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	NAME: Vruddhi Shah STD.: DIV.: PAGE:		
	Computer Networks		
	Experiment 2		
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	Ain: Write a program to implement Framing		
	as priming as the policy of the hearing as		
vi on	Theory:		
4.00	The second of th		
3 1,	Character count: The total number of charactery that		
	are present in frame are counted using field in		
	header. The seceiver is given the number of		
	characters for every frame so they know when a		
	character count is disturbed or		
mer led	distorted by an error during transmission, then		
	distorted by an error during transmission, then the receiver might lose synchronisation.		
Ca.			
+5	Franc 1 Franc 2 Franc 3		
	4 ab c 2 d 3 e s		
0 2	Byte stuffing: This is also called character stuffing.		
	There is a flag start flag, an end flag and an escape		
	plag. The start and end flags indicate the start		
	and end of any frame. If those flags appear		
	in a string, while stuffing, they are preceded by		
	a special escape flag. This indicates that they are a		
	part of the string. An escape flag inside the string		
	Is also preceded by an escape Mag		
Fig:	Start flag-s End flag-d stuffed flag-o Message: goodbye stuffed string = 59000 oodbyed		
	Message: goodbye stuffed string = sgoodoodbyed		
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3. Bit stuffing: It is also called bit oriented from	added
3. Bit stuffing It is about Extra bits are being or bit-oriented approach. Extra bits are being	
by network protocol distributed by I con	ecutives
of every tok frame in the message, we in	the
a O after we continue !	
new message.	
new message:  (g) Message: 0 110 1111111111110010  Stuffed missage: 0 11 0 111110 111110 001 0	
Stuffed nessage:	
Conclusion: Thus, we have studied and implementations from the various framing techniques.	rented
Conclusion from techniques.	
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# Department of Computer Engineering Class: S.Y. B.Tech. Semester: V

**Course Name: Computer Networks Lab** 

Name: Vruddhi Shah	SAP ID: 60004220215
Date of Performance: 14.08.24	Date of Submission: 14.08.24

# **Experiment No: 2**

**Aim:** Write a program to implement Framing:

Techniques: Character count, Byte stuffing, Bit stuffing.

## **Program:**

```
k = int(input("Which stuffing do you want?\nPress 1 for
character count\nPress 2 for byte stuffing\nPress 3 for bit
stuffing\n"))
def characterCount():
    n = int(input("How many frames? "))
    ans = ""
    for i in range(n):
        frame = input("Enter frame " + str(i) + " ")
        k = len(frame)
        ans += str(k+1)
        ans += frame
    return ans
def byteStuffing():
    start = input("Enter start flag ")
    end = input("Enter end flag ")
    escape = input("Enter escape flag ")
    mess = input("Enter message to be sent ")
    i = 0
    while i < len(mess):
        if (mess[i] == start) or (mess[i] == end) or (mess[i]
== escape):
            mess = mess[:i] + escape + mess[i:]
            i += 2
        else:
            i += 1
    mess = start + mess + end
```

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```
return mess

def bitStuffing():
    mess = input("Enter message to be sent")
    if len(mess) < 6:
        return mess
    i = 6
    while i < len(mess):
        if mess[i-6:i] == "011111":
            mess = mess[:i] + "0" + mess[i:]
            i += 1
        i += 1
        return mess</pre>
```

#### **Screenshots:**

## Bit stuffing:

```
Which stuffing do you want?
Press 1 for character count
Press 2 for byte stuffing
Press 3 for bit stuffing
Stuffed string is 0110111110111111010010
```

# **Byte stuffing:**

```
Which stuffing do you want?

Press 1 for character count

Press 2 for byte stuffing

Press 3 for bit stuffing

2

Enter start flag s

Enter end flag d

Enter escape flag o

Enter message to be sent goodbye

Stuffed string is sgooooodbyed
```

#### **Character count:**

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```
PS C:\Users\djsce.student\Desktop> python -u C:\User
Which stuffing do you want?
Press 1 for character count
Press 2 for byte stuffing
Press 3 for bit stuffing
1
How many frames? 2
Enter frame 0 abc
Enter frame 1 de
Stuffed string is 4abc3de
```

### **Conclusion:**

Thus, we have studied and implemented the various framing techniques.