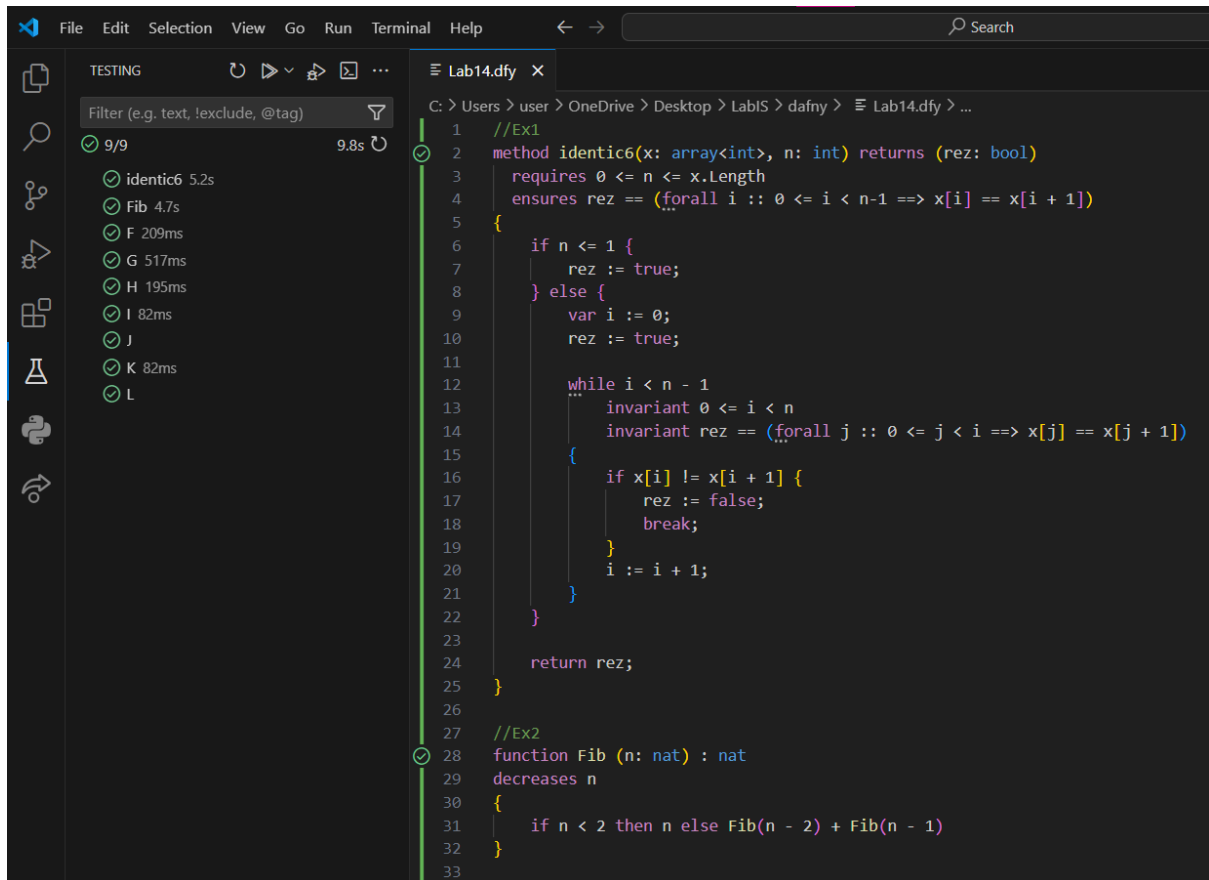


Laborator 14



The screenshot shows the Dafny IDE interface. On the left, the 'TESTING' panel displays a list of test cases, all of which passed successfully. The main editor shows the source code for 'Lab14.dfy', which includes two examples: 'Ex1' and 'Ex2'.

TESTING Panel:

- 9/9 tests passed, total time 9.8s.
- identic6: 5.2s
- Fib: 4.7s
- F: 209ms
- G: 517ms
- H: 195ms
- I: 82ms
- J: 82ms
- K: 82ms
- L: 82ms

Source Code (Lab14.dfy):

```
1 //Ex1
2 method identic6(x: array<int>, n: int) returns (rez: bool)
3   requires 0 <= n <= x.Length
4   ensures rez == (forall i :: 0 <= i < n-1 ==> x[i] == x[i + 1])
5 {
6   if n <= 1 {
7     rez := true;
8   } else {
9     var i := 0;
10    rez := true;
11
12    while i < n - 1
13      invariant 0 <= i < n
14      invariant rez == (forall j :: 0 <= j < i ==> x[j] == x[j + 1])
15    {
16      if x[i] != x[i + 1] {
17        rez := false;
18        break;
19      }
20      i := i + 1;
21    }
22  }
23
24  return rez;
25 }
26
27 //Ex2
28 function Fib (n: nat) : nat
29   decreases n
30 {
31   if n < 2 then n else Fib(n - 2) + Fib(n - 1)
32 }
33
```

