Deciphered secret message:

FIRST I BELIEVE THAT THIS NATION SHOULD COMMIT ITSELF TO ACHIEVING THE GOAL BEFORE THIS DECADE IS OUT OF LANDING A MAN ON THE MOON AND RETURNING HIM SAFELY TO THE EARTH.

Key

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| A = i | B = w | C = q | D = x | K = e | F = s | G = c | H = u | I = t |
| J = p | K = a | L = j | M = b | N = m | O = f | P = v | Q = h | R = y |
| S = l | T = g | U = z | V = d | N = w | X = r | Y = o | Z = e |  |

1. When I was writing my frequency analysis program, I thought I would be writing a program to automatically decipher the text to. That wasn’t the case. I left the program open for easy edits. Most difficulties I had weren’t serious. I easily identified any errors and fixed them. The compiler buzzing gives an immediate indication of what I have to do. One think that made this program difficult was the many designs I had in my head at the start. I wasted several minutes coding before realizing that I could run the program another way. Then I found out that I had to rewrite the same code. Besides a few extra planning steps, I didn’t run into very many errors. Minor syntax errors, such as writing variable.length() in reference to an array, instead of variable.length, happened on some rare occasions.
2. There were some minor variations between the frequencies of letters in the plaintext and cipher text. It was somewhat difficult for me to decode the message at first. After about 10 minutes of decoding, I realized that the message was a JFK speech. After I realized that the message was a JFK speech, I adjusted my key. In the end, I made more adjustments to the key to make unused letters match their probable translations. One thing that could have improved the accuracy of the translations between cipher and plain text was larger sample spaces. If the text files were larger, the translations would continue to get closer to accurate.
3. I personally think that writing an extension program would have been a better idea than doing this project the old fashioned way. The program would have deciphered the text quicker. The program might not be accurate at first though. To make the program work better, it would be a good idea to not only translate the text into letters of similar frequencies, but to also prompt the user for feedback on translations and allow the user to enter a better key. The user would correct the flawed translations, eventually making the translation work as intended.