CSAW - LLM

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rev/whataxor

Observation:

The challenge provides us with a binary that asks for user input (password), and checks whether it is equal to the flag.

Approach:

1. Observe the binary using Ghidra.
2. Observe the main function to understand the flag generation operation.
3. Identify the string which will pass the function.

Solution:

1. Prompted ChatGPT to give a python code for steps 2-3 in the Approach.

```python
# Define the variables
variables = [
    -0x37, 0xd9, 0xcb, 0xdd, 0xc9, 0xde, 0xcc, 0xd1, 0x9a, 0xc4, 0xcf,
0xf5, 0xd9, 0xc2, 0xcf, 0xcf,
    0xfa, 0xf5, 0x9b, 0xdd, 0xc5, 0xf5, 0xd9, 0xc2, 0xcf, 0xfd, 0xda, 0xf5,
0x98, 0xc2, 0xd8, 0xcf,
    0xcf, 0xf5, 0x9f, 0xc2, 0xcf, 0xcf, 0xc1, 0xd9, 0xf5, 0xf5, 0xf5, 0xf5,
0xf5, 0xd0, 0xf5, 0xf5,
    0xf5, 0xd0, 0xd0, 0xd0, 0xf5, 0xf5, 0xf5, 0xf5, 0xf5, 0xd0, 0xd0, 0xd0,
0xd0, 0xd0, 0xd0, 0xf5,
    0xf5, 0xf5, 0xf5, 0xf5, 0xd2, 0xc5, 0xd8, 0xd7
]

# XOR and AND with 0xFF, then print the corresponding characters
for value in variables:
    result = (value ^ 0xFFFFFFAA) & 0xFF
    char = chr(result)
    print(char, end='')

# Output will be the corresponding characters
```

Flag: *csawctf{0ne_sheeP_1wo_sheWp_2hree_5heeks_____z___zzz_____zzzzzz_____xor}*
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