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EB02 Lab Week 3

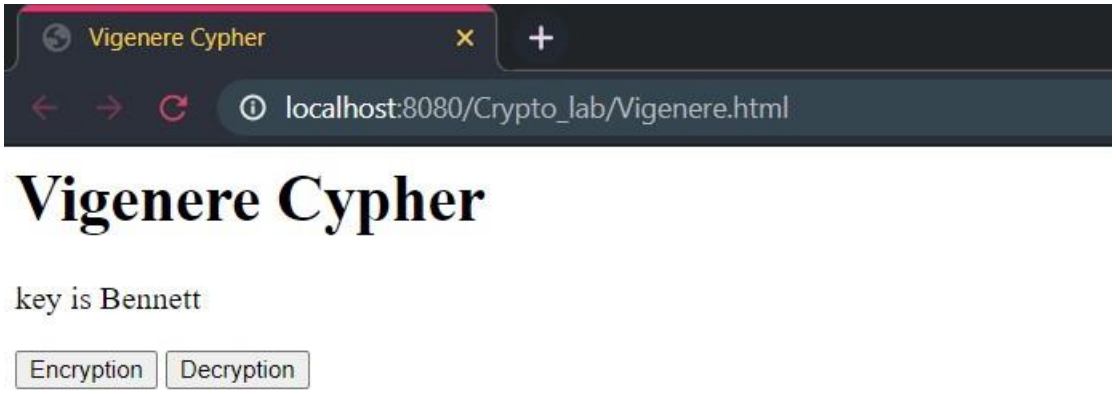
Question 1: (Language: JAVASCRIPT, Server : TOMCAT v9)

```
<html>
<head>
<title>Vigenere Cypher</title>
<h1> Vigenere Cypher </h1>
</head>
<body>
<p> key is  Bennett </p>
 <script> function
encryption(){
var P1 = window.prompt("Enter plain text for encryption"); let
K="Bennett";
var A="abcdefghijklmnopqrstuvwxyzABCDEFGHIJKLMNOPQRSTUVWXYZ ";
var out1 = "";

for (let i = 0; i < P1.length; i++)
        {
             out1 +=
A.charAt((A.indexOf(P1.charAt(i))+A.indexOf(K.charAt(i%K.length)))%A.length);
}        alert(out1);
    }
```

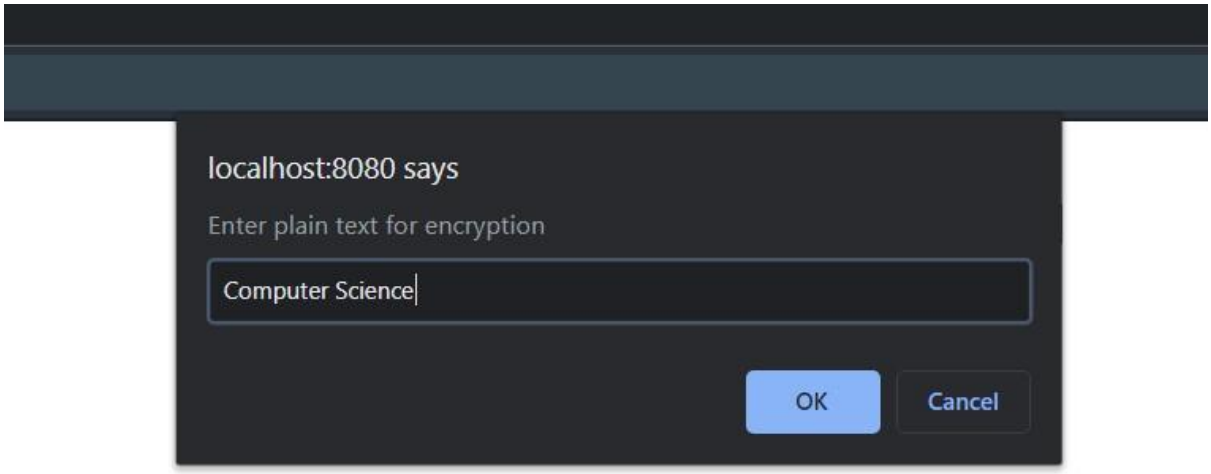
```
</script>

 <script>
function decryption() {
var P2 = window.prompt("Enter plain text for decryption");  let
K='Bennett';
var A="abcdefghijklmnopqrstuvwxyzABCDEFGHIJKLMNOPQRSTUVWXYZ ";
var out2= "";
for (var i = 0;i < P2.length;i++)
{
 out2 +=
A.charAt(((A.indexOf(P2.charAt(i))+A.length)A.indexOf(K.charAt(i%K.length)))%
A.length);
  }

       alert(out2);
    }

</script>
<button onclick="encryption()">Encryption</button>

<button onclick="decryption()">Decryption</button>


</body>
</html>
```

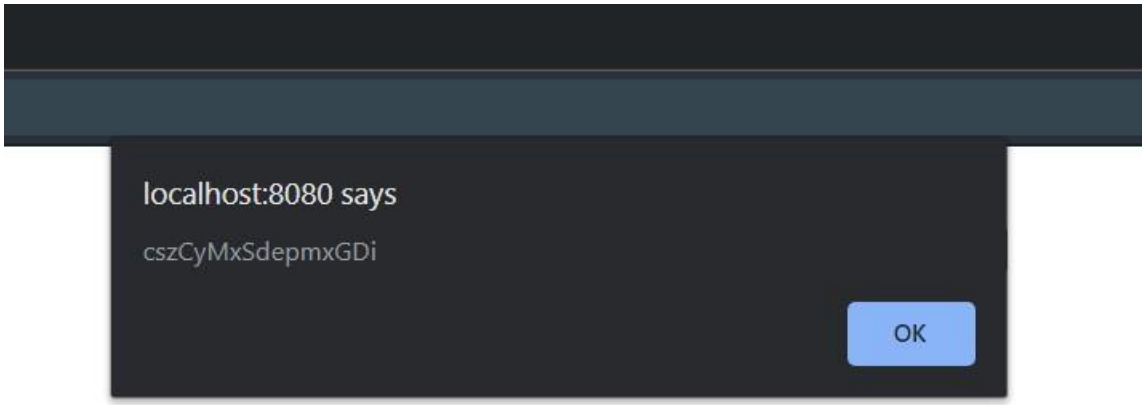
Output

1 Index page


Vigenere Cypher
localhost:8080/Crypto_lab/Vigenere.html
Vigenere Cypher
key is Bennett
Encryption
Decryption

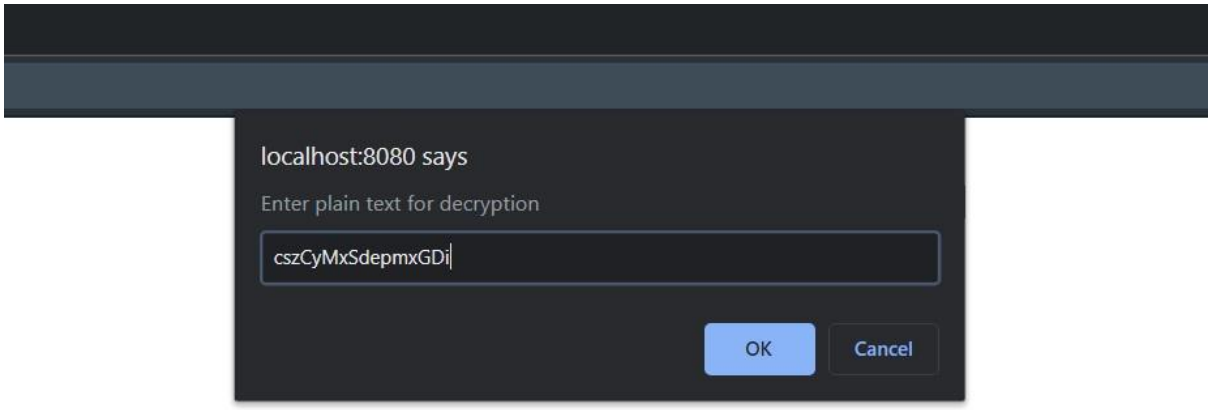
2 encryption

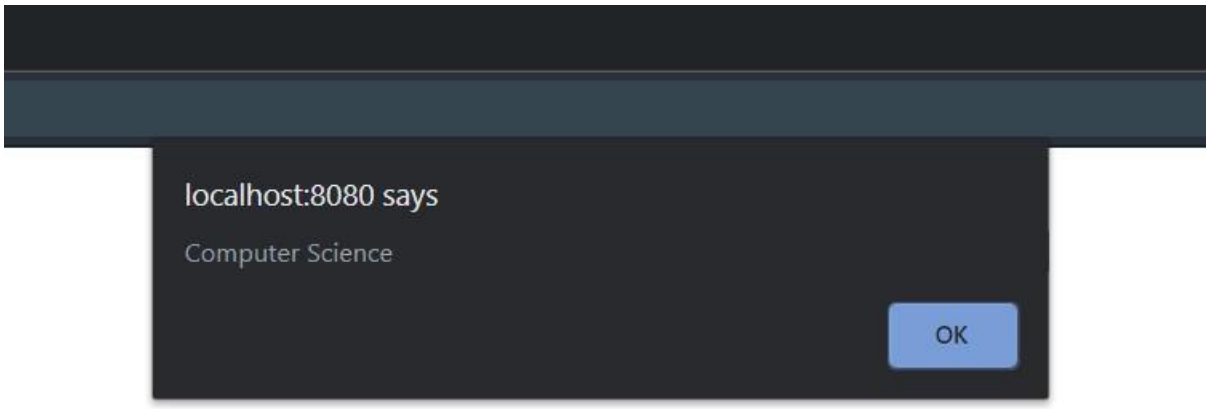




---

3 Decryption





Question 2

CODE: (Language: Python3)

import random class

Vernam:

```
   def encryption():
      key=""
      encrypt_str=input("Enter binary string to encrypt: ")
A=[int(i) for i in list(encrypt_str)]        e = [0 if random.random()
> 0.5 else 1 for i in range(len(A))]        key = key.join([str(i) for i
in e])        print(f'Key: {key}')

      result=[A[i]^e[i] for i in range(len(A))]
output= "".join([str(i) for i in result])
print(f'Encrypted Text: {output}')

   def decryption():
      decrypt_str=input("Enter binary string to decrypt: ")
k= input("Enter binary Kwy for decryption: " )
      D=[int(i) for i in list(decrypt_str)]
K=[int(i) for i in list(k)]        res=[D[i]^K[i]
for i in range(len(D))]
out=''.join([str(i) for i in res])
print(f'Decrypted Text: {out}')

   encryption()
decryption()
```

OUTPUT:

```
    decryption()
```

```
Enter binary string to encrypt: 10011101010101111100001
Key: 11110111010010000000111
Encrypted Text: 01101011110001111100110
Enter binary string to decrypt: 01101011110001111100110
Enter binary Kwy for decryption: 11110111010010000000111
Decrypted Text: 10011101010101111100001
```

```
]:
```