Program:

def byte\_stuffing():  
 final\_output = []  
 print("\n\*\*\*BYTE STUFFING\*\*\*")  
 temp = input("Enter the input stream : ")  
 bits\_store = [str(x) for x in temp]  
 for i in range(0, len(bits\_store)):  
 if bits\_store[i] == "F":  
 final\_output.append("~F")  
 elif bits\_store[i] == "~":  
 final\_output.append("~~")  
 else:  
 final\_output.append(bits\_store[i])  
 print("After byte stuffing we get : F" + ''.join([str(elem) for elem in final\_output]) + "F")  
 print("After byte de-stuffing we get : " + ''.join([str(elem) for elem in bits\_store]))  
  
  
def bit\_stuffing():  
 c = 0  
 i = 0  
 n = 6  
 check = True  
 print("\n\*\*\*BIT STUFFING\*\*\*")  
 temp = input("Enter the input stream : ")  
 bits\_store = [int(x) for x in temp]  
 final\_output = [int(x) for x in temp]  
 final\_output.insert(0, 0)  
 while check:  
 if final\_output[i] == 1:  
 i += 1  
 c += 1  
 else:  
 i += 1  
 c = 0  
 if c == n:  
 final\_output.insert(i - 1, 0)  
 i -= 2  
 if i == len(final\_output):  
 check = False  
 print("After bit stuffing we get : 0111111" + ''.join([str(elem) for elem in final\_output]) + "01111110")  
 print("After bit de-stuffing we get : " + ''.join([str(elem) for elem in bits\_store]))  
  
  
  
  
def exit\_code():  
 print("\nProgram ended successfully")  
 exit()  
  
  
def framing():  
 while (True):  
 print("\nPress 1 for byte stuffing and destuffing")  
 print("Press 2 for bit stuffing and destuffing")  
 print("Press 3 t exit")  
 choice = int(input("Enter your choice : "))  
 if choice == 1:  
 byte\_stuffing()  
 if choice == 2:  
 bit\_stuffing()  
 if choice == 3:  
 exit\_code()  
  
  
print("FRAMING METHODS\n")  
framing()

Output:

FRAMING METHODS

Press 1 for byte stuffing and destuffing

Press 2 for bit stuffing and destuffing

Press 3 t exit

Enter your choice : 1

\*\*\*BYTE STUFFING\*\*\*

Enter the input stream : FA~FB

After byte stuffing we get : F~FA~~~FBF

After byte de-stuffing we get : FA~FB

Press 1 for byte stuffing and destuffing

Press 2 for bit stuffing and destuffing

Press 3 t exit

Enter your choice : 2

\*\*\*BIT STUFFING\*\*\*

Enter the input stream : 111111011111111

After bit stuffing we get : 011111101111101011111011101111110

After bit de-stuffing we get : 111111011111111

Press 1 for byte stuffing and destuffing

Press 2 for bit stuffing and destuffing

Press 3 t exit

Enter your choice : 3

Program ended successfully

Process finished with exit code 0