Name: G.R.Nithishkumar

Roll no.: 20ucs088

Ex No.: 2

Program: Simulation of bit stuffing using python

def stuff(signal):

onec = 0 # one counter

c = 0 # index counter

one = [] # one indexes

s = list(signal)

for i in s:

c += 1

if i == '0':

onec = 0

else:

onec += 1

if onec == 5:

one.append(c)

onec = 0

k = 0 # count extra index number

for i in one:

# print(i)

s.insert(i + k, '0')

k += 1

return s

# destuffing the stuffed signal

def destuff(signal):

onec = 0 # one counter

c = 0 # index counter

one = [] # one indexes

signal = list(signal)

for i in signal:

c += 1

if i == '0':

onec = 0

else:

onec += 1

if onec == 5:

one.append(c)

onec = 0

k = 0 # count extra index number

for i in one:

# print(i)

signal.pop(i + k)

k -= 1

return signal

# \*\*\*\*\*\*\*\*\*Driver Code \*\*\*\*\*\*\*\*\*\*\* #

signal = input("Enter the signal: ")

print("\nOriginal signal : ", signal)

stf = stuff(signal)

print("\nStuffed signal : ", end="")

print("".join([x for x in stf]))

dstf = destuff(stf)

print("\nDestuffed signal : ", end="")

print("".join([x for x in dstf]))

Output:

