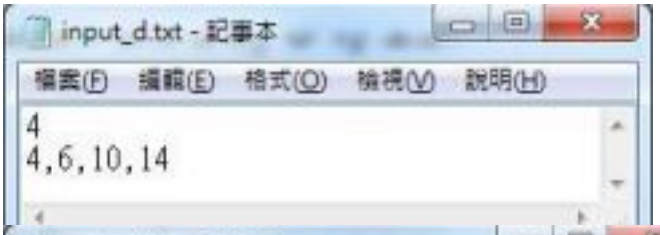
Input: input_m.txt, input_d.txt

Output: output.txt

The following is the input/output format example:

Variable number Range: 2~4

Midterm value index
Range: 0~15
(The existed index stands for value 1)



Variable number Range: 2~4

Don't care index
Range: 0~15
(The existed index stands for value x)

The file names are fixed. DO NOT change them.

Your program is expected to create the file including

the content.

ii. Kmap order (here not the order from truth table to K map)

1. 4 variable

CD \ AB	00	01	11	10
00	0	1	2	3
01	4	5	6	7
11	8	9	10	11
10	12	13	14	15

Fig1. The index of minterm

CD \ AB	00	01	11	10
00	1	1	0	0
01	x	1	x	0
11	0	0	x	1
10	0	0	x	1

Fig2. Example value of minterm

2. 3 variable

C \ AB	00	01	11	10
0	0	1	2	3
1	4	5	6	7

Fig3. The index of minterm

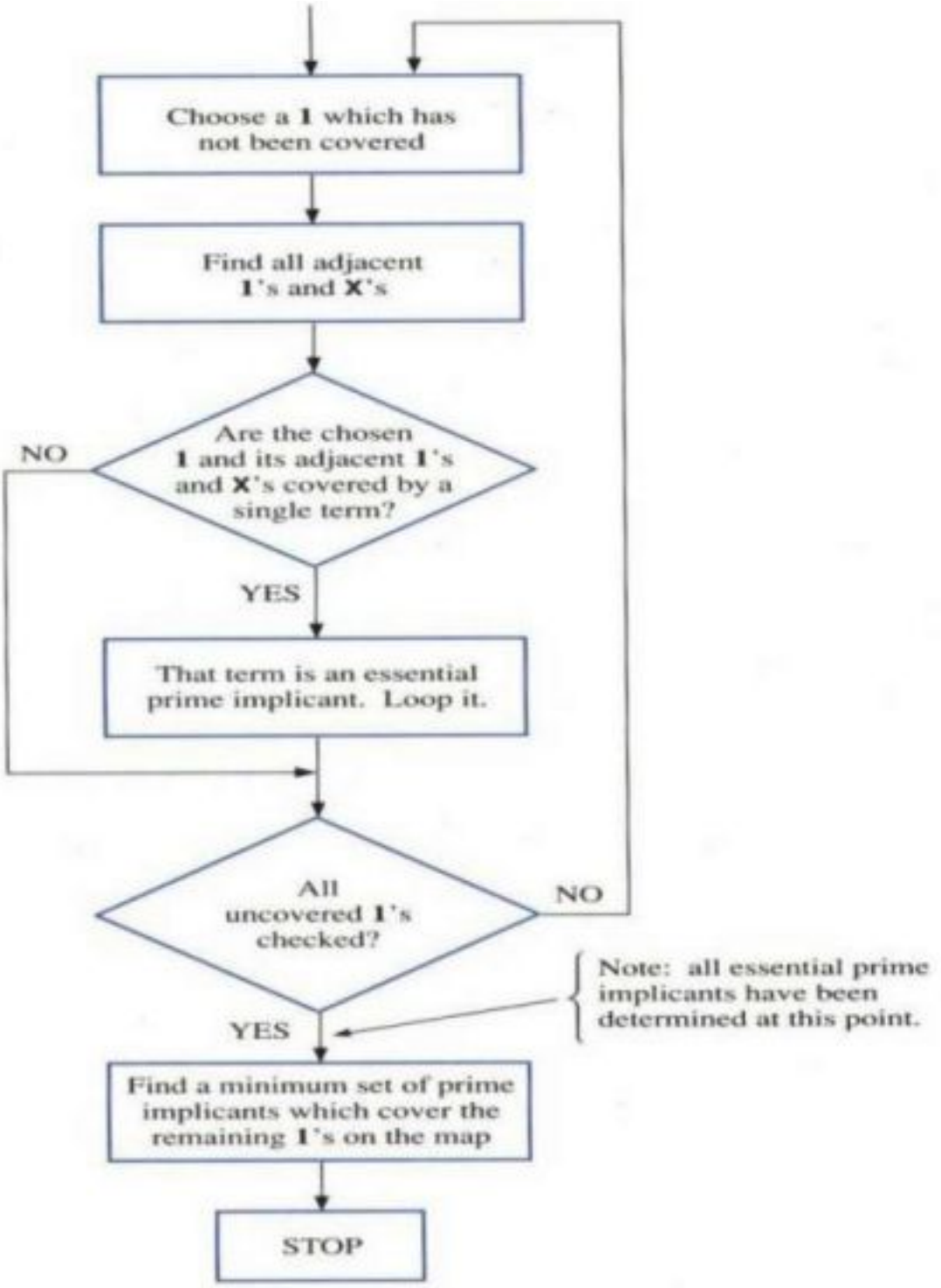
3. 2 variable

C \ A	0	1
0	0	1
1	2	3

Fig4. The index of minterm

4. Hint

You can reference the flow chart below to design your program.


Choose a 1 which has not been covered
Find all adjacent 1's and X's
Are the chosen 1 and its adjacent 1's and X's covered by a single term?
NO
YES
That term is an essential prime implicant. Loop it.
All uncovered 1's checked?
NO
YES
Note: all essential prime implicants have been determined at this point.
Find a minimum set of prime implicants which cover the remaining 1's on the map
STOP