Functional Programming

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[While it ***isn't*** a side-effect to change values stored in variables, data structures, or objects that are ***local*** to a function, the functions we write in pure functional programming are not even allowed to do that!]

Advantages of Functional Programming

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     Flow of information during execution of imperative code is much more complex: ***Changing a stored value gives updated information to all parts of the code with access to the value***; to understand the code we would have to understand just when and how the updated information is used.

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   - Different arguments of a function call can be evaluated in parallel, as evaluation of one argument expression cannot interfere with or affect evaluation of another.

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When executed on computer systems that are in common use today, programs written in a functional style are generally less efficient (are slower and use more memory) than equivalent imperative programs.

- For example, imperative code that frequently updates individual elements of a large array cannot, in general, be replaced with similarly efficient functional code.