

Details Of Encryption Scheme

Steps performed in encryption are given as below.

Assuming key as "EDGARCODD" and plain text as "MauriceVincent"

Step-1 : Applying Vignere Cipher Encryption Procedure using given key which is repeated until it matches with the length of plain text.

- From the plain text all the special characters and numbers will be removed.
- All the small letters are converted into capital letters.
- Now key will be repeated to match the length of plain text.
- Vignere Cipher Encryption procedure is applied.
- All the characters which were previously converted to capital will be converted back to small letters.

PLAIN TEXT AFTER REMOVING SPECIAL CHARACTERS AND NUMBERS	MauriceVincent.....
CAPITAL CONVERSION	MAURICEVINCENT.....
KEY (REPEATED)	EDGARCODDEDGAR.....
VIGNERE CIPHER TEXT	QDARZESYLRFKNK.....
SMALL CONVERSION	QdarzesYlrfknk.....

Vignere cipher encryption procedure only works with capital letters. So any small letter encountered will be converted to capital first , then encrypted and then converted to small again.

Step-2 : Now applying Shift cipher procedure which shifts the Vignere cipher by 0,1,2,3... in lengths of key. In this case in lengths of 9.

- The output from the first step is taken and the characters in the cipher are shifted forward (Addition) by 0,1,2,3 in lengths of 9 as given below.
- Shift cipher encryption procedure is applied and final cipher is obtained.
- All the special characters and numbers which were removed previously will be added back.

SMALL CIPHER TEXT	QdarzesYlrfknk.....
SHIFT CIPHER	0000000001111..... (ADDITION)
FINAL CIPHER TEXT With SPECIAL CHARACTERS AND NUMBERS	QdarzesYlsglol.....

Step-3 : Now the final cipher text is encrypted using h20171030081 public key