TASK 4

In this digital word security and privacy is important because data is the nowadays assert. To protect our data from the third party members and attackers, we need to change the plain text into a cipher text. Changing the plain text into cipher text can achieve with several process like encryption and hashing.

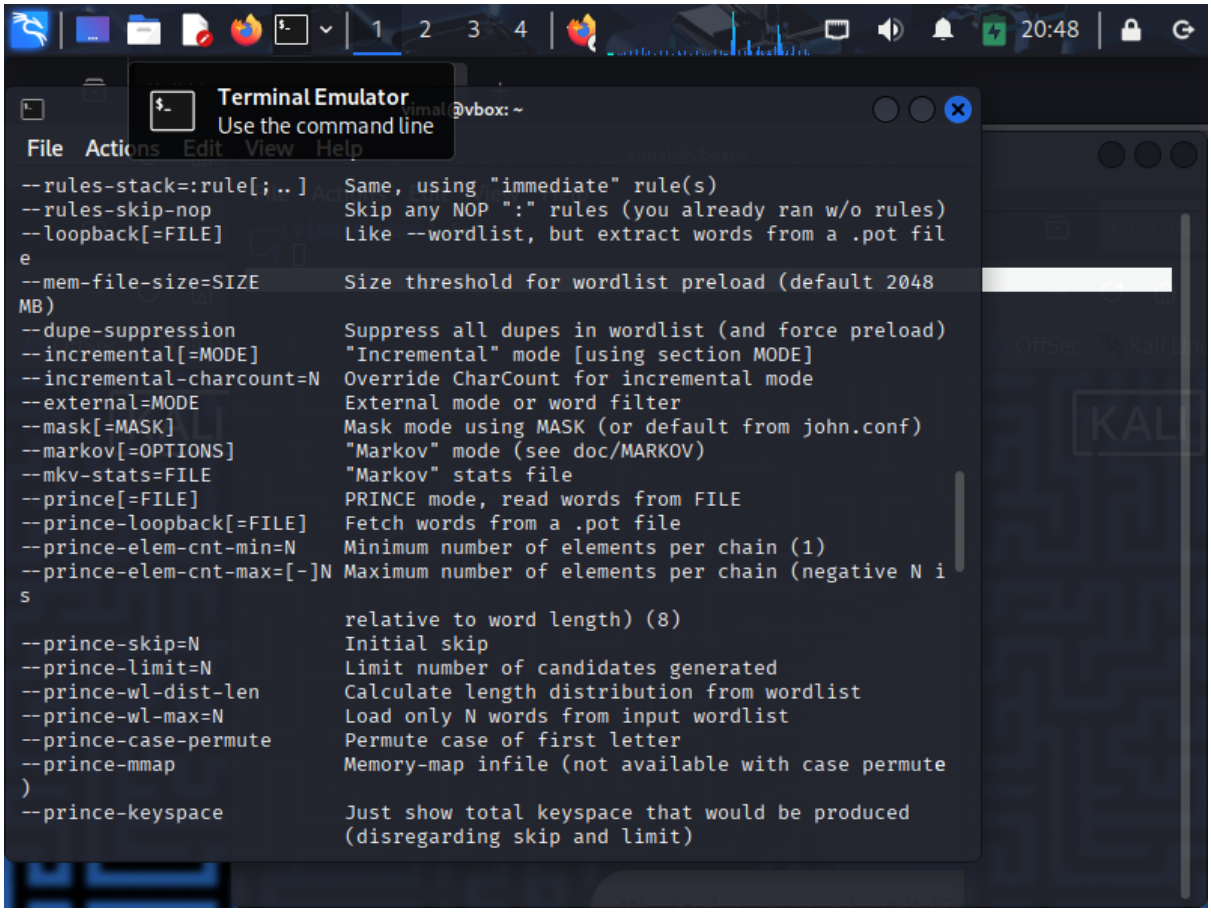
HASHING

Hashing is process of changing the text into a sequence of number majorly in hexadecimal values, this process is fixed we cant able to reverse it, this thing is useful to store the credentials at server. Even the server doesn't know the original text or script. Example **fad89cd3d010b686f0fb8aaf22d79576d589d29f648b42d917b7f5cafe6c0ed3** Is the hash value of **WannaCry ransomware SHA256 hash.txt**

ENCRYPTION

Encryption is also do the same things like hashing, changing the plain text into a cipher text. But the working mechanism is makes the difference here, in hashing there is no reverse process but in encryption the both side reverse process may occur. The changing process is achieved by the crypto keys like **public key and private key.**

- **HASHING** -ONE WAY PROCESS
- **ENCRYPTION** -TWO WAY PROCESS(cypto keys)



I have installed the john ripper in my vm, kali linux runn it in mu vm terminal and run the following commands

- sudo apt update : update the firmware.
- sudo apt install john -y : install the john ripper
- john –help : confirm installation
- echo -n password123 | md5sum :**Create a harsh using text**

Here the the password123 is the word to hashing

- **echo** : to print
- **-n** : to decleare there is no new line
- **Password123** : this is the text
- **Md5sum** : it is the command to hash the value

482c811da5d5b4bc6d497ffa98491e38 -this is the hash value