CSCI 334:
Principles of Programming Languages

Lecture 18: Variables

Instructor: Dan Barowy
Williams

Topics

Variables

Implementing variables

Your to-dos

1. Read *Evaluation* and *Implementing Variables*
2. Lab 9, **due Sunday 11/19** (project checkpoint)

Final project timeline

1. ~~Project proposal (Lab 8), due Sun 11/12~~
2. Minimally working version (Lab 9), **due Sun 11/19**
3. Language specification doc (Lab 10), **due Sun 12/3**
4. Mostly working version (Lab 11), **due Sun 12/10**
5. Project + video presentation (Lab 12), **due Sun 12/17**

Sample Project Videos

Variables

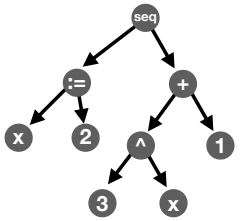
Variables

A **variable** is a named placeholder for a value in an expression. At runtime, when a value is **assigned** to a variable, that **variable name is bound to the value** within the variable's scope. When a variable is **used** in an expression, the bound value is **substituted** into the expression when the expression is evaluated.

We'll talk about **scope** in the next lecture.

Example

```
x := 2
3^x + 1
```



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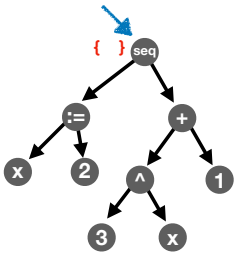

{ } is an “environment”

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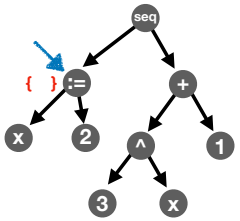

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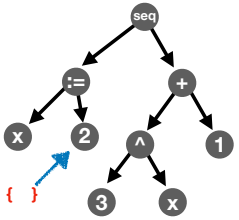

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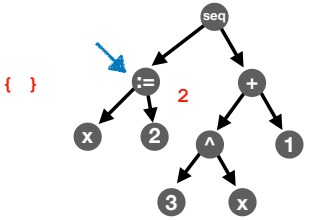

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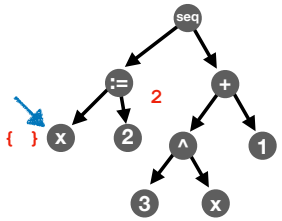

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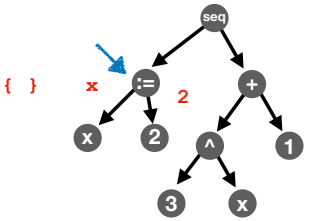

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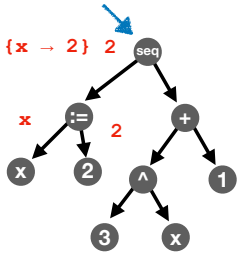

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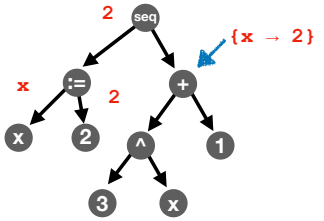

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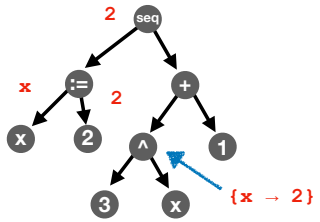

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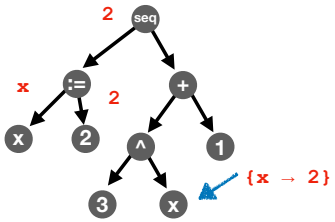

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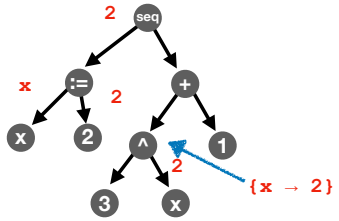

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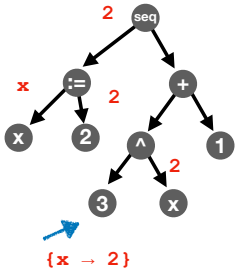

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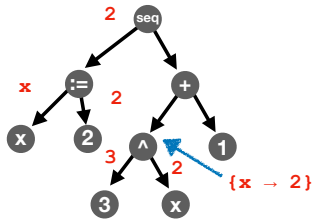

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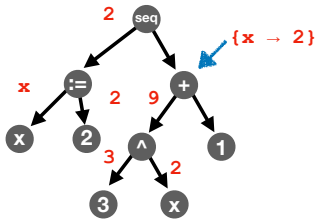

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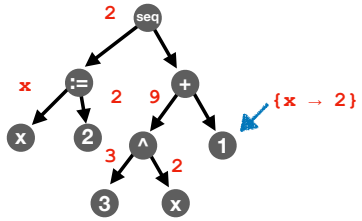

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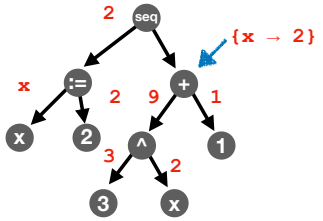

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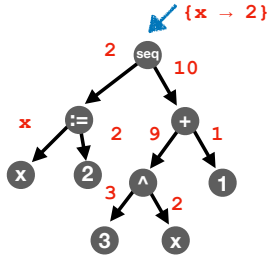

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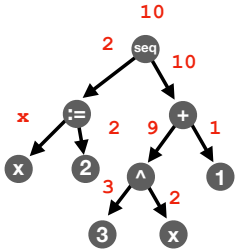

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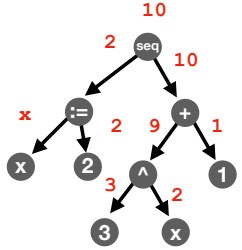

Cool, huh?

Every CS major should know this.

How does it work?

Recap & Next Class

Today:

Variables

Next class:

Testing