Keep Counting

The challenge:

Connect to this port and see how high you can count!

nc redacted-url 12345

Once connected you'll be prompted with something like this:

```
2
3
4
5
enter the next number: 6
6
7
enter the next number: 7
oh no! wrong number :(
```

In the example above I entered 6, got a few more numbers then entered the wrong number 7 which ended the program. But if you count high enough you'll get the flag:

```
998
999
1000
1001
enter the next number:
sending: 1002
splendid! here is your flag: rfdsec{hope_you_did_not_do_that_by_hand}
```

That does not look fun to do manually (it goes to 1000) so this is a good chance to break out some coding skills - or learn some. Note that numbers increase by a random amount each time so you must account for that in your code. My solution was written in Python:

```
from socket import socket

clientsocket = socket()
clientsocket.connect(('redacted-url', 12345))

while True:
   data = clientsocket.recv(1024).decode()  # get data from server and decode from
'bytes' type
   print(data)
   if not "enter the next number:" in str(data):  # if you arent asked to enter
number it must be the flag
       break
   data = data.splitlines()
   i = data[-2]  # get last number in list
   i = str(int(i) + 1)  # convert string to integer, add 1, convert back to string
   print("sending: " + i)
   i = (i + '\n').encode() # add newline and re-encode the data so it plays nice
with the receiving socket
   data = clientsocket.send(i)
clientsocket.close()
```

Here is the server code, also written in Python:

```
#!/usr/bin/env python3
from random import randrange
import sys

n = 1
while n < 1000:
   s = ''
   i = 0
   r = randrange(2,7)
   while i < r:
       i += 1
       n += 1
       if r == i:
           s = s + str(n)
       else:
           s = s + str(n) + '\n'
   print(s)
   u = input("enter the next number: ")
   if u.isdigit():
       if (int(u) == (n + 1)):
           continue
       else:
           print("oh no! wrong number :(")
           #break
           sys.exit(0)
   else:
       print("numeric characters only! goodbye!")
       sys.exit(0)
print("splendid! here is your flag: flag{hope_you_did_not_do_that_by_hand}")
sys.exit(0)
```