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Course → BCA 'A'

Q3

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

# this function return the
# encrypted text generated
# with the help g the key
def cipher Text (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))
# This function decrypts the
# encrypted text and return
# the original text.
def original Text (cipher_text, key):
    orig_text = []
```

```
for i in range (len (cipher - text)):
    x= (ord (cipher- text [i]) - ord (key [i]) +26) % 26
     x += ord ('A')
     orig-text .append (chr (x))
     return ("  ". join (orig-text))

   # Driver code

   if -- name --  == "--main--":
       string =" cryptography"
       keyword = " monarchy"

       key = generate key (string, keyword)
       cipher-text = cipher text (string, key)
         printf(" ciphertext:", cipher-text)
         print ("original / Decrypted text :",
           original Text ( cipher -text, key ))
```