CS 355

Zephaniah Amonoo-Harrison

HW #5

06/29/2021

1. Binding in programming is the association of properties with names. Binding time however, is the period in which this association takes place.
2. Static binding is binding that occurs before run time and remains unchanged throughout the program execution. Dynamic binding on the other hand is binding that occurs or can change during execution of the program.
3. – Static variables are bound to memory cells before execution begin and stay bounded throughout the execution as well. One advantage is efficiency. A disadvantage is reduced flexibility.

* Stack-dynamic variables are storage bindings created for declaration statements that have been elaborated. An advantage is accessible memory. One disadvantage is the run-time speed being possibly slower.
* Explicit heap-dynamic variables are memory cells that are allocated to take effect during the execution and are specified by the programmer. An advantage is the ability to conveniently build dynamic structures. A disadvantage is the difficulty of using pointers and reference variables.
* Implicit heap-dynamic variables are bound to heap storage only when they are assigned values. An advantage is these have the highest level of flexibility. A disadvantage is the run-time overhead of the maintenance of dynamic attributes.