# CSCI 3180 Marking Scheme for Assignment 4

# Part 1 Logic Programming (52%)

# Basic Requirements (total : 10%)

* 1. Correct file name (2%)
  2. Queries in comments (2%)
  3. Clear question number (2%)
  4. The . of each rule and query (2%)
  5. Comments (personal info. and NO-PLAGARISM). (2%)

1. Question 1 (total : 21%)
   1. Rules of sum (2%)
   2. Rules of product (4%)
      1. basic case (2%)
      2. recursion case (2%)
   3. Query b (3\*4) (2%)
   4. Query c (8/4) (2%)
   5. Query d (factors of 6) (3%)
   6. Rules of exponent (4%)
      1. basic case (2%)
      2. recursion case (2%)
   7. Query f (2^3) (2%)
   8. Query g (log2 8) (2%)
2. Question 2 (total : 21%)
   1. Automation encode (6%)
      1. six transitions (each one 1%)
   2. Rules of state (6%)
      1. two cases: from state and to state (each case 3%)
   3. Rules of walk (9%)
      1. basic case walk([],X,X) (4%)
         1. need to justify whether X is a state.
      2. recursion case (5%)

# Task2 Functional Programming (48%)

# Basic Requirements (6%)

* 1. Correct file name (2%)
  2. Clear question number (2%)
  3. Comments (personal info. and NO-PLAGARISM). (2%)

1. Question 3 (total : 21%)
   1. Definition of binary tree (3%)
   2. Inorder traversal (6%)
      1. basic case: empty tree (2%)
      2. recursion case (4%)
   3. Preorder traversal (6%)
      1. basic case: empty tree (2%)
      2. recursion case (4%)
   4. Postorder traversal (6%)
      1. basic case: empty tree (2%)
      2. recursion case (4%)
2. Question 4 (total : 21%)
   1. Symmetric (7%)
   2. Palindrome (7%)
   3. Rev (7%)