

Group - 9

Source: C	Target: MIPS
Implementation: Python	

Members :

Roll Number	Name	Contribution
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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 an 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
- 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)
- Pointers/References

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
```