



Based on hint 1, the flag has three parts and based on the number of points needed to get hint 2, we locate all code paths that XOR with 0x36.

```
sh -c "objdump -d reez_revenge | grep -n '83 f0 36'"
```

We get

```
619: 1805: 83 f0 36      xor  $0x36,%eax
1640: 257f: 83 f0 36      xor  $0x36,%eax
2686: 3364: 83 f0 36      xor  $0x36,%eax
```

Map each address to its function:

```
gdb -q ./reez_revenge -ex "info symbol 0x1805" -ex "info symbol 0x257f" -ex "info symbol 0x3364" -ex q
```

Output

aABbcc + 110 in section .text

AaBBcC + 122 in section .text

AAbbCC + 122 in section .text

Then we disassemble these chunks

```
gdb -q ./reez_revenge -ex "disassemble aABbcc" -ex q
```

```
gdb -q ./reez_revenge -ex "disassemble AaBBcC" -ex q
```

```
gdb -q ./reez_revenge -ex "disassemble AAbbCC" -ex q
```

Extract the immediates from the movabs/movl/movb instructions and form the “chunk” bytes:

movabs loads a 64-bit immediate (displayed big-endian), but writes to memory in little-endian. Convert the immediate to little-endian bytes.

movl gives a 32-bit immediate (store as 4 bytes, little-endian).

movb gives a single byte. Running flip.py we got:

chunk hex: 50435869425e57586945595a405f5851695f424b

decoded: fun_than_solving_it}

chunk hex: 405143554f465e53444d58575b5f58516900026950

decoded: vgucypher{naming_64_f

chunk hex: 435855425f595845695f456941574f695b59445369

decoded: unctions_is_way_more_

Rearrange these fragment, we got the flag

vgucypher{naming_64_functions_is_way_more_fun_than_solving_it}