**Write a Python program to perform Cyclic Redundancy Check**

from math import log, ceil

def CRC(dataword, generator):

dword = int(dataword, 2)

l\_gen = len(generator)

dividend = dword << (l\_gen - 1)

shft = ceil(log(dividend + 1, 2)) - l\_gen

generator = int(generator, 2)

while dividend >= generator or shft >= 0:

rem = (dividend >> shft) ^ generator

dividend = (dividend & ((1 << shft) - 1)) | (rem << shft)

shft = ceil(log(dividend+1, 2)) - l\_gen

codeword = dword << (l\_gen-1)|dividend

print("Remainder: ", bin(dividend).lstrip("-0b"))

print("Codeword : ", bin(codeword).lstrip("-0b"))

dataword = input("Enter Dataword: \n")

generator = input("Enter Key: \n")

CRC(dataword, generator)

**Output:**

