Homework3 Description

<u>2022/10/10</u>

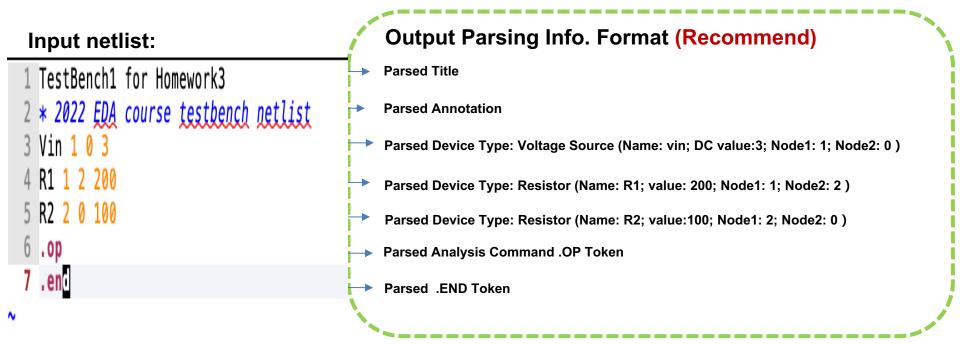
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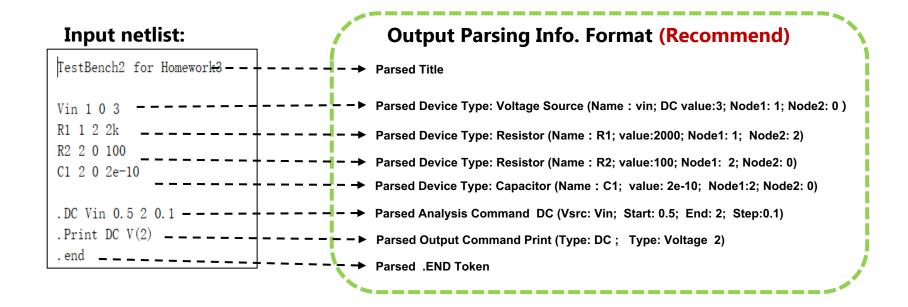
Last Update: 2022/10/10

- Basic Requirements:
 - Title/Comments/.end
 - Basic two ports element: R
 - Basic Voltage Source (DC Only)
 - Basic Analysis (Op only)
- Show Parsing Information: recommend to display the parsed information as below case



2022 slide 2

- Advanced Requirements:
 - Parse a capacitor
 - Parse DC analysis
 - Parse Print output
- Show Parsing Information: recommend to display the parsed information as below case



- Parse Requirements in TB3:
 - Parse correct lines.
 - Count device number.
 - Count node number.

- Output message(example):
 - Device: 24
 - R: 6 L: 6 C: 12
 - Vsrc: 4
 - Node: 11

- Parse Requirements in TB4:
 - Parse correct lines.
 - Find out all errors.
 - Line number is required when print error messages.

- Print error messages(example):
 - line 4 : Fail to parse R2.

Grades

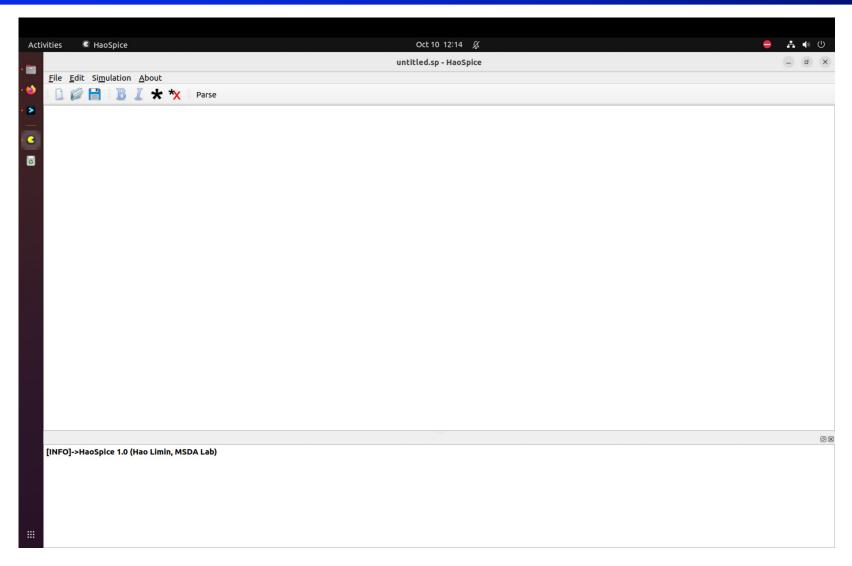
- Full Marks: 10 points in Homework3.
- Scores For Each Test Bench:
 - Test Bench 1: 5
 - Test Bench 2: 3
 - Test Bench 3: 1
 - Test Bench 4: 1

Requirement

- (Hand-in is required!)
 - You must submit your HW to Canvas (in one week after this lecture is finished).
- Please write a Qt/C++ program that
 - can read a netlist file
 - can extract the netlist lines
 - can recognize "comments", "element lines", "dot commands", etc.
 - can extract the tokens in the element statements & control statements
 - ... (more better!), such as parsing a netlist in GUI
- Create some test netlists by yourself (TA will provide some).
- Include in your HW submission the test netlists and the execution results.
- If you use other programming languages, please do the equivalent work.
- Submit a PDF file with a name like this for easy identification:
- 中文姓名_HW3.pdf Lecture 5B slide 15

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Screenshot of TA's SPICE



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