Assignment 1 part 1

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1. **Syntax -** how natural, brief, readable is the expression of code given the syntax of the language. Can the syntax of language be extended by the programmer.
   Coupling and Reuse - how easily code can be reused in different contexts.
   Code Organization - how code is organized into a hierarchy of units (expressions, functions, modules, packages) and how these units are organized.

2. i) (x: number, y: number) => (number)

   ii) <T> (x: T[]) => (T)

   iii) (x: boolean, y: number) => (number)

3. Shortcut semantics are the semantics of some operators in which the second argument is executed or evaluated only if the first argument does not suffice to determine the value of the expression.
   For example, when we use the Boolean operator '|' between two different arguments, the function will evaluate the Boolean value of both of the arguments before concluding the value of the expression, even though in times where the first argument evaluated is true, there is no actual need to check the other argument ("or" value is True if only one argument is true). In contrast, the operator '||' will **stop** evaluating other arguments after the first **true** value – therefore the name "**shortcut** semantics".