## **Logic System Assignment 1**

# A simple CAD tool based on Quine-McCluskey method Due date: 2017/04/26

#### 1. Description

In this homework, you will write a program to implement a  $(2^{\sim} 4\text{-Variable})$  Quine-McCluskey method.

#### 2. Requirement

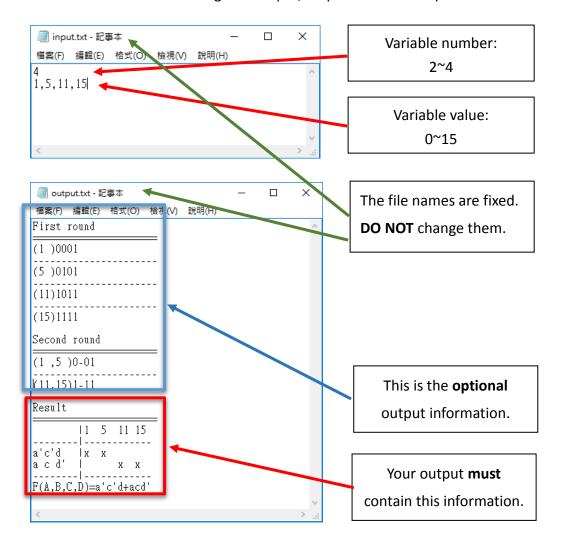
- i. Read the input file Your program will read the input file for the minterm information: e.g.  $F(A,B,C,D) = \sum m(0,1,5,11,15) + \sum d(4,6,10,14)$  The format of the information are followed by **input/output** specification.
- ii. Devide the minterm into groups and compare adjacent groupsYou can use arrays to store the different groups of minterm and allocate new arrays to store the result of previous comparison.
- iii. Write the output fileYou should show the process of comparison and the prime implicant chart in the output file.

### 3. Input/Output Specification

- i. Programming language
  You can finish your program in C, C++ or Java.
  Your program should be able to read the input file following the specific format.
- ii. Input/Output filenameInput: input.txt

#### Output: output.txt

iii. The following is the input/output format example:



#### 4. Hint

You can use this flow chart to design your program. It **isn't necessary** to follow this chart step by step.

