

CSE 3302

Lecture 16: Objects
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Types

Last time:

strongly typed if no type errors occur at run time

statically typed languages rule out type errors at compile time

- requires programmers to write type declarations
- *sound type systems* ensure at compile time that no type errors will occur at run time
 - must be conservative

dynamically typed languages rule out type errors at run time

- dynamic checks before operations

Records

Last time, discussed records:

- $\{x_1: T_1, \dots, x_n: T_n\}$

Type:

- $\{x: \text{int}, s: \text{String}, c: \text{char}, y: \text{int}\}$

Construction:

- $\{x = 2, s = \text{"hi"}, c = \text{'x'}, y = 10\}$

Selection

- $r.y$