Department of Computer Science & Engineering
7th Semester Computer Science & Engineering, (2019-20)

CS431: COMPILER DESIGN LAB
List of Laboratory experiments

Cycle -1 (Complete on or before 30/08/2019)

1. Implementation of Lexical Analyzer for PYTHON using Lex Tool
2. Generate YACC specification for a few syntactic categories.
   a) Program to recognize a valid arithmetic expression that uses operator +, – , * and /.
   b) Program to recognize a valid variable which starts with a letter followed by any number of letters or digits.
   c) Implementation of Calculator using LEX and YACC
   d) Convert the BNF rules into YACC form and write code to generate abstract syntax tree
3. Implement Intermediate code generation for simple expressions.

Cycle -2 (Complete on or before 11/10/2019)

4. Write program to convert NFA to DFA and minimize the DFA (Use Subset Construction Algorithm)
5. Develop an operator precedence parser for a given language.
6. Write program to Simulate First and Follow of any given grammar.

Cycle – 3 (Complete on or before 8/11/2019)

7. Construct a recursive descent parser for an expression.
8. Construct a Shift Reduce Parser for a given language.
9. Implement the back end of the compiler which takes the three address code and produces the 8086 assembly language instructions that can be assembled and run using an 8086 assembler. The target assembly instructions can be simple move, add, sub, jump etc.

Internal Lab examination: 13/11/2019