

Course Summary

Languages
of Programming Languages
of Complex Software

Translation of Programming Languages

sis
expressions, finite automata
e syntax
, recursive descent
p, shift-reduce parsing
gy: derivation
hven translation
ntics
ibles, relation to environment diagrams
de inference

4:53 2019 CS164: Lecture #40 2

4:53 2019 CS164: Lecture #40 4

Assorted Announcements

at end of lecture (worth 5 points). Be sure to sign in on
t circulating.
next Tuesday (7 May).
ments due Friday, 10 May.
esday, 15 May at 7PM in 2040 VLSB.

Programming Languages

clarations
tent (lifetime) of variables
between language design and runtime structures:
representation
s of recursion, variable-sized data, functional values
ce
s. multiple inheritance
yle interfaces
ods for describing languages: type systems
anguages used here: Prolog, Python, C++.

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	Parting Remarks
<p>Tools</p> <ul style="list-style-type: none"> ation, use of regular expressions and states ators, rule-based programming ontrol concepts 	<p>Parting Remarks</p> <ul style="list-style-type: none"> ompilers: his course are general-purpose tools ain-specific languages s for research n and distributed computation rogram analysis: its compiling for parallelism & distributed computation. ng programs for security attacks/flaws analysis for program validation (e.g., avionics)
<p>tion of Programming Languages, contd.</p> <ul style="list-style-type: none"> tion, intermediate forms representations for "special effects" S calls riented method dispatch ollection <p>gy: basic blocks, control-flow graph</p> <p>' optimizations</p> <p>of flow analysis</p>	<p>onstruction of Complex Software</p> <ul style="list-style-type: none"> ith project, including parts you didn't write. "pass" or "phase". t-orientation to partition task of intermediate forms; how used to reduce work of ilers
<p>4:53 2019</p> <p>CS164: Lecture #40 5</p>	<p>4:53 2019</p> <p>CS164: Lecture #40 8</p>
<p>4:53 2019</p> <p>CS164: Lecture #40 5</p>	<p>4:53 2019</p> <p>CS164: Lecture #40 7</p>