Mini-Project 1

I wrote my program in C++ and have included a makefile. The program itself will be called “Program”. Decisions on whether to encode versus decode and what plaintext/ciphertext and key to use will be provided to the user once the program has started. I assumed that the program would be provided good input. The algorithm used to encode and decode the message are the same as the ones given in the assignment description. However, interesting note for those who use C++: The “%” sign is not modulus but rather remainder, which at first glance doesn’t seem like it would be an issue. I mean what’s the difference right? The problem is when you take the remainder of a negative number vs the modulus of a negative number. While the mod will always be positive, the remainder will not. So when you go to decode, you need to either use a modulus function or ensure that you value is nonnegative. I did the latter by simply adding 26 to my values before taking “% 26” of them. This in essence gave me “mod 26” each time. Fun Fact!

Let me know if you have any questions. Have a great day!