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Q3 :- input plaintext = " Cryptography " with key = "Monarchy"

```
# include < Stdio.h7
# include <string.h7

 int main()
{
    char msg [] = "Cryptography" ;
    char key[] = "Monarchy" ;
    int msglen = Strlen (mgs), Key len = Strlen (Key, i,j;

    Char newkey [msglen], encrypted Msg (mgslen],
        decrypted Msg [msglen];
    for (i = 0; j=0; i< msglen; ++; ++j){
      y (j == Key len)
          j = 0;
       new key [i] = key [j] ;
    }

       newkey (i] = Key [j ];
    }
```

```c
newKey[i] = '\0';
for (i = 0; i < msg_len; ++i)
    encryptedMsg[i] = ((msg[i] + newKey[i]) % 26) + 'A';
encryptedMsg[i] = '\0';
for (i = 0; i < msg_len; ++i)
    decryptedMsg[i] = (((encryptedMsg[i] - newKey[i]) +
        26) % 26) + 'A';
decryptedMsg[i] = '\0';
printf("Original Message: %s", msg);
print("\n Key : %s", Key);
print("\n New Generated Key : %s", newKey);
print("\nEncrypted Message : %s", encryptedMsg);
print("\n Decrypted Message : %s", decryptedMsg);
return 0;
}
```