



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



Fourth Stage

***Security
Lab.***

Lecture 6

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Example

Write a program in Matlab to Decrypt the word “**XOBS**” by using **Affine Cipher** with the Pair **Key** (3, 2). Where the **message** and **Key** should be in the form of input.

Decryption Code

```
clear, clc
c = input('Ciphertext = ', 's');
k1 = input('First Key = ');
k2 = input('Second Key = ');

c = upper(c);
c = int16(c) - 65;

for i=1:25
    if mod(k1*i,26)==1
        k1=i; 
    end
end

p = mod( k1 * (c - k2) , 26);
p = char(p + 97)
```

The Result of Decryption is

hero

Homework

Write one program in MATLAB to Encrypt and Decrypt the message “this is an exercise” using the following cipher.

- **Affine Cipher with Pair key (19, 20).**