

Lecture Schedule for the Final Exam

Lecture 10: More Powerful LR Parsers

A general discussion of Canonical LR and Lookahead LR

Canonical LR Items

Constructing a CLR(1) Item set

Lecture 11: CLR(1) Parsing Table Construction

Constructing canonical LR automaton

From Automaton to CLR(1) parsing table

Lecture 12: Introduction to Syntax-directed Translation

The logic of syntax directed translation

Inherited and Synthesized Attributes

Evaluation of syntax directed definitions

Lecture 13: Dependency Graphs and SDD Types

Dependency Graphs

S-attributed Definitions

L-attributed Definitions

Lecture 14: Introduction to Syntax Trees

Importance of a Syntax Tree

SDT/SDT for Syntax Trees

Construction Example of a Syntax Tree

Lecture 15: **Symbol Table *******

Importance of Symbol Tables


Scopes in Program and Nesting of Symbol Tables


Important attributes of variables and functions


Book: Chap 2 - section 2.7.1 (pg 87 to 89)

Supplementary Materials: [Symbol Tables and Static Checks](#)

Lecture:  Symbol Table

 Symbol Table Implementation *****

Class Note:  Symbol Table.pdf ,

 L15_SymbolTable.pdf *****

Lecture 16: Type Grammar and Attributes of a Type

Type Expression Grammar

Attributes of an Array Type

Grammar for a sequence of variable declarations

Grammar and attributes of Record Types

Lecture 17: Type Information Processing During Bottom-up Parsing *****

SDT for Array Type Calculation

SDT for variable widths and offsets calculation in a sequence of variable declarations



Book sections:


Chap 6 - 6.3 (whole)

Practice:

Chap 6:

Book examples 6.9, book exercise 6.3.1

Lecture:  Grammar Type ,  SDT for variable width and offset calculation *****

Class Note:  Type Grammar and Attributes.pdf *****

Lecture 18: Introduction to Intermediate Code Generation *****

Importance of three address codes as Intermediate Representation

Features of three address codes

Quadruples

Triples

Book chapters:

Chap 5- 5.3.1, Chap 6- 6.1.1, 6.2 (skip 6.2.4)

Practice:

Book examples chap 5 - 5.11, chap 6 - 6.2, 6.4, 6.6, 6.7

Book exercises chap 5 - 5.3.1 (a), 6.1.1, 6.2.1

Lecture: 1. https://youtu.be/jJd_oOoMtEM*****

2. <https://youtu.be/vwZ7YfKorJw>*****

Class Note: ■ Intermediate code generation.pdf