

1. Write an optimizer pass in C or Java or Python that does common-sub expression elimination on the three address intermediate code.

(Commutative operations also need to be eliminated).

2. Identify the structure of if-else statements in 'C' programming language that can be transformed into their equivalent switch-case statements. Design and implement the Adhoc syntax directed translation system for the identified case.

3. Use LEX and YACC to create translator that would translate the given input (compound expression) into three-address code.

4. Design and implement the Adhoc syntax directed translation system for evaluating the expression like
Sample Input: $(2+3) \geq (5*2)$ Output is 0.