael. Some years ago–never mind how long precisely– having little or no money in my purse, and nothing particular to interest me on shore, I thought I would sail about a little and see the watery part of the world. It is a way I have of driving off the spleen and regulating the circulation. Whenever I find myself growing grim about the mouth; whenever it is a damp, drizzly November in my soul; whenever I find myself involuntarily pausing before coffin warehouses, and bringing up the rear of every funeral I meet; and especially whenever my hypos get such an upper hand of me, that it requires a strong moral principle to prevent me from deliberately stepping into the street, and methodically knocking people's hats off–then, I account it high time to get to sea as soon as I can. This is my substitute for pistol and ball. With a philosophical flourish Cato throws himself upon his sword; I quietly take to the ship. There is nothing surprising in this. If they but knew it, almost all men in their degree, some time or other, cherish very nearly the same feelings towards the ocean with me.*