# **Logic System Assignment 2**

# A simple CAD tool based on Quine-McCluskey method Due date: 2017/06/22

# 1. Description

In this homework, you will write a program to implement a 10-variable Quine-McCluskey method.

# 2. Requirement

#### i. Read the input file

Your program will read the input file for the minterm information:

e.g. 
$$F(A,B,C,D,E,F,G,H,I,J) = \sum m(0,1,2,3,9,45,123,247,301,397,432,592,666,733,878,952,1023) + \sum d(4,6,10,14,977,978,1000)$$

The format of the information are followed by input/output specification.

## ii. Divide the minterms into groups and compare adjacent groups

You can use arrays to store the different groups of minterms and allocate new arrays to store the result of previous comparison.

# iii. Write the output file

You should show the **process of comparison** and the **prime implicant chart** in the output file.

#### 3. Input/Output Specification

## i. Programming language

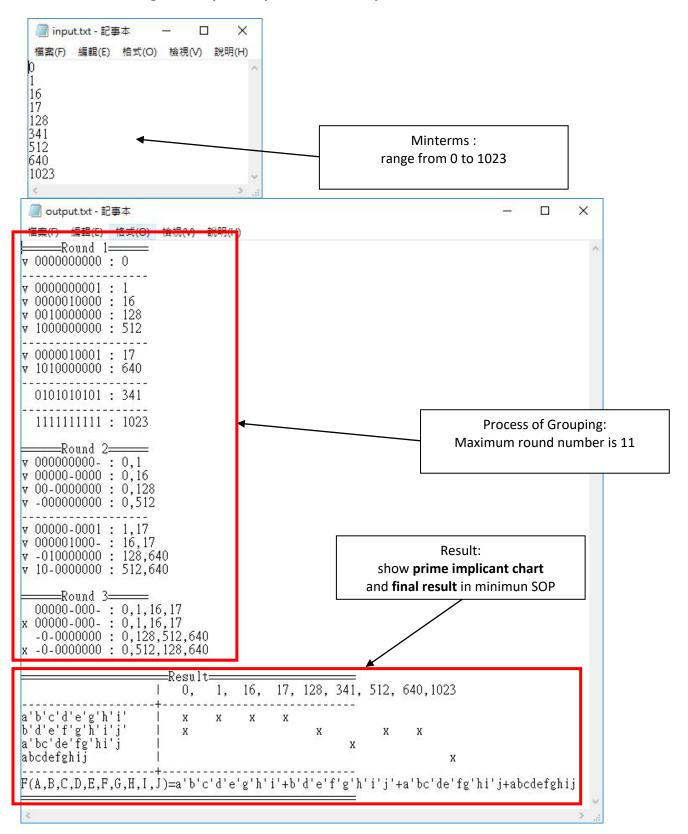
You can finish your program in C, C++ or Java.

Your program should be able to read the input file and generate the output file following the specific format.

#### ii. Input/Output filename

Input: 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.

