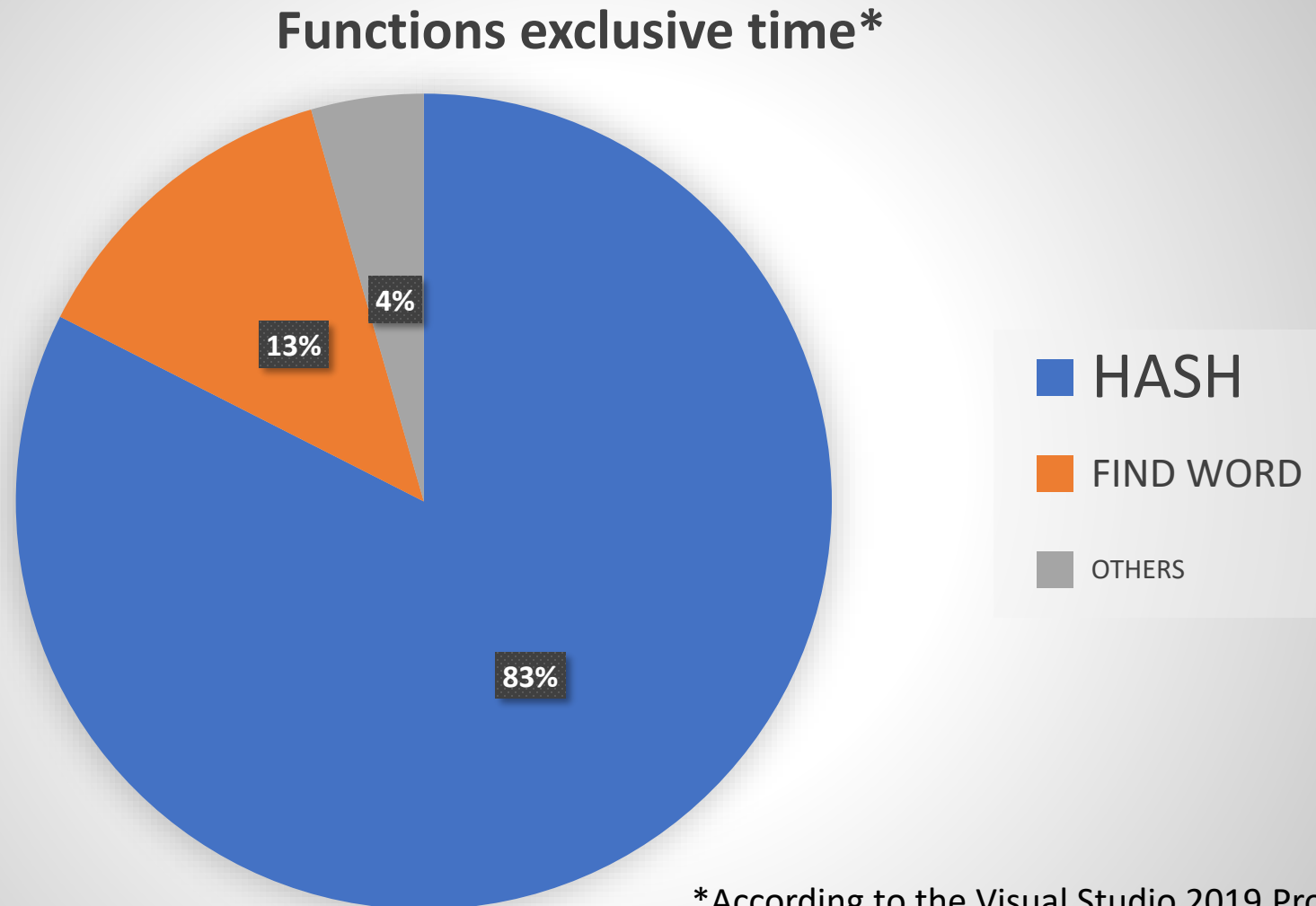


# Before optimization



\*According to the Visual Studio 2019 Profiler

## Total time, ms

21640

21710

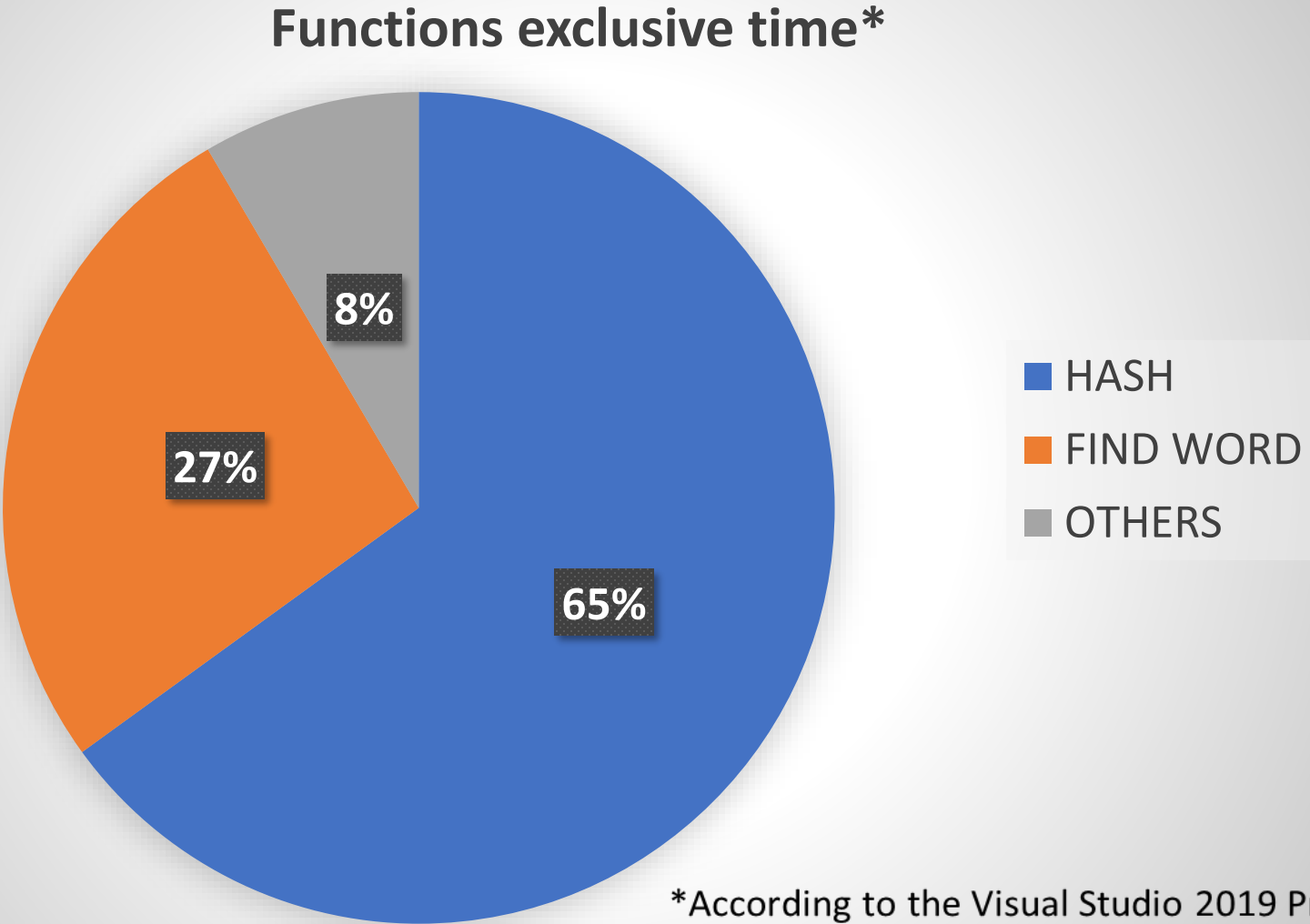
21430

21530

21650

Average: 21590

# After optimization

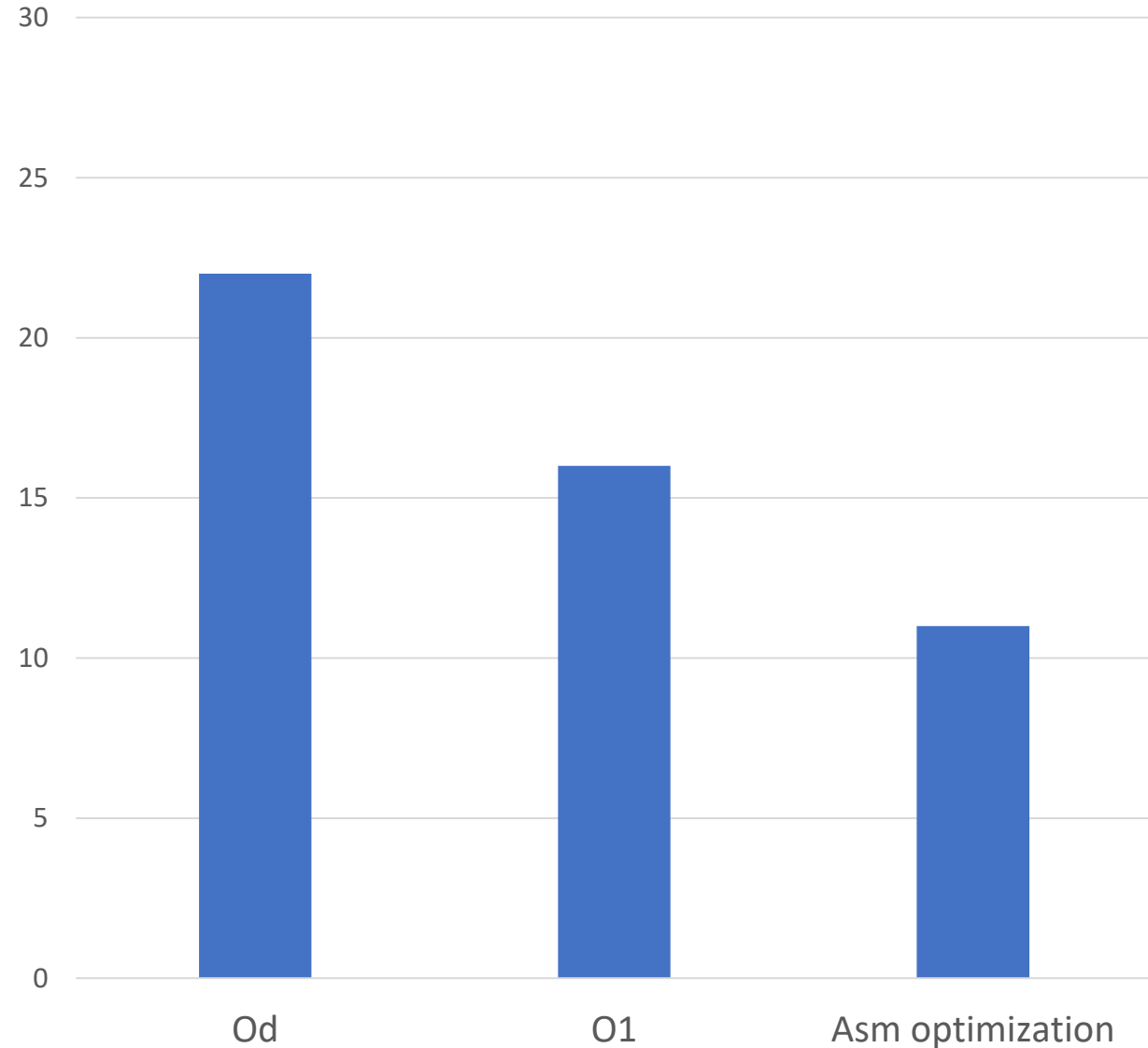


\*According to the Visual Studio 2019 Profiler

Total time, ms
10360
10320
10340
10320
10440
Average: 10356

# Time comparison

- 2 times faster than unoptimized code
- 1.4 times faster than -O1 optimization



# Details

```
int hash_func(char* first_letter)
{
    int hash = 5381;

    for (char* cur_letter = first_letter; *cur_letter != 0; ++cur_letter)
        hash = ((hash << 3) + hash) + *cur_letter;

    int table_hash = hash % Size_of_table;

    return table_hash;
}
```



```
hash_with_asm proc first_letter: dword, size_of_table: dword

    mov ecx, first_letter
    mov ebx, 5381

hash_start:
    cmp byte ptr [ecx], 0
    je hash_end
    mov edx, ebx
    shl ebx, 3
    add ebx, edx
    add ebx, [ecx]
    inc ecx
    jmp hash_start
hash_end:

    xor edx, edx
    mov eax, ebx
    mov ecx, size_of_table
    div ecx
    mov eax, edx

    ret
```