Programming Language Constructs

* variable
  + declaration
  + variable type
    - char
    - string
    - integer
    - decimal
    - Boolean
  + assignment
  + binary shifts
  + "duck" type
  + array
  + constant
  + enumeration
  + reference scope access
* scope
  + implicit
  + explicit
* comment
* statement termination
* runtime & memory
  + stack
  + pointer
  + heap
* flow of control
  + if…then…else
  + ternary
  + switch
  + break/continue/return
  + while
  + do…while
  + for
  + for…each
  + PEMDAS
  + comparison
    - and
    - or
    - equals
    - not equals
    - greater than
    - less than
* serialization & deserialization
* compilation
  + jit
  + bytecode
* interpreter
* debugger
  + breakpoint
* functions
  + signature
  + parameters
  + return value
  + calling
  + pointer
  + overloading
  + recursion
* thread
  + spawn
  + join
  + marshalling
* event
  + register
  + unregister
* synchronous vs. asynchronous
  + callback
* interface
* error handling
  + try
  + catch
  + throw
* object oriented concepts
  + class
    - abstract
    - override
    - constructor
    - properties / accessor methods
      * get
      * set
  + instance / object
  + static
  + encapsulation
  + inheritance
  + polymorphism
  + struct
* guiding principles
  + DRY
  + KISS
  + premature optimization is the root of all evil
  + prefer standards-compliance to proprietary technologies