

COMP500 / ENSE501: Week 11 – Exercise:

EXERCISE NAME: *Debug vs Release*

Given the following program source code:

```
1  #include <stdio.h>
2  #include <assert.h>
3
4  int side_effect_example(void);
5
6  int main(void)
7  {
8      printf("Program just started...\n\n");
9
10     printf("Assert used next...\n\n");
11     assert(side_effect_example());
12     printf("Assert was just used (maybe)...\n\n");
13
14     #ifdef _DEBUG
15         printf("This is a Debug Build...\n\n");
16     #else
17         printf("This is a Release Build...\n\n");
18     #endif // _DEBUG
19
20     printf("Program is about to end...\n\n");
21
22     return 0;
23 }
24
25 int side_effect_example(void)
26 {
27     printf("This function will not be ");
28     printf("called when the program is ");
29     printf("compiled in Release mode.\n\n");
30
31     return 1;
32 }
```

Build the source code using the Debug build target. Run the resulting program and note the output.

Build the source code using the Release build target. Run the resulting program and note the output.

Find the resulting executable files from each build target on disk.

What changes occurred between the two build targets?

How were the resulting executables different?