

## BCSE III – Compiler Design Lab

### Assignment 4

Deadline for submission – 5<sup>th</sup> March for A1 A2 and A3

1. Learn how to use YACC (several tutorials are available on the Internet.)
  - (a) Design a grammar to recognise a string of the form AA...ABB...B, i.e. any number of 'A's followed by any number of 'B's. Use LEX and YACC to recognise it. Which one is a better option?
  - (b) Change your grammar to recognise strings with equal numbers of 'A's and 'B's - now which one is better?
2. (a) Write the lex file and the yacc grammar for an expression calculator. You need to deal with only '+' and only integers.
  - (b) Enhance the above by adding support for '\*' .
  - (c) Enhance the above by adding support for integer mod with the symbol '%' and integer exponentiation with the symbol '^'.Consider operator precedence by order of specification in yacc. Also consider left associativity.
3. Enhance the expression calculator to use floating point numbers.