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1 # `3-for-a-while`
2
3 ## `stars.c`
4
5 - double loops
6 - `for (int i = 0) + for (int j = 0)`
7
8 ## `primes.c`
9
10 - double loops
11 - `int is_prime = 1;`: why 1? why not 0?
12 - `if (is_prime)` vs. `if (is_prime != 0)` vs. `if (is_prime == 1)`
13 - testing
14 - https://www.wolframalpha.com/input?i=+primes+less+than+100000
15 - mma: `PrimePi[100000]`
16 - `number = 2`
17 - `break`
18 - `i * i <= number` vs. `i * i < number`
19 - `stdbool.h`
20 - C89, C99, C23
21 - `bool b = 5`
22 - `(bool) 3.5`
23 - [x] timing
24 - `clock_t start = clock(); clock_t end = clock(); (end - start) /`
    `CLOCKS_PER_SEC`
25
26 # `binary-search.c`
27
28 - already sorted array
29 - Fib
30 - `int index = -1;`
31 - `printf`
32 - `break`
33 - testing
34 - `1`: the leftmost/rightmost one
35 - search for the leftmost/rightmost one
36 - [ ] learn from the standard library???
37 - `(low + high) / 2`
38 - `low + (high - low) / 2`
39 - [ ] try it???
40
41 ## `digits.c`
42
43 - testing
44 - `do-while`
45
46 ## `selection-sort.c`
47
48 - preparation: scanf
49 - with comments
50 - `swap`
51 - `while (scanf ...)`
52 - https://en.cppreference.com/w/c/io/fscanf
```

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53     - Number of receiving arguments successfully assigned (which may
    be zero in case a matching failure occurred before
54     the first receiving argument was assigned)
55     - or `EOF` if input failure occurs before the first receiving
    argument was assigned
56     - How to run this?
57     - Linux: `Ctrl + D` at the beginning of a line
58     - Mac: `Cmd + D` at the beginning of a line
59     - Windows: `Ctrl + Z` at the beginning of a line
60 - more `printf` (after each iteration)
61 - `sizeof`
62 - Input&Output indirection
63     - Linux/Windows Cmd
64
65 ## `palindrome.c`
66
67 - `#define`: pre-processing
68 - `scanf("%20s", string);`
69 - `strlen`
70 - comma expression
71 - `for` version
72 - `while` version
```