6.02.20 Experiment No. 2

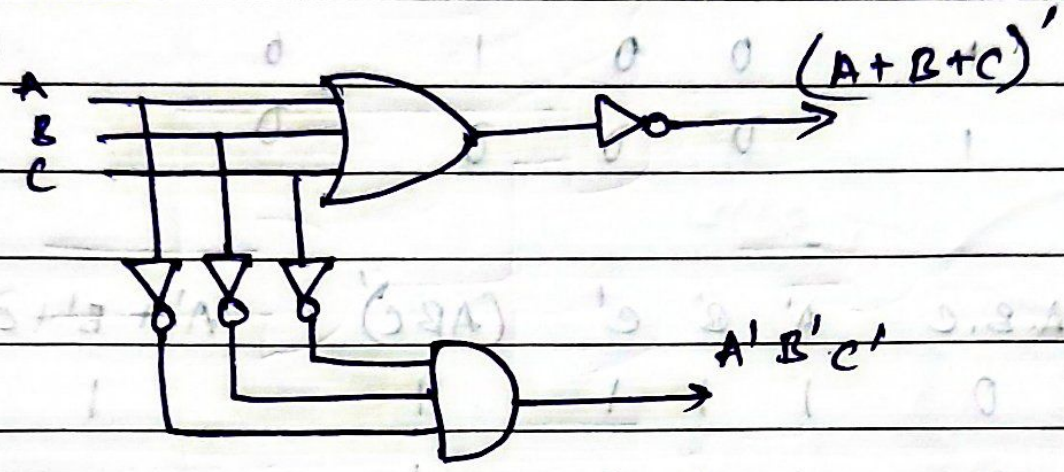
Aim:

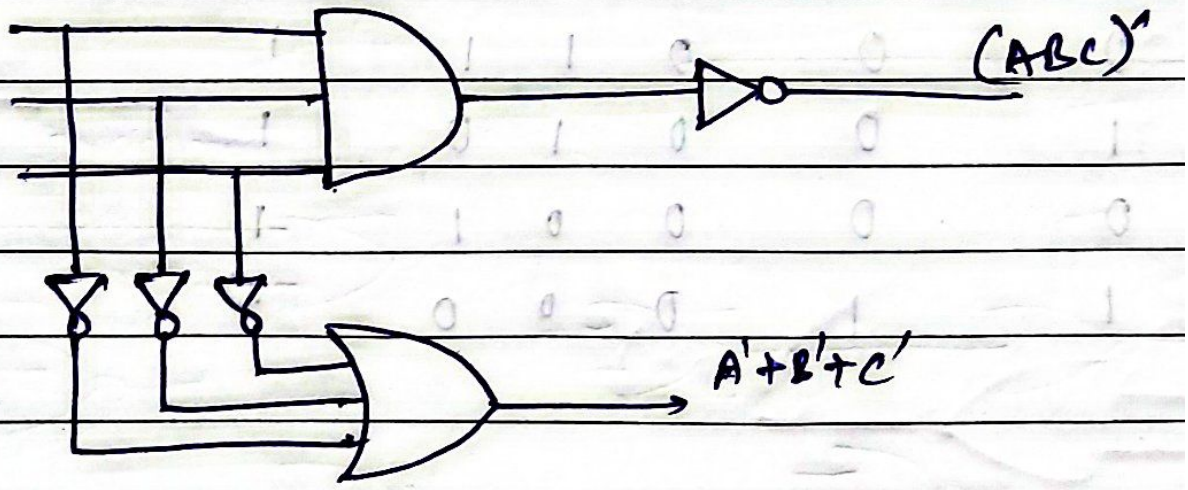
To verify the DeMorgan's Laws.

$$(A+B+C)' = A'.B'.C'$$

$$(A.B.C)' = A'+B'+C'$$

Circuit





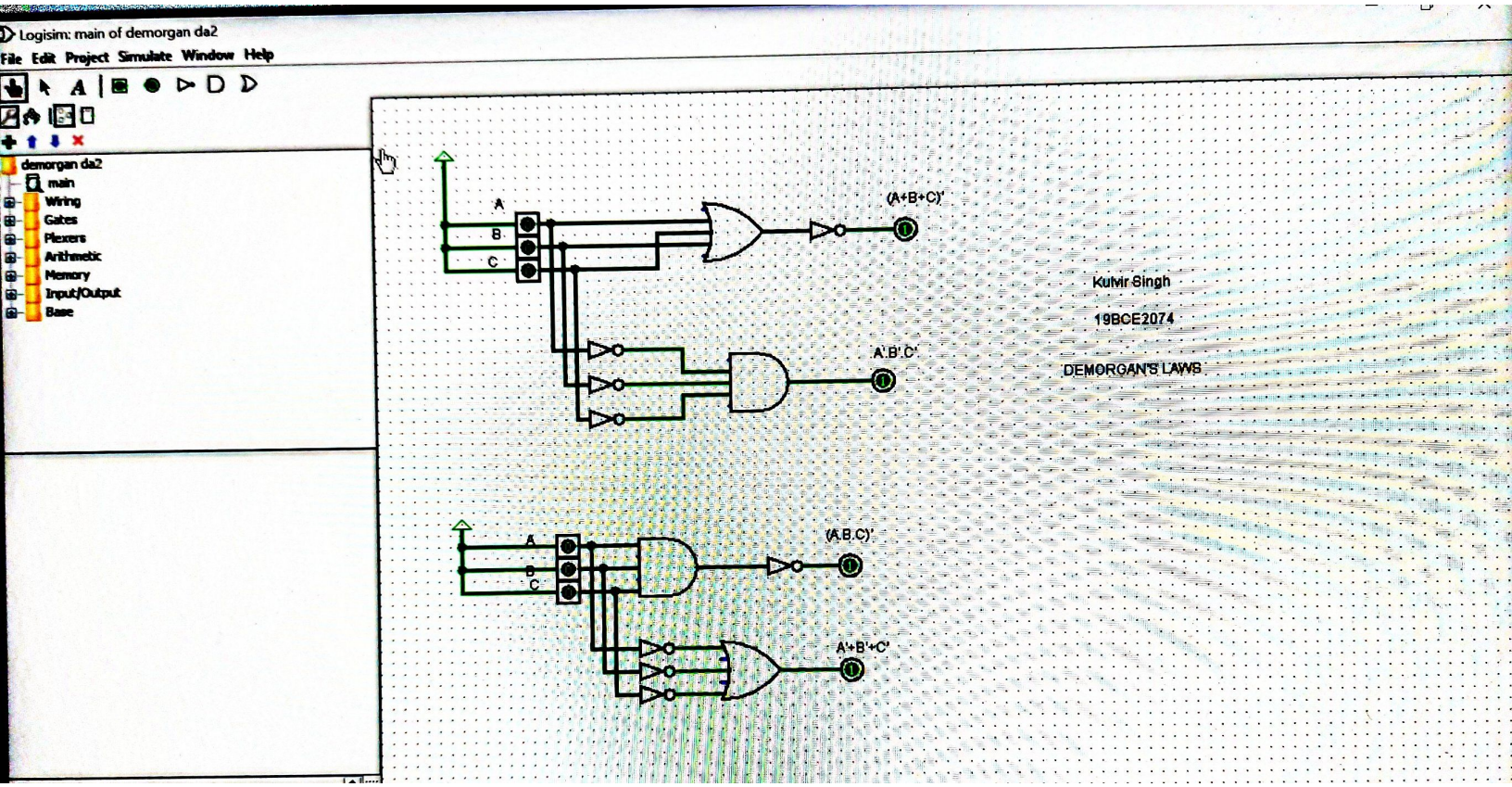
Truth Table

1st Circuit

A	B	C	A+B+C	A'	B'	C'	(A+B+C)'	A'.B'.C'
0	0	0	0	1	1	1	1	1
0	0	1	1	1	1	0	0	0
0	1	0	1	1	0	1	0	0
0	1	1	1	1	0	0	0	0
1	0	0	1	0	1	1	0	0
1	0	1	1	0	1	0	0	0
1	1	0	1	0	0	1	0	0
1	1	1	1	0	0	0	0	0

2nd Circuit

A	B	C	A.B.C	A'	B'	C'	(ABC)'	A'+B'+C'
0	0	0	0	1	1	1	1	1
0	0	1	0	1	1	0	1	1
0	1	0	0	1	0	1	1	1
0	1	1	0	1	0	0	1	1
1	0	0	0	0	1	1	1	1
1	0	1	0	0	1	0	1	1
1	1	0	0	0	0	1	1	1
1	1	1	1	0	0	0	0	0


Logisim: main of demorgan da2
File Edit Project Simulate Window Help
demorgan da2
main
Wiring
Gates
Plexers
Arithmetic
Memory
Input/Output
Base
A
B
C
(A+B+C)'
A'.B'.C'
Kulvir Singh
19BCE2074
DEMORGAN'S LAWS
A
B
C
(A.B.C)'
A'+B'+C'