Lab # 04 Task

1) Reduce the following Boolean functions using K-Map. Make the truth table for the reduced expression and then simulate the simplified/reduced expression on Logicly.
   I. $F = A'B + AB' + AB$
   II. $F = A'B'C + A'BC + ABC' + ABC$

2) Identify the Minterm and Maxterm for the following truth table.

S.no	A	B	C	F	
0	0	0	0	0	
1	0	0	1	1	
2	0	1	0	1	
3	0	1	1	0	
4	1	0	0	0	
5	1	0	1	0	
6	1	1	0	1	
7	1	1	1	1	

3) Simplify the following Boolean functions using K-Map.
   I. $F(A,B)$ $=$ $\sum (2,3)$
   II. $F(A,B,C)$ $=$ $\sum (2,3,6,7)$
   III. $F(A,B,C,D)$ $=$ $\sum (0,2,5,7,8,10,14,15)$
   IV. $F(A, B, C, D) =$ $\sum (0, 1, 2, 5, 7, 8, 9, 10, 13, 15)$