Kevin Dinh

2451012

Vigenere Cipher

The code gets really slow and clunky by the 5 length key. This is due to the code having to iterate through every combination to check and see if a word exists in the dict.txt. With a 5 letter key it would take 26^5 combinations, which would translate to $O(26^n)$.

kevdinh33@kevdinh33-desktop:~/School/EECS565$ ./cipher
MSOKKJCOSXOEEKDTOSLGFWCMCHSUSGX 2 6
Time it took to crack the code: 0.000282 seconds
The key used: KS
Decrypted text: CAESARSWIFEMUSTBEABOVESUSPICION

kevdinh33@kevdinh33-desktop:~/School/EECS565$ ./cipher
OOPCULNWFRCFQAQJGPNARMEYUODYOUNRGWORQEPVARCEPBBSCEQYEARAJUYG
WWYACYWBPRNEJBMDTEAEYCCFJNENSGWAQRTSJTGXNRQRMDGFEEPHSJRGFCFM
ACCB 3 7
Time it took to crack the code: 0.020551 seconds
The key used: JAY
Decrypted text:
FORTUNEWHICHHASAGREATDEALOFPOWERINOTHERMATTERSBUTESPECIALLYINWA
RCANBRINGABOUTGREATCHANGESINASITUATIONTHROUGHVERYSLIGHTFORCES

kevdinh33@kevdinh33-desktop:~/School/EECS565$ ./cipher
MTZHZEOQKASVBDOWMWMKMNYIIHVWPEXJA 4 10
Time it took to crack the code: 0.221788 seconds
The key used: IWKD
Decrypted text: EXPERIENCEISTHETEACHEROFALLTHINGS

kevdinh33@kevdinh33-desktop:~/School/EECS565$ ./cipher
HUETNMIXVTMQWZTQMMZUNZXNSSBLNSJVSJQDLKR 5 11
Time it took to crack the code: 6.48377 seconds
The key used: ZIENF
Decrypted text: IMAGINATIONISMOREIMPORTANTTHANKNOWLEDGE