COMP302: Programming Languages and Paradigms

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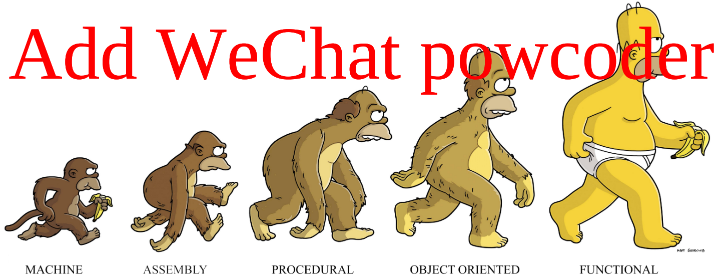
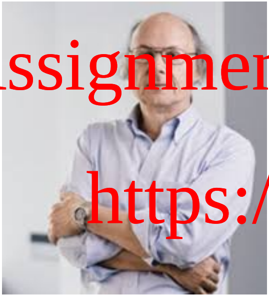


Functional Tidbit: Imperative vs Functional Programming!



"I find languages that support just one programming paradigm constraining."

- Bjarne Stroustrup

Warm-Up: Computation and Effects

So far:

Expressions in OCaml have characteristics:

- An expression has a type
- An expression evaluates to a value (or diverges).

Today:

Expressions in OCaml may also have an *effect*.

Warm-Up: Type, Values, and Effect

Given the following expression write down its type, its value (i.e. what the expression evaluates to), and its effect, if it has any.

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- `fun x -> x + 3 * 2`

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- `fun x -> (x := 3; x)`

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Today: Programming with State

- Mutable Data-Structures
- Closures and Objects

– Demo –