

## Assignment 1

1. Use Hill cipher to encipher the message “We live in an insecure world”. Use the following Key.  
 $K = \begin{bmatrix} 3 & 2 \\ 5 & 7 \end{bmatrix}$
2. Decrypt the output of Problem 1 using Hill Cipher. (Hint: Find Inverse of K)
3. Encrypt the message: “Life is full of surprises” using Vigenere Cipher. Use Keyword “HEALTH”.
4. Decrypt the output of Problem 3 using Vigenere Cipher. Use same key.
5. Use “WEALTH” as sub-key. Encrypt the message “wishyouveryhappynewyear ” using Auto-key cipher.
6. Decrypt the output of problem 5 using Auto-key cipher. Use “WEALTH” as sub-key.