# Group 11

## Team Members

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## Project Details

Source Language                  :          GO
Implementation Language     :          Python
Target Language                    :          MIPS

# Features (Basic) Implementation Details

Features Implemented

1. Data types - Integer, Boolean, String, Float
2. Variables and Expressions
3. Conditionals
4. Loops (For)
5. Switch-Case
6. Input/Output statements
7. Arrays
8. Functions (Recursion)
9. Struct Data Type
10. Pointers
11. Pass by Reference and value
12. Short Assignment
13. Print without delimiters (of multiple data types)

Features not implemented

1. Library Functions
2. Class Data Type
3. Function Prototyping
4. Global Variables
5. Complex float features

# Advanced Features

- Multi-Level Pointers:
  For int, bool, strings etc
- Multiple Return Values ( of any size/types )
- Complex Data Types:
  Array of Struct, Array of strings etc
- Malloc - Dynamic Memory Allocation
  Linked List, BST implementation
- Functions with any number of parameters ( of any sizes/types )
- Switch Statement with multiple cases combined
- Multiple Assignments
- Minimized register spills and fills, by using reg to var and var to reg mapping
- Short Assignment for all data types