

About Lazy and Force Evaluations in the F# Programming language, Memoization

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Force and Lazy Evaluations strategies for functional programming are fundamental concepts. There are a number of languages such as Haskell, that use a Lazy Evaluations strategy.

The main operation of functional programming is the application - using the function in the argument, but, in turn, the argument can be a functional way that contains additional calls to the functionality. For instance:

```
let NoLongLines f = length (IsLineLong filter (ReadLines f))
```

The most obvious strategy for calling `f x` is to first compute the argument `x`, and then assign the function only the computed value. It works like an energy computing strategy. In this example, the file will be read first, `ReadLines f` will be executed, then filtered, and then the length of the received lines will be calculated. In the case of a Lazy Evaluations strategy, image computation will be delayed to the last point when necessary. In the function example, the `length` argument takes the entire image in parentheses, and then calls the `filter` function when the first list item is needed to calculate the length. This function, in turn, will complete the iteration in the list, calling the `ReadLines` function if necessary.

Thus, in a Lazy Evaluations strategy, it is very difficult to determine in what order the calculations will be performed.

References

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