CSC258 Prelab Two

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1 Truth Table of the Circuit

A	B	C		0	1	2	3	4	5	6
0	0	0		1	0	0	1	0	0	1
0	0	1		0	1	1	0	0	0	0
0	1	0		1	0	0	0	1	0	0
0	1	1		1	1	1	1	1	1	1
1	0	0		0	0	0	1	0	0	0
1	0	1		1	1	1	0	0	0	1
1	1	0		0	1	1	0	0	0	0
1	1	1		1	0	0	1	0	0	0

2 Karnaugh-Maps of Each Display

2.0.1 Letter 0

	B'·C'	B'·C	B·C	B·C'
A'	1	0	1	1
A	0	1	1	0

2.0.2 Letter 1

	B'·C'	B'·C	B·C	B·C'
A'	0	1	1	0
A	0	1	0	1

2.0.3 Letter 2

	B'·C'	B'·C	B·C	B·C'
A'	0	1	1	0
A	0	1	0	1

2.0.4 Letter 3

	B'·C'	B'·C	B·C	B·C'
A'	1	0	1	0
A	1	0	1	0

2.0.5 Letter 4

	B'·C'	B'·C	B·C	B·C'
A'	0	0	1	1
A	0	0	0	0

2.0.6   Letter 5

	B'·C'	B'·C	B·C	B·C'
A'	0	0	1	0
A	0	0	0	0

2.0.7   Letter 6

	B'·C'	B'·C	B·C	B·C'
A'	1	0	1	0
A	0	1	0	0

3   Optimized Logic of the Circuit

3.0.1   Letter 0

- A'C' + AC + BC

3.0.2   Letter 1

- B'C + A'C + ABC'

3.0.3   Letter 2

- B'C + A'C + ABC'

3.0.4   Letter 3

- B'C' + BC

3.0.5   Letter 4

- A'B

3.0.6   Letter 5

- A'BC

3.0.7   Letter 6

- A'B'C' + AB'C + A'BC