```
# EE 381 fall 2018 Project 3
# Dong Jae Shin
# 014579836
# start date 9-19-18
# Finish date 9-19-18
#--------------------------------------------------------------------------

import random

# Enter spec.'s
p = float(input("Enter the probability of going from 0 to 1. "))
q = float(input("Enter the probability of going from 1 to 0. "))

S = random.randint(0,1) # S is assigned either 0 or 1


print(S, end = '') # print original location

for i in range(24):

    r = random.uniform(0,1) # r is a random decimal number between 0 and 1

    # Markov Model
    if S == 0 and r < p:
        S = 1
    elif S == 1 and r < q:
        S = 0
    print(S, end = '') # print steps
```

outputs

```
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