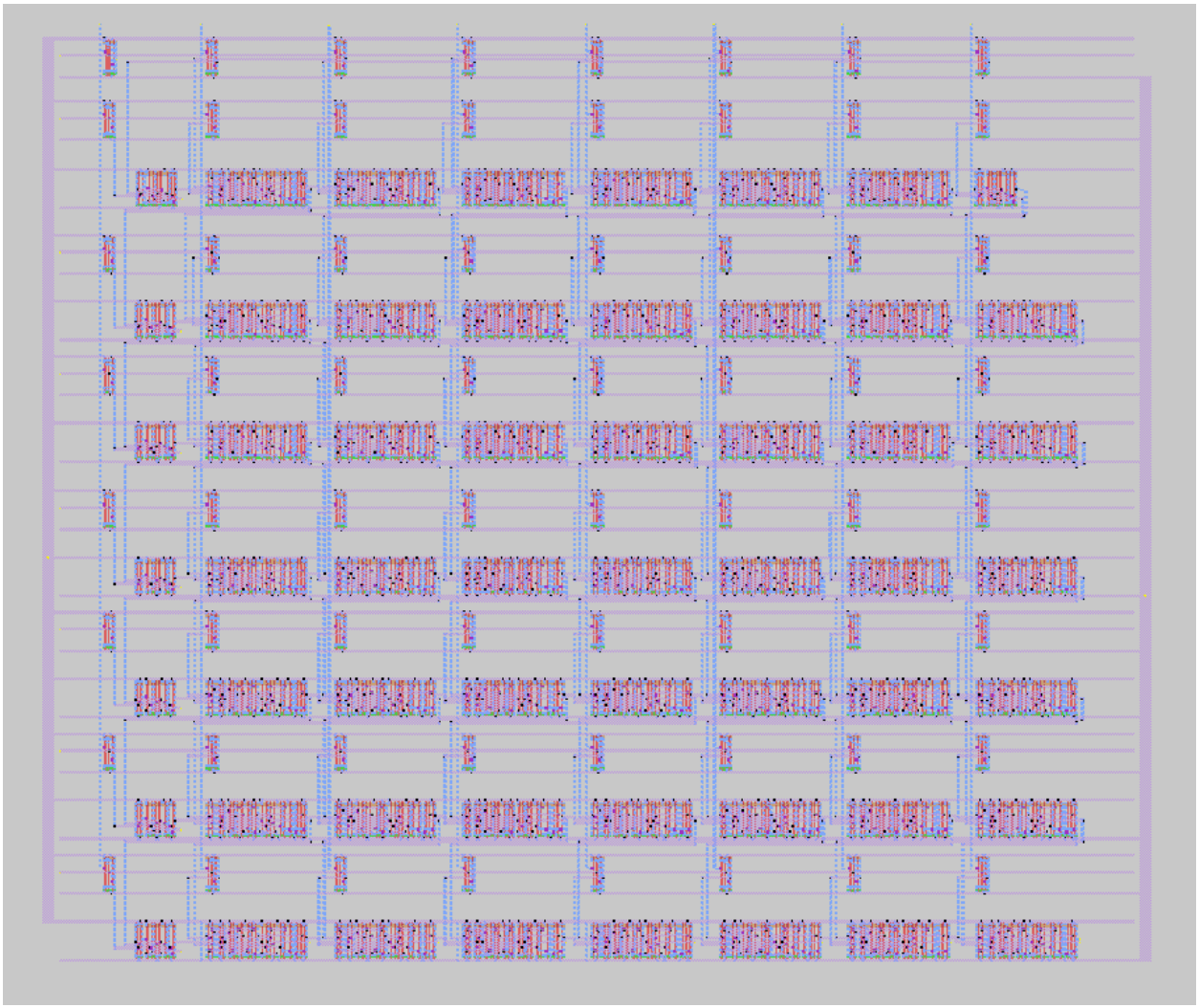
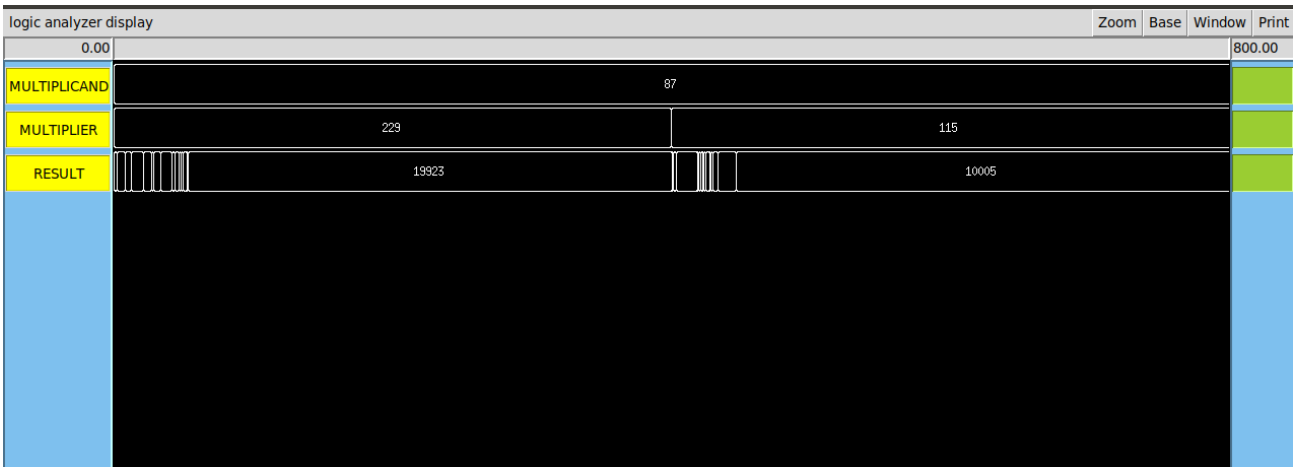
Final Project

ECGR 5133

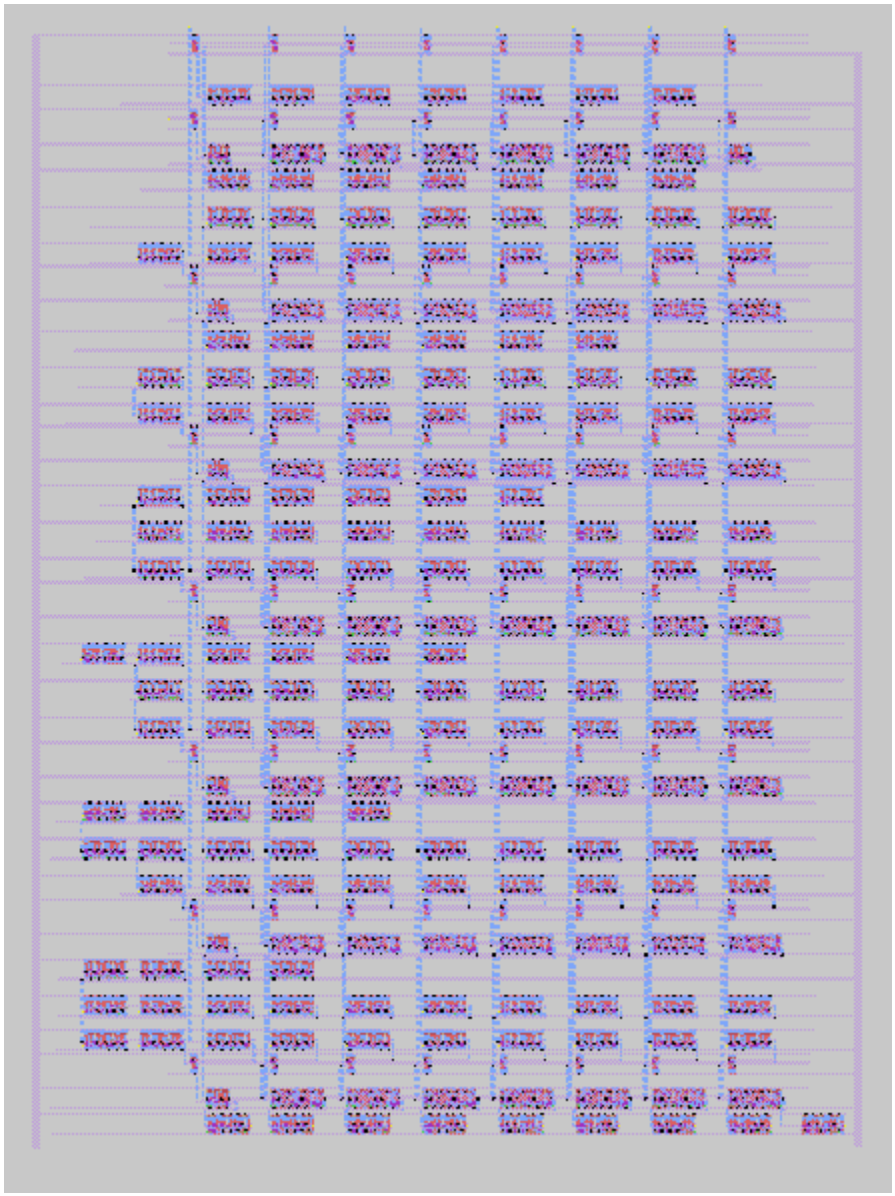
Dr. Mukherjee

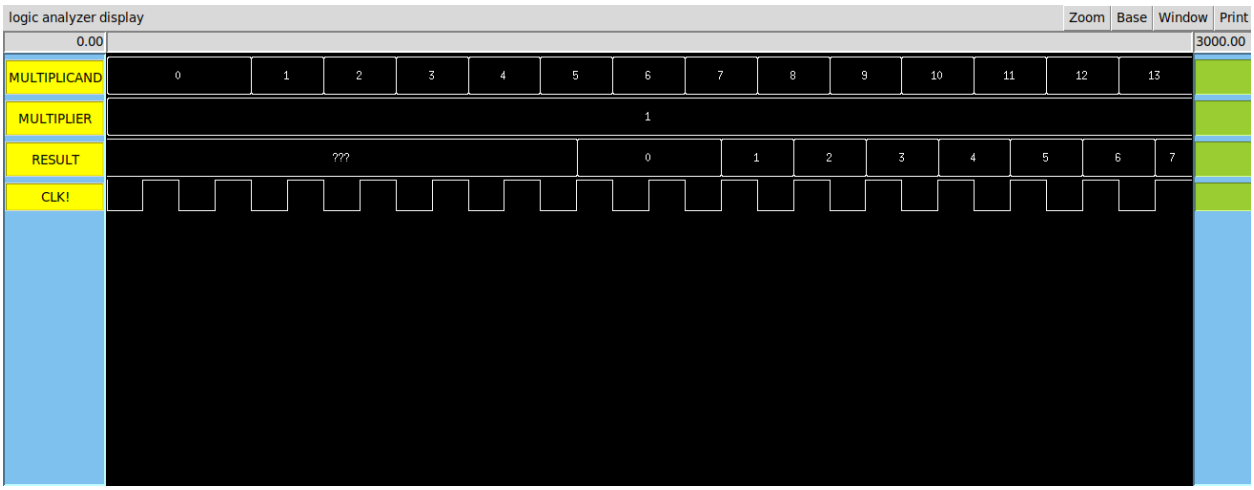
Part 1 – Non-Pipelined Layout




logic analyzer display
Zoom
Base
Window
Print
0.00
800.00
MULTIPLICAND
87
MULTIPLIER
229
115
RESULT
19923
10005

Part 2 – Pipelined Layout Without Zero Clock Skew Routing




logic analyzer display
Zoom
Base
Window
Print
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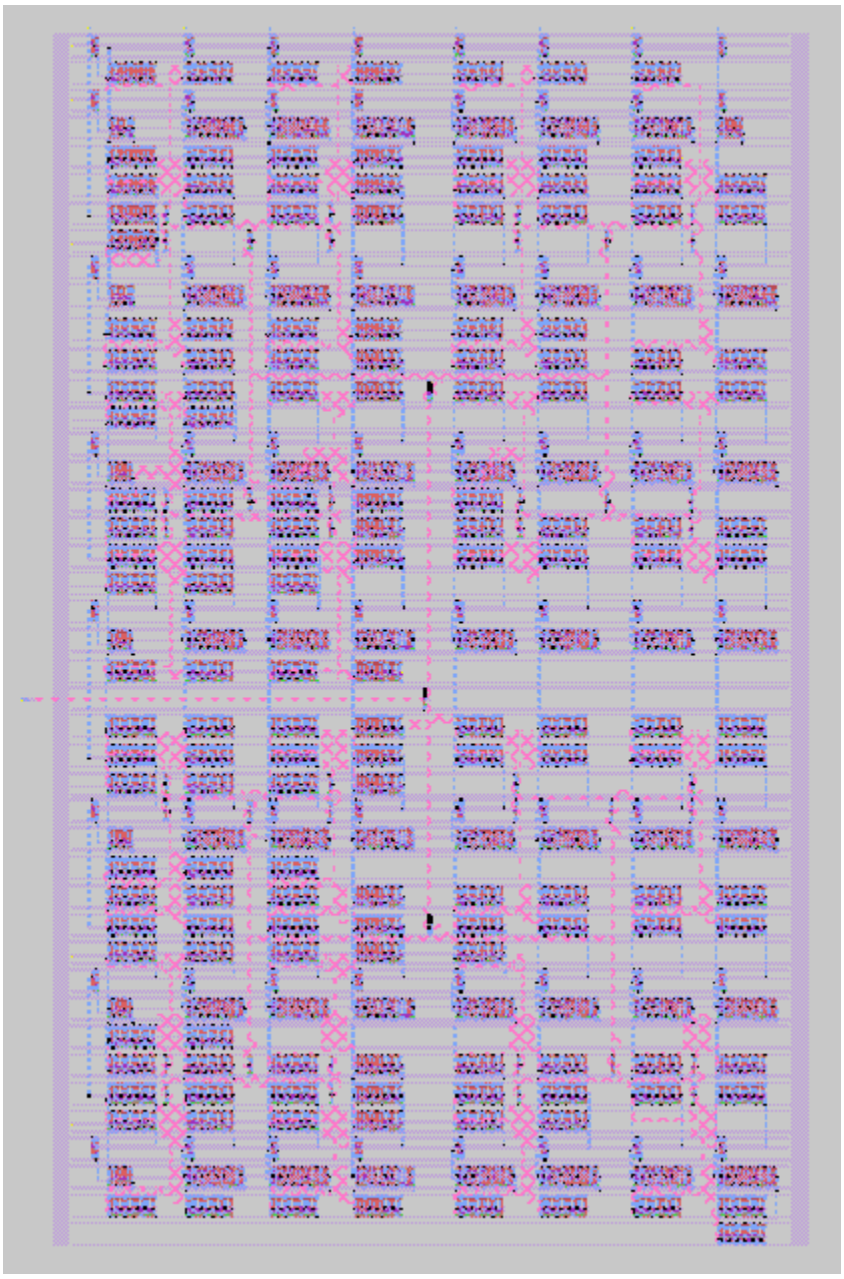
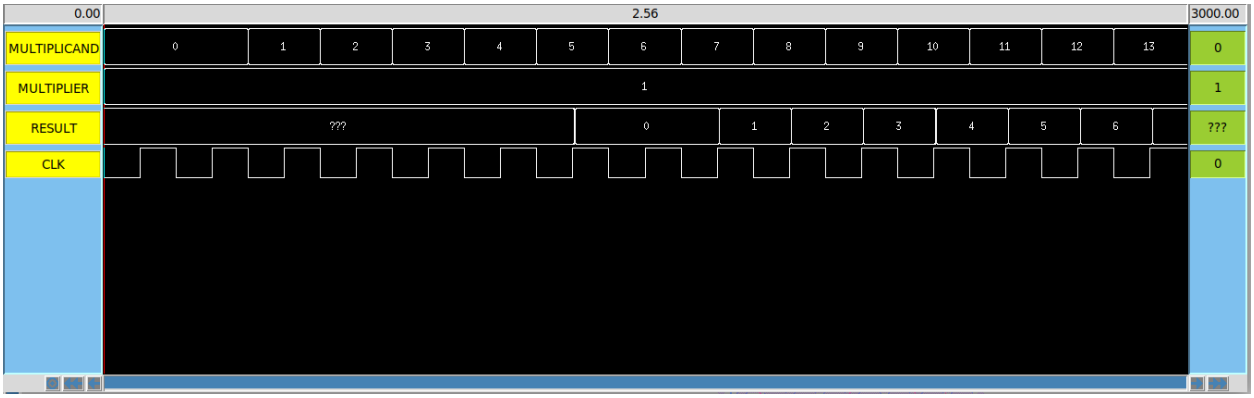
MULTIPLICAND
0
1
2
3
4
5
6
7
8
9
10
11
12
13
MULTIPLIER
1
RESULT
???
0
1
2
3
4
5
6
7
CLK!

Part 3 – Pipelined Layout With Zero-Skew Clock Routing

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2.56
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MULTIPLICAND
MULTIPLIER
RESULT
CLK
0
1
2
3
4
5
6
7
8
9
10
11
12
13
???
0
1
2
3
4
5
6
???
0