

1. This is a sample literate programming file. We will simply compute the first 20 fibonacci numbers.

```
#include <stdio.h>
```

```
⟨calculate a fibonacci number 2⟩⟨main 3⟩
```

2. ⟨calculate a fibonacci number 2⟩ ≡

```
size_t fib(size_t i)
{
    size_t n = 0;
    size_t nn = 1;
    size_t ii = i;

    i = 0;
    for ( ; i < ii; i++) {
        size_t m = n;
        n = nn;
        nn = nn + m;
    }
    return n;
}
```

This code is used in section 1.

3. ⟨main 3⟩ ≡

```
int main(void)
{
    size_t i = 0;
    size_t ii = 20;
    for ( ; i < ii; i++) {
        size_t r = fib(i);
        fprintf(stdout, "%d:%d\n", (int) i, (int) r);
    }
    return 1;
}
```

This code is used in section 1.

4. Index.*fib*: 2, 3.*fprintf*: 3.*i*: 2, 3.*ii*: 2, 3.*m*: 2.*main*: 3.*n*: 2.*nn*: 2.*r*: 3.*stdout*: 3.

FIB

NAMES OF THE SECTIONS 3

⟨calculate a fibonacci number 2⟩ Used in section 1.
⟨main 3⟩ Used in section 1.

FIB

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