

```

1 // Duration
2 open System
3
4 let duration f =
5     let timer = new System.Diagnostics.Stopwatch()
6     timer.Start()
7     let returnValue = f()
8     printfn "Elapsed Time: %i" timer.
        ElapsedMilliseconds
9     returnValue
10
11 // Fibonacci recursive (hej hihhi)
12 let rec fibrec x =
13     match x with
14     | 1 -> 1
15     | 2 -> 1
16     | x -> fibrec(x-1) + fibrec(x-2)
17
18 // Fibonacci bottom-up dp
19 let fib x =
20     let fibmap = new System.Collections.Generic.
        Dictionary<int,int64>()
21     fibmap.[1] <- int64 1
22     fibmap.[2] <- int64 1
23     for i=3 to x do
24         fibmap.[i] <- (fibmap.[i-1] + fibmap.[i-2])
25     fibmap.[x]
26
27 // Le main (9gag)
28 let main() =
29     printfn "Fibonacci recursive 30: %i" (duration ( fun
        () -> fibrec 30 ))
30     printfn "Fibonacci dp 150: %i" (duration ( fun() ->
        fib 150 ))
31
32 main()

```