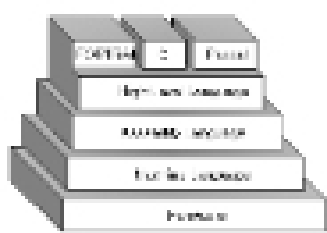
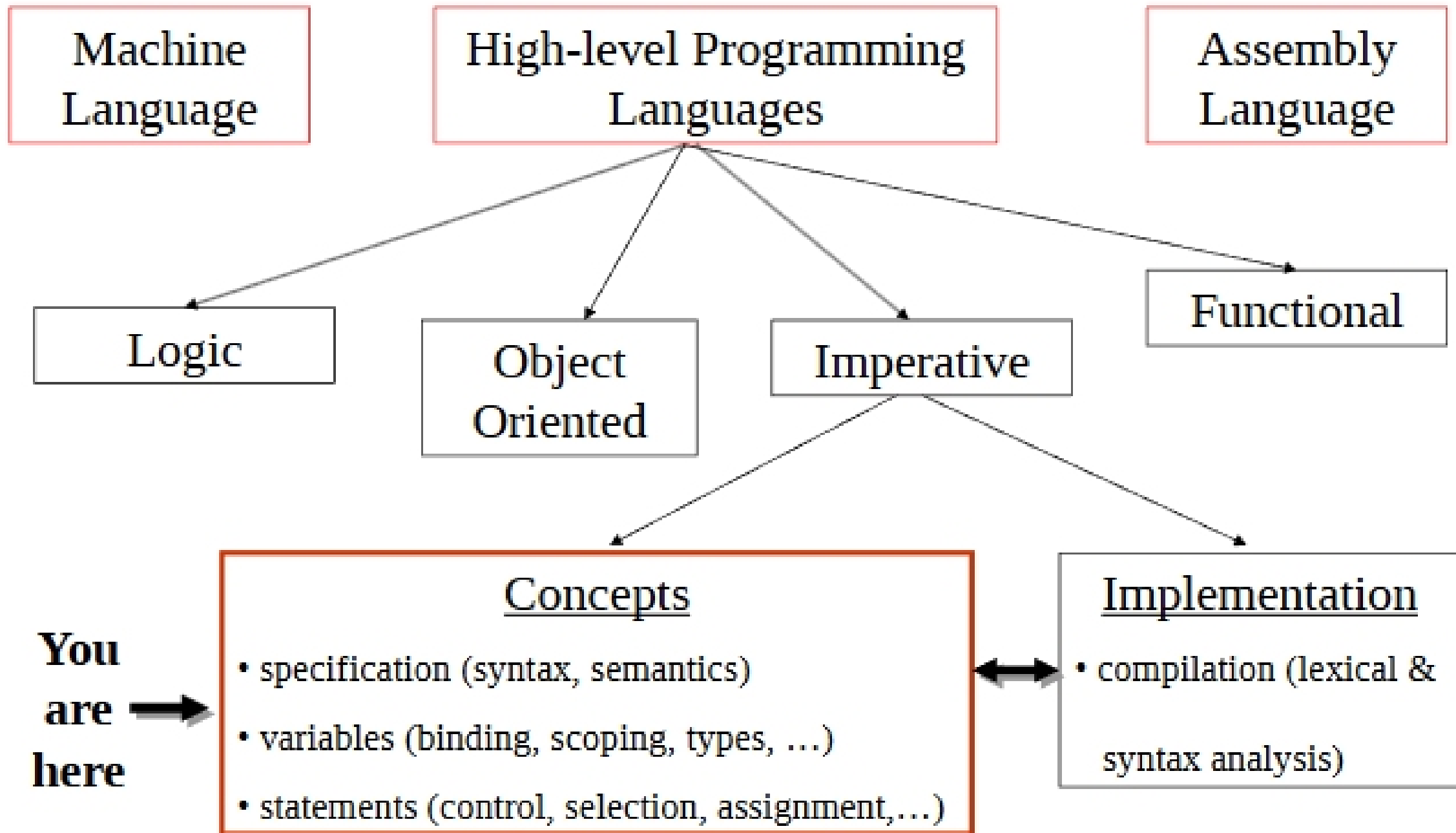


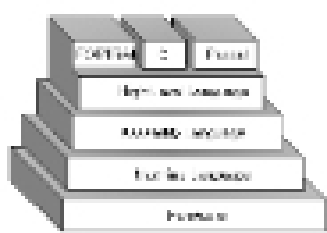
CSE 452: Programming Languages

Data Types



Where are we?





Types: Intuitive Perspective

- ◆ Behind intuition:
 - Collection of values from a “domain” (denotational perspective)
 - Internal structure of data, described down to small set of fundamental types (structural view)
 - Equivalence class of objects (implementor’s approach)
 - Collection of well-defined operations that can be applied to objects of that type (abstraction approach)
- ◆ Utility of types:
 - Implicit context
 - Checking: ensure that certain meaningless operations do not occur. (type checking can’t catch all).