The key is

(first letter is cipher letter and second is translation to normal alphabet)

1. i
2. p
3. w
4. x
5. k
6. s
7. c
8. u
9. t
10. j
11. a
12. q
13. b
14. m
15. f
16. v
17. h
18. y
19. l
20. g
21. z
22. d
23. n
24. r
25. o
26. e

1.What difficulties did you run into writing the frequency analysis program? How did you resolve

these problems?

The difficulties were coming up with solutions to place each letter of the chunk of words into an array. I resolved this problem by chopping the chunk first into words, then into letters.

2. How closely did the frequencies of letters in the plaintext and the ciphertext correspond? What

could be done to improve the accuracy of the correspondence?

The frequencies did not exactly match up. To improve the accuracy, one can use a larger sample of text to determine the frequencies

3. This assignment involved writing a program and then interpreting the results the old fashioned way. Propose an extension to this project that would allow the computer to do all the work so that you only have to evaluate whether the decoded message makes senses. You don’t need to actually write another program to do this, just consider how it could be done and clearly describe your solution in a well written paragraph.

A person can write a program comparing the frequencies of both letters. The key with the closest frequency will translate the cipher letter than that particular letter. This may result in duplicate translations of different letters but it should be fairly accurate if the sample sizes are large enough.