

Assignment_4_rough_notes

Assignment 4

Quick Notes

- running `file challenge3.exe` shows that it is a intel 80386 microsoft executable
- Using Ghidra I can view the decompiled code
- I can rename some of the variable names that don't make sense.

Key Ideas

- I see that there are `fopen()` calls and attempts to create a file called `challenge3.txt`
- I see that there is a way to print works in a message box and also a fail to create the text file command
- I also see there is a `fwrite()` to write "nice!"
- Main contains multiple `else` statements depending if a file exists or not.
- I see dynamic linked libraries that are imported. I see the `messageboxA` library
`fopen("w")` will try to write to a file but if it does not exist it will create one.

When I rerun the program I get the same thing each time.

Using the Decompiler made it a lot easier. I can view the C function calls and put it together a lot quicker

```
Decompile: _main - (challenge3.exe)

4 {
5     FILE *pFVar1;
6     int iVar2;
7     FILE *pFVar3;
8
9     __main();
10    pFVar1 = _fopen("NUL","w");
11    if (pFVar1 == (FILE *)0x0) {
12        _MessageBoxA@16((HWND)0x0,"Failed!","Error",0x10);
13        iVar2 = 1;
14    }
15    else {
16        pFVar3 = _freopen("NUL","w",(FILE *)(_iob_exref + 0x20));
17        if (pFVar3 == (FILE *)0x0) {
18            _MessageBoxA@16((HWND)0x0,"Failed!","Error",0x10);
19            _fclose(pFVar1);
20            iVar2 = 1;
21        }
22        else {
23            _puts("What is this!");
24            _fclose(pFVar1);
25            _MessageBoxA@16((HWND)0x0,"Works!","0",0);
26            pFVar1 = _fopen("challenge3.txt","w");
27            if (pFVar1 == (FILE *)0x0) {
28                _MessageBoxA@16((HWND)0x0,"Failed to create the text file!","Error",0x10);
29            }
30            else {
31                _fwrite("Nice.\n",1,6,pFVar1);
32                _fclose(pFVar1);
33            }
34            iVar2 = 0;
35        }
36    }
37    return iVar2;
38 }
```



