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Sub. code - PBC-601

Ques 3→ WAP for encryption & decryption of the Vignere cipher on the input text = "Cryptography" with a key = "Monarchy".

Python program →

```
def genKey (string, key):
    key = list (key)
    if len(string) == len(key):
        return key
    else:
        for i in range (len(string) - len (key)):
            key. append [ key [i % len(key)])
        return (" ". join (key))

def encryption (string, key):
    cipher_text = [ ]
    for i in range (len(string)):
        x = (ord (string[i]) + ord ( key [i])) % 26
        x += ord ("A")
        cipher_text. append ( chr (x))
    return ("". join ( cipher_text))

def decryption (cipher_text, key):
    org_text = [ ]
    for i in range( len(cipher_text)):
        x = ord (cipher_text [i]) - ord ( key [i] )+26) % 26
        x += ord ("A")
```

```python
        org_text.append(chr(x))
    return ("".join(org_text))


if __name__ == "__main__":
    string = "cryptography"
    key = "monarchy"
    newkey = genKey(string, key)
    ciphertext = encryption(string, newkey)
    print("ciphertext:", cipher_text)
    print("Original /Decrypted key:", decryption
                                    (ciphertext, key))
```