

Compiler Design Homework 9

Due before Week 13

Read Kaleidoscope Tutorial Ch. 6 - 7 (Language Extensions)

<https://releases.llvm.org/13.0.0/docs/tutorial/MyFirstLanguageFrontend/LangImpl06.html>

<https://releases.llvm.org/13.0.0/docs/tutorial/MyFirstLanguageFrontend/LangImpl07.html>

Spreadsheet Calling Out from JIT Code (Week 12)

- The objective of this exercise is to practice making function calls from the JIT code to functions in your application (or the standard library).
- You must **change the JIT Function** so that the **only argument** that you pass into the JIT Function is a **reference to the TableOfCells** object.
- Whatever data the JIT Function needs from any cell, you are to obtain by **calling a function in the TableOfCells** object from the JIT code either to get to a cell reference or get its data directly.
- You may **modify** the **TableOfCells** class code in any way you need, to provide any functionality that you need to get data for the JIT code from all the other cells.
- Submit a **readme** file, all the **code** for your spreadsheet, the **executable** (identify the OS in the readme). Use **HW5-Input.txt** as the input file. Submit the **output** files with your generated code. **Submit results to Blackboard before the Week 13 class.**

Optimizer Research **Reminder** (Due Week 10)

- You should incorporate my comments and prepare a final paper to distribute to myself and your classmates (preferably a day or two) before the **Week 10** class.
- Prepare a PowerPoint presentation for each optimization selected to be given in the Week 10 session. Each presentation should be 15 to 20 minutes and should include the points described for the paper especially the information about the Analysis Passes. Expect to have a little Q&A time.
- Be Prepared to present your research in class on Week 10. You will have 20 minutes for each presentation. Submit the PowerPoint files to Blackboard.

Compiler Project **Reminder** – IR Code Gen – (Due Week 10)