Group - 9

Source: C	Target: MIPS
Implementation: Python	

Members:

Roll Number	Name	Contribution
190353	Hardik Sharma	25%
190428	Ketan Chaturvedi	25%
190652	Priyanshu Yadav	25%
190758	Sanjay Pander	25%

Features Supported:

- Native Data types (integer, character, float).
- Variables and Expressions
- Control structures
  - Conditionals (if, if-else)
  - Loops (do-while,for, while).
- Input/Output statements(printf, scanf)
  - Format For Printf :- printf(a) 'a' can be a constant of type float, int, char or constant. 'a' can also be a identifier of these type
  - Format For Scanf :- scanf(a) 'a' can be an identifier of type float, int, char and the input value would be stored in the identifier a.
- Arrays
- Pointers/References
- Constants
- **Efficient register allocation(First variables optimized by removing redundant variables and the register allocated for them)***

Note: The compiler does **not** support any type-casting either implicit or explicit.

Features **not** Supported:

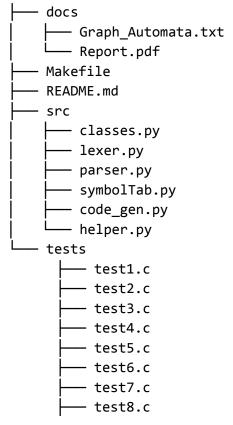- Array declarations can only have constants as size if size is given.

      int a[]={1,2,3,4} works

      int b=5
      int a[b] does not work

- Functions
- Signed, Unsigned
- && and || not supported
- Bitwise operators are not supported
- User defined types (struct)

Github link : https://github.com/ketanch/Group_9_CS335_Project

Directory Structure:
```
├── docs
│   ├── Graph_Automata.txt
│   └── Report.pdf
├── Makefile
├── README.md
├── src
│   ├── classes.py
│   ├── lexer.py
│   ├── parser.py
│   ├── symbolTab.py
│   ├── code_gen.py
│   └── helper.py
└── tests
        ├── test1.c
        ├── test2.c
        ├── test3.c
        ├── test4.c
        ├── test5.c
        ├── test6.c
        ├── test7.c
        ├── test8.c
```

```
├── test9.c
└── test10.c
```