

MIDWESTERN STATE UNIVERSITY

DEPARTMENT OF COMPUTER SCIENCE

CMPS 3023: Logic Design

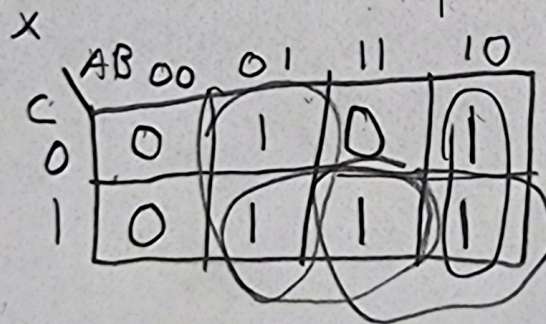
Spring semester 2022

Student name: Yoseph b/p/ul

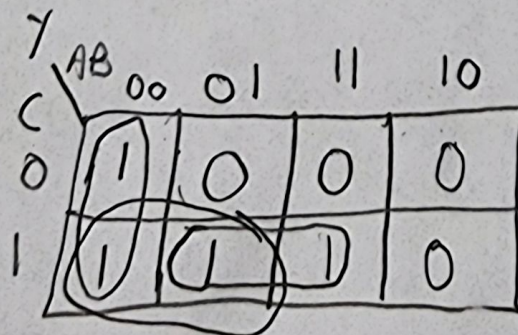
Assignment #4 - Logic circuits simulation - due date 04/02

Write the Boolean algebra expressions and simplify using Karnaugh map for the following table of combinations, where A, B and C are inputs and X, Y are outputs. Draw the schematics, compile and simulate the circuit using Altera Quartus software. Turn in the schematics and the waveform simulation diagram of the design (snapshots copied in PowerPoint or Word and saved as PDF files, no jpeg or other picture files).

A	B	C	X	Y
0	0	0	0	1
0	0	1	0	1
0	1	0	1	0
0	1	1	1	1
1	0	0	1	0
1	0	1	1	0
1	1	0	0	0
1	1	1	1	1

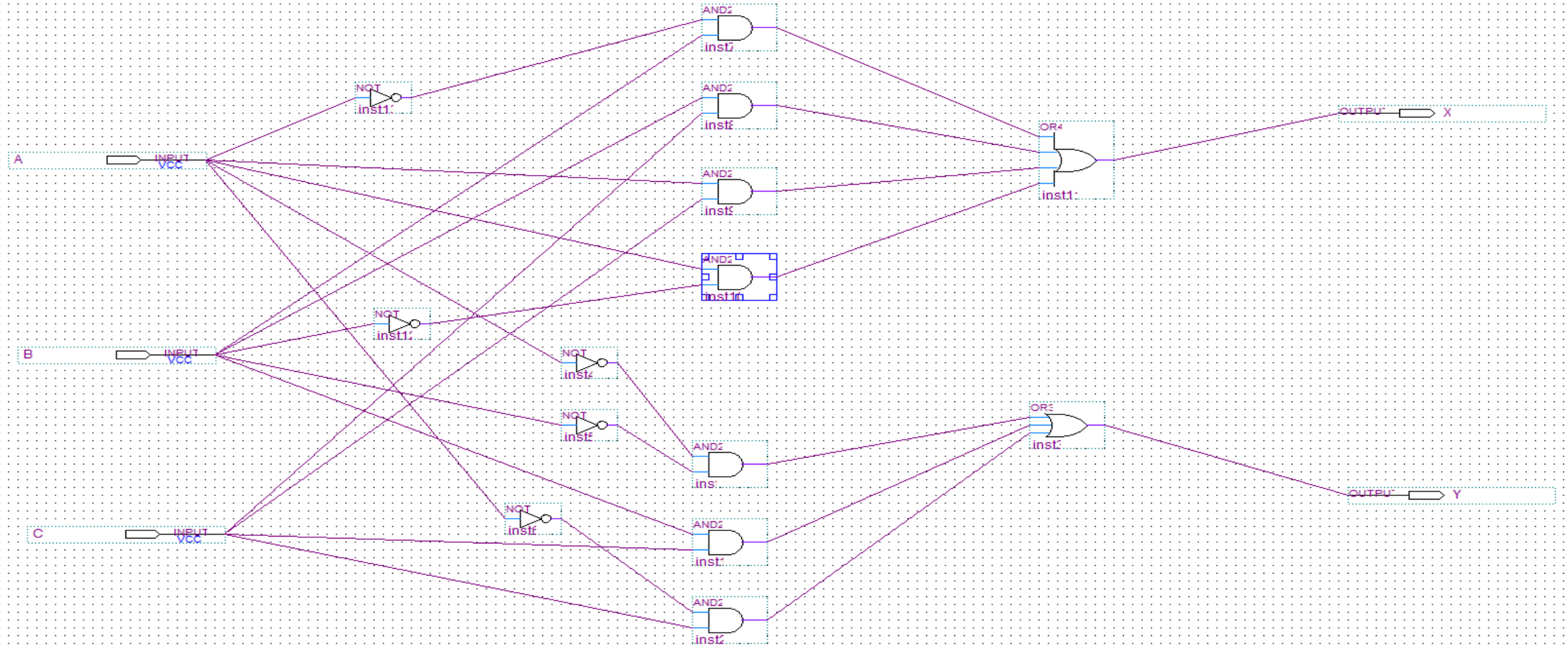


$$\bar{A}B + BC + AC + A\bar{B}$$



$$\bar{A}\bar{B} + BC + \bar{A}C$$

Design (Yoseph Helal)



Waveform Simulation (Yoseph Helal)

