Compiler Design (CS335) Project

Group 20

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Source Language: C
Implementation Language : C++
Target Language : MIPS Assembly

Basic features

Implemented

- Native Data types (integer, boolean, char)
- Variables and Expressions
- Control structures
  - Conditionals (if, if-then-else)
  - Loops (for, while)
- Input/Output statements
- Arrays
- Functions
  - Recursion
- User defined types (struct, union)
- Pointers (single level / stack pointers)
- Library functions like printf

Not implemented

- 8 bytes data types
- String and math functions
- Typedef, static, sizeof
- Switch

Extra features

- Float data types
- Multidimensional arrays for basic data types as well as user defined data types(struct, union, etc.)
- Direct Initialization for 1d and Multidimensional Array
- Pointers to struct and union (pointer referencing)
- struct/union data type as function parameter and return
- Global variables, arrays
- Struct/union inside struct/union

Thank You

Hope you and your family are healthy and safe during these uncertain and unprecedented times.