

The downloaded file is a pcap capture which contains the executable we are going to reverse. After we extract the code and we have the executable, we run it and see it is a crackme that requires a pin. After disassembling it, we see 4 functions:

1. eadsvfbdgw(n), which calculates the nth Fibonacci number recursively
2. asberwefreqw(n), which calculates n factorial recursively
3. ecscisfun(n), which is in mutual recursion with tryharder(n)
4. tryharder(n), which is in mutual recursion with ecscisfun(n)

The difficulty comes in solving the recursion between ecscisfun and tryharder, as calculating v22 would cause a recursion error. Solving is easy, as ecscisfun and tryharder alternate.

After translating the code into python and solving the recursions, we get:

```
def eadsvfbdgw(a1):
    if a1 <= 1:
        return a1
    fib = [0, 1]
    for i in range(2, a1 + 1):
        fib.append(fib[i - 1] + fib[i - 2])
    return fib[a1]

def asberwefreqw(a1):
    result = 1
    for i in range(2, a1 + 1):
        result *= i
    return result

def ecscisfun(a1):
    result = 1
    while a1 > 1:
        result = 2 * a1 + 1337 + result
        a1 -= 1
        if a1 <= 1:
            break
        result = 2 * (a1 + 200) + result
        a1 -= 1
    return result

def tryharder(a1):
    result = 1
    while a1 > 1:
        result = 2 * (a1 + 200) + result
        a1 -= 1
        if a1 <= 1:
            break
        result = 2 * a1 + 1337 + result
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        a1 -= 1
    return result

v3 = tryharder(8)
v4 = eadsvfbdgw(15) + v3
v5 = eadsvfbdgw(7)
v6 = eadsvfbdgw(v5) + v4
v7 = eadsvfbdgw(8)
v8 = eadsvfbdgw(v7) + v6
v9 = eadsvfbdgw(8)
v10 = eadsvfbdgw(v9) + v8
v11 = asberwefreqw(4) + v10
v12 = asberwefreqw(1)
v13 = asberwefreqw(v12)
v14 = eadsvfbdgw(v13) + v11
v15 = eadsvfbdgw(5)
v16 = eadsvfbdgw(v15) + v14
v17 = tryharder(11)
v22 = tryharder(v16 + v17 - 1)
print(v22)
```

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