

Exp 6)implement the character shifting and distuffing in sender and receiver side respectively

```
1 FLAG = "F" # Special flag character
2 ESC = "E" # Escape character
3 def character_stuffing(data):
4     stuffed_data = ""
5     for char in data:
6         if char in (FLAG, ESC):
7             stuffed_data += ESC + char
8         else:
9             stuffed_data += char
10    return FLAG + stuffed_data + FLAG
11 def character_destuffing(stuffed_data):
12     destuffed_data = ""
13     i = 1 # Start after initial FLAG
14     while i < len(stuffed_data) - 1: # Ignore end FLAG
15         if stuffed_data[i] == ESC: # If ESC is found, skip it
16             i += 1
17         destuffed_data += stuffed_data[i]
18         i += 1
19     return destuffed_data
20 original_data = "ABCFDEFGF" # Contains FLAG 'F'
21 stuffed = character_stuffing(original_data)
22 print("Stuffed Data:", stuffed)
23 destuffed = character_destuffing(stuffed)
24 print("Destuffed Data:", destuffed)
25
```

Output

```
Stuffed Data: FABCFDEEEFGEFF
Destuffed Data: ABCFDEFGF
```