

Ans 3:

```
def generateKey (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 cipherText (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 originalText(cipher-text, key):
    original
    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)

```

```

if __name__ == "__main__":
    string = "Cryptography"
    keyword = "Monarchy"
    key = generateKey(string, keyword)
    cipher-text = cipherText(string, key)
    print("Ciphertext :", cipher-text)
    print("Original / Decrypted Text :",
          originalText(cipher-text, key))

```