



**The Islamic University**  
**College of Technical Engineering**  
**Department of Computer Technical Engineering**



**Fourth Stage**

***Security  
Lab.***

**Lecture 8**

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## Example

Write a program in Matlab to decrypt the message “**OMSTV**” by using **Vigenere Cipher** with **Keyword: hi**

**Decryption**

$$\longrightarrow P_i = (C_i - K_i) \bmod 26$$

# Decryption Code

```
clear, clc

c = input('Ciphertext = ', 's');
k = input('Key = ', 's');

c = upper(c);
k = upper(k);

lc = length(c);
lk = length(k);

if lc>lk
    for i=1:lc
        k1 = repmat(k,1,i)
        if lc<length(k1)
            break
        end
    end
end
```

```
k1 = k1(1:lc);
else
    k1 = k(1:lc);
end

p = int16(c-65) - int16(k1-65);
p = mod(p,26);
p = char(p+97)
```

**The Result of Decryption is**

**hello**

# Homework

By using **Vigenere Cipher**, Decrypt  
for the word **“OSTEAUCVE”** using the  
**Key : leg**