Indian Institute of Technology Tirupati
CS3310 Compiler Design Laboratory
Lab #11 Due Date: (Nov 17, 2019 23:00 pm)

Objective: To enhance your mini compiler with code generation capabilities (This is an extension to Lab #9)
A simple code generator: Consider the intermediate code instructions containing just arithmetic expressions, containing operators valid arithmetic operators from C language, and generate the equivalent MIPS machine code. You use any naive approach. Your program has to take any valid arithmetic expression written in C language as input through a file and then display

1. The equivalent three address code
2. The equivalent MIPS code

You have already done part 1 as your Lab #9. You need to extend the same to generate the MIPS code.

Input : Blocks of C variable declarations and statements containing arithmetic expressions.

Output: three address code and then MIPS code

Execusion: $./minicc prog.c

Input:

```
{
 int a, d;
 {
  int b, c;
  d = a + b + c;
 }
}
```

Output:

```
 t0 = b + c
 d  =  a + t0
```

```
LD R0, b
LD R1, c
ADD R0, R0, R1
ST t0, R0

LD R0, t0
LD R1, a
ADD R0, R0, R1
ST d, R0
```

Note: You may simplify your approach wherever needed.