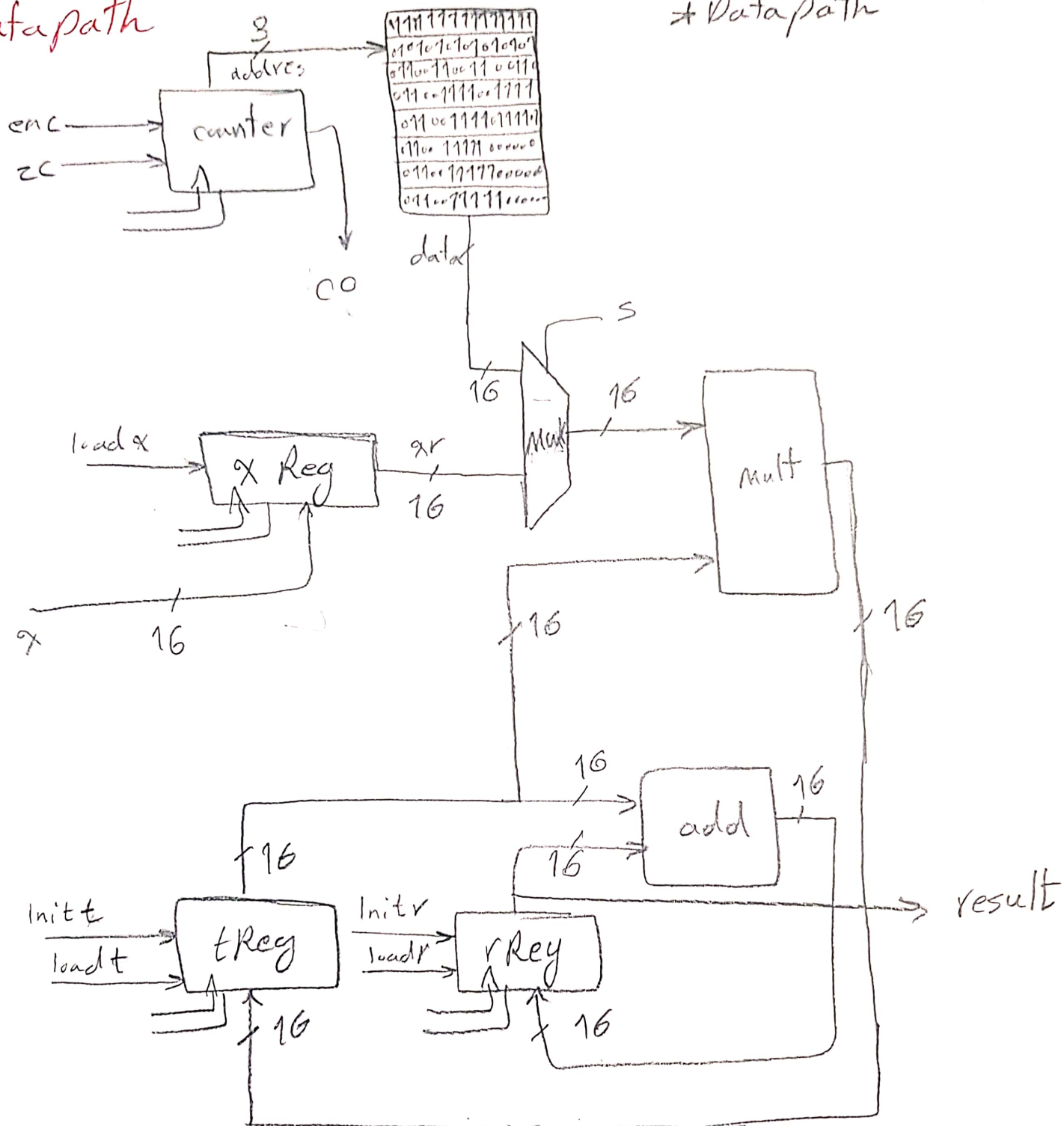


* Datapath

* Datapath



$$\begin{aligned} \tan x = & x + \frac{1}{3} x^3 + \frac{2}{15} x^5 + \frac{17}{315} x^7 + \frac{62}{2835} x^9 + \frac{1382}{155925} x^{11} \\ & + \frac{21844}{6081075} x^{13} + \frac{929569}{638512875} x^{15} \end{aligned}$$

* ROM و هیت بیت دار که در هر کدام یک Data قرار دارد و برای بیت‌ها از
 Hex
 فایده می‌باشد.
 to Binary

$$\textcircled{1} \quad 1 \rightarrow 0.1111111111111111 \rightarrow \text{FFFF}$$

$$\textcircled{2} \quad \frac{1}{2} \rightarrow 0.0101010101010101 \rightarrow 5555$$

$$\textcircled{3} \quad \frac{2}{5} \rightarrow 0.0110011001100110 \rightarrow 6666$$

$$\textcircled{4} \quad \frac{17}{42} \rightarrow 0.0110011110011110 \rightarrow 679E$$

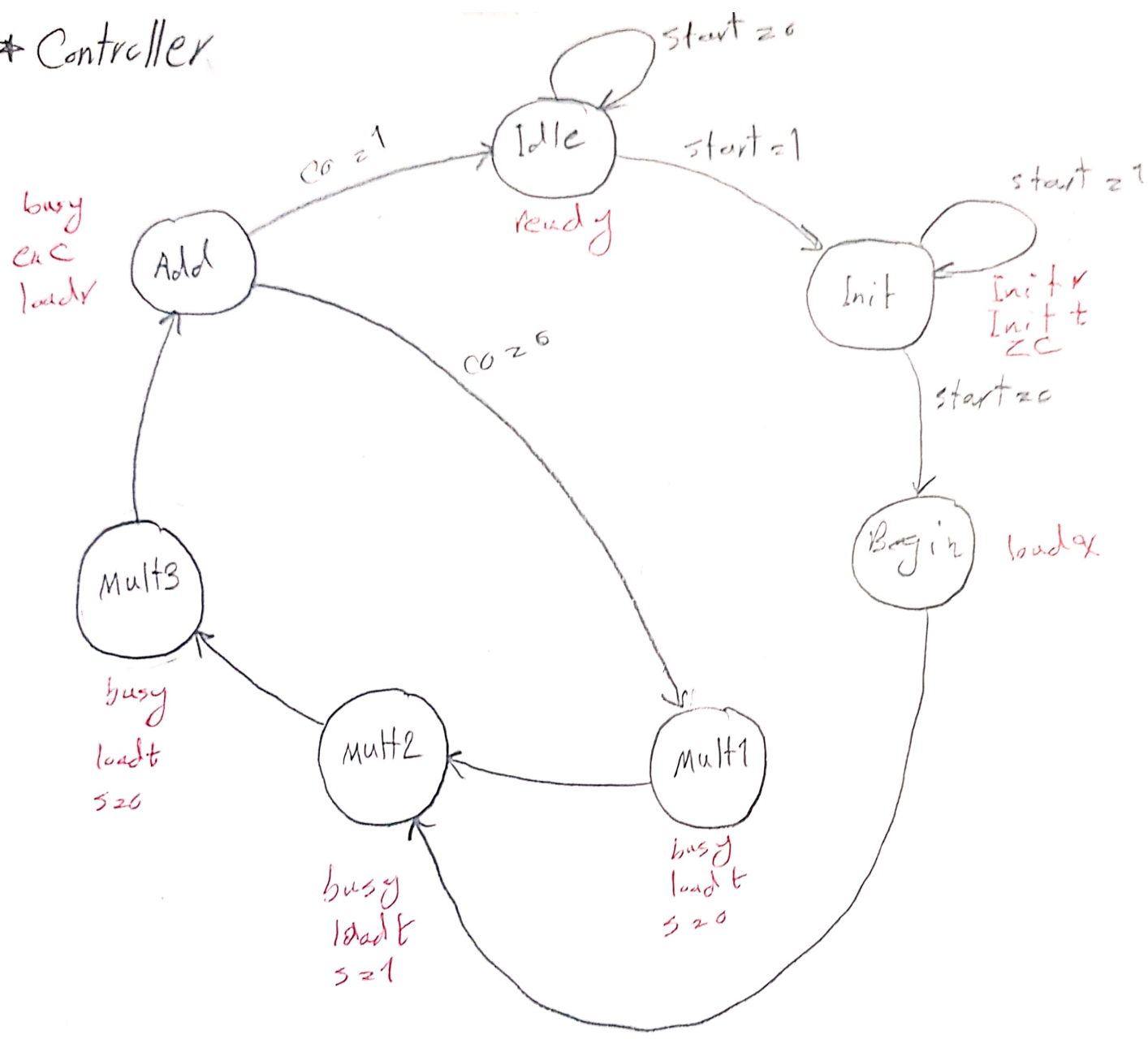
$$\textcircled{5} \quad \frac{62}{153} \rightarrow 0.0110011110111101 \rightarrow 67BD$$

$$\textcircled{6} \quad \frac{691}{1705} \rightarrow 0.0110011111000000 \rightarrow 67C0$$

$$\textcircled{7} \quad 0,405284551 \rightarrow 0.0110011111000000 \rightarrow 67C0$$

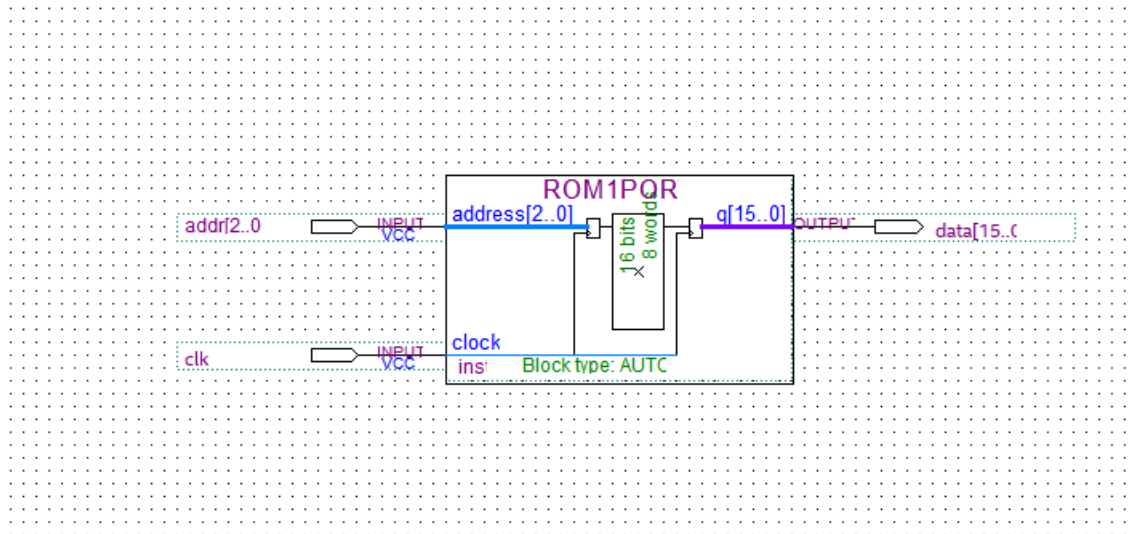
$$\textcircled{8} \quad 0,4052846592 \rightarrow 0.0110011111000000 \rightarrow 67C0$$

* Controller



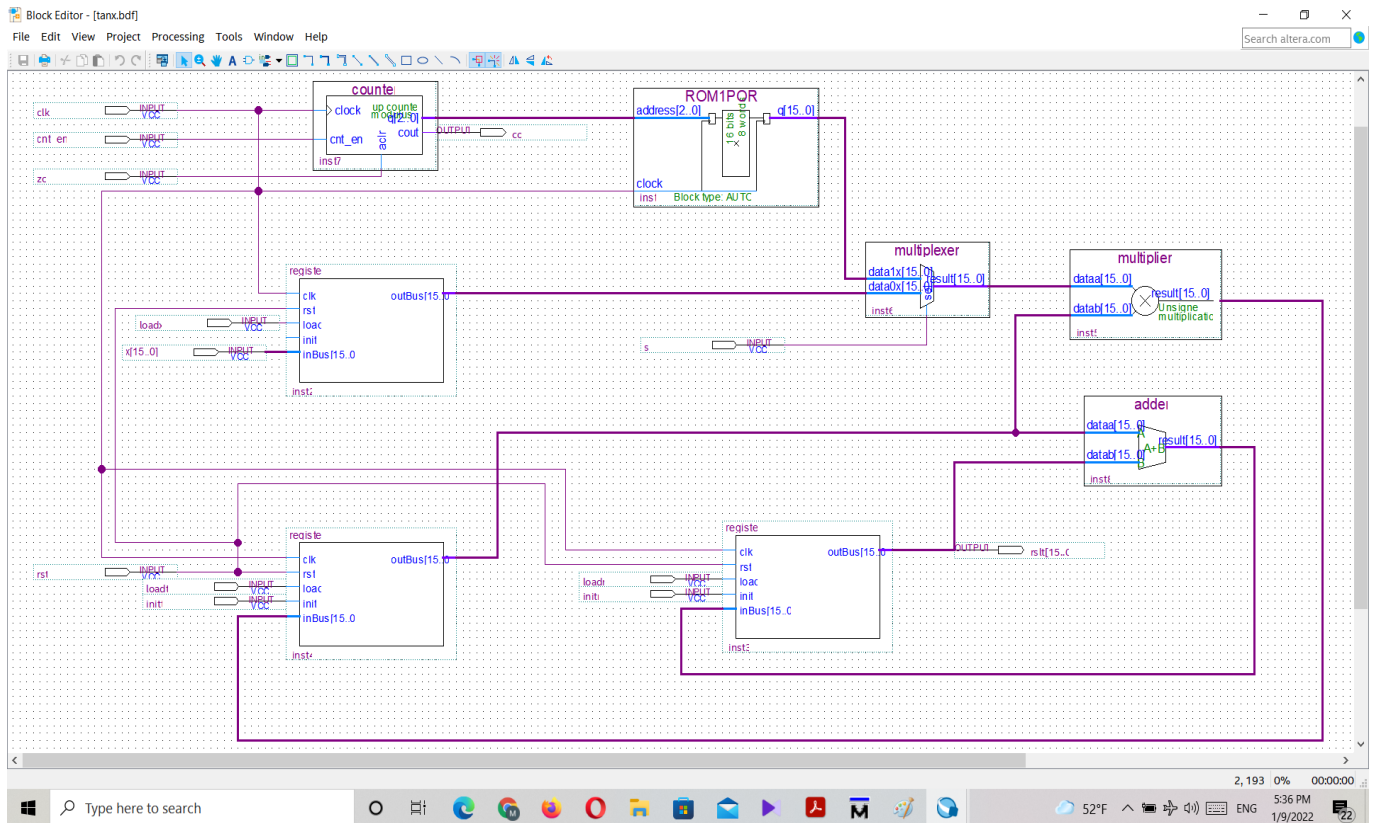
a)

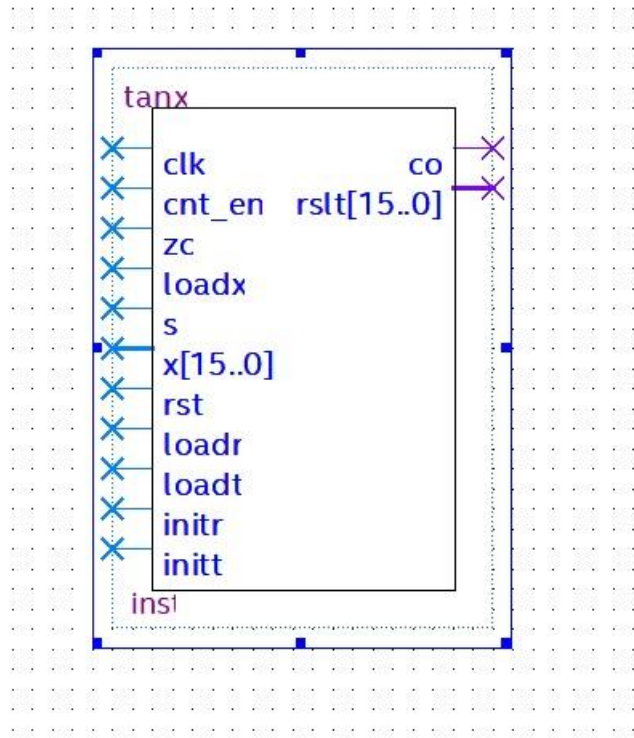
--ROM--



b)

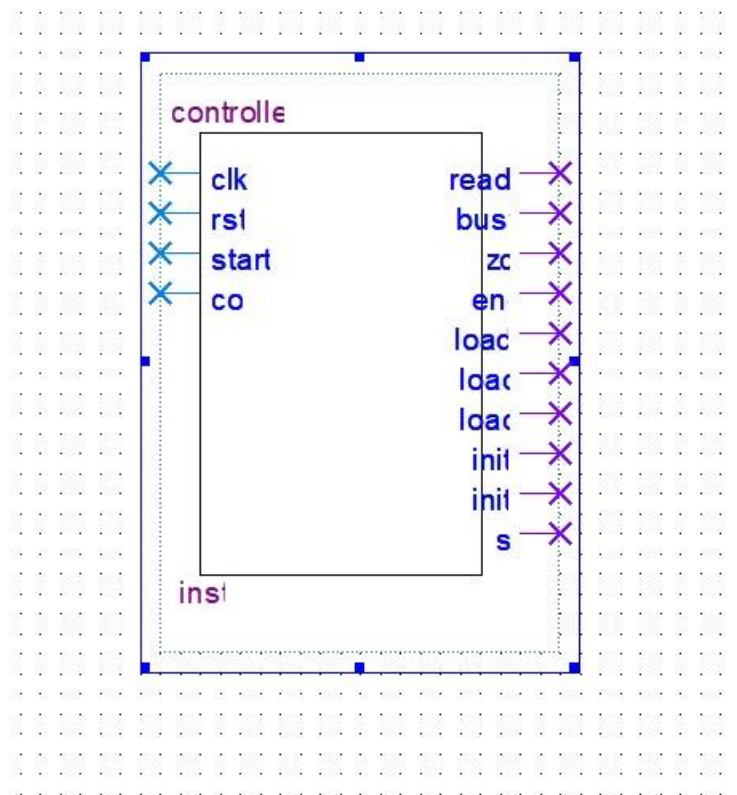
--DataPath--





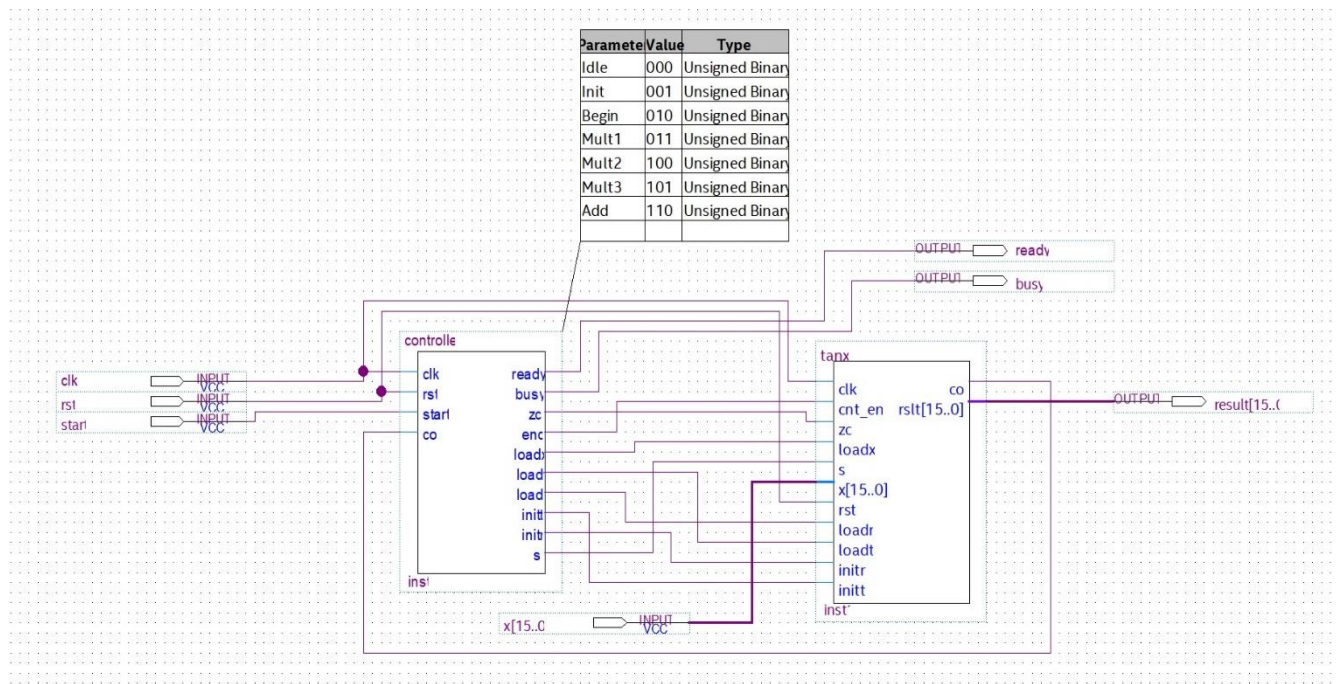
c)

--Controller--



d)

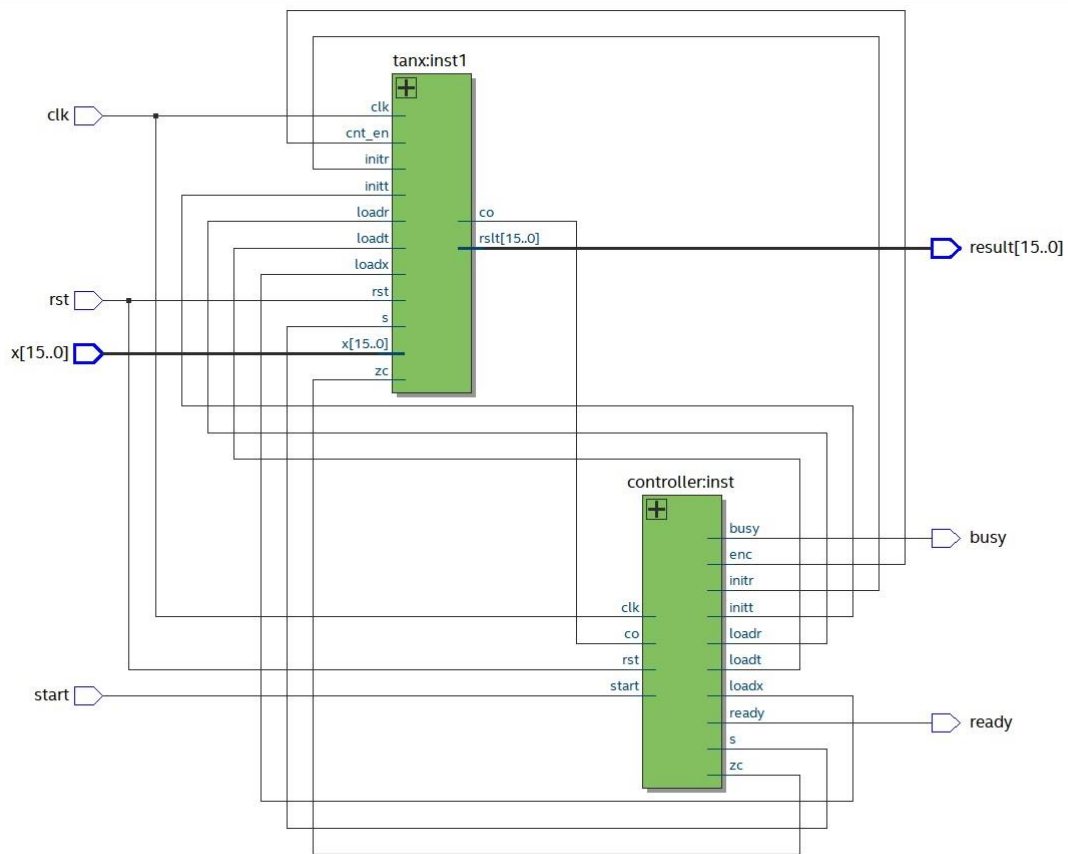
--RTL--



--flow summary--

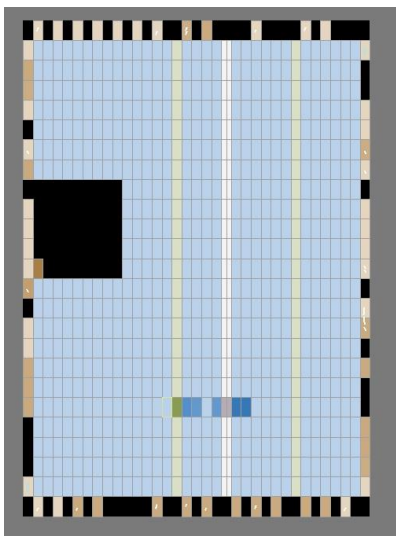
RTL.bdf		Compilation Report - RTL	
Table of Contents		Flow Summary	
Flow Summary		<<Filter>>	
Flow Settings		Flow Status	Successful - Sun Jan 09 17:44:27 2022
Flow Non-Default Global Settings		Quartus Prime Version	20.1.0 Build 711 06/05/2020 SJ Lite Edition
Flow Elapsed Time		Revision Name	RTL
Flow OS Summary		Top-level Entity Name	RTL
Flow Log		Family	Cyclone IV E
Analysis & Synthesis		Device	EP4CE6E22A7
Fitter		Timing Models	Final
Assembler		Total logic elements	62 / 6,272 (< 1 %)
Timing Analyzer		Total registers	58
EDA Netlist Writer		Total pins	37 / 92 (40 %)
Flow Messages		Total virtual pins	0
Flow Suppressed Messages		Total memory bits	128 / 276,480 (< 1 %)
		Embedded Multiplier 9-bit elements	2 / 30 (7 %)
		Total PLLs	0 / 2 (0 %)

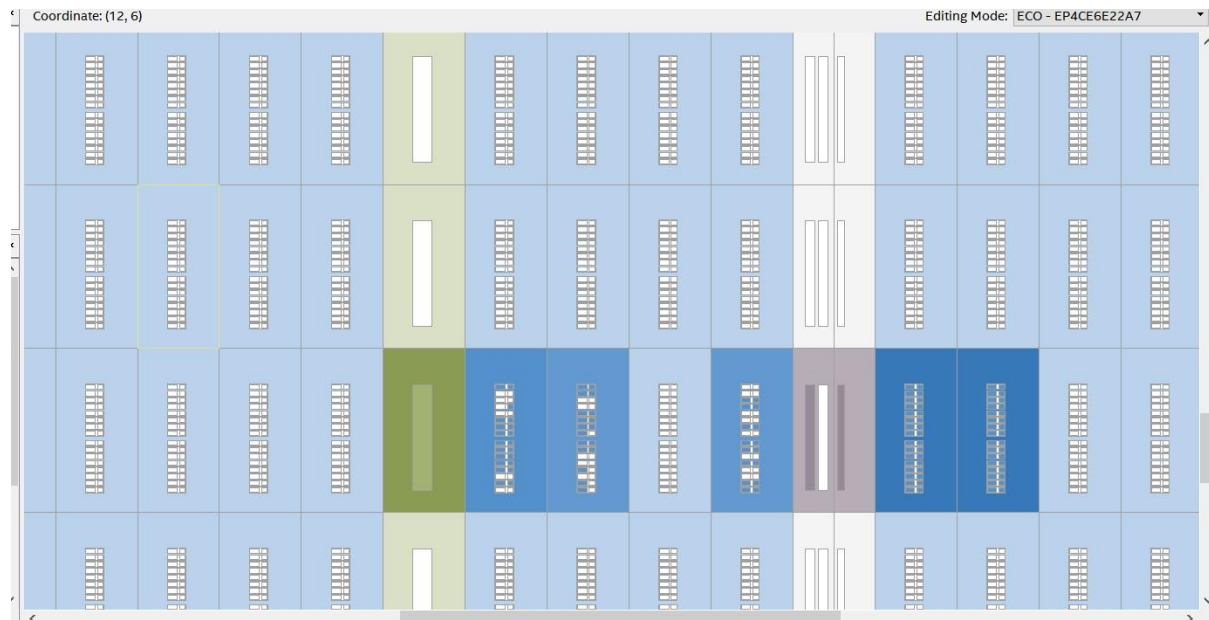
--netList--



f)

--floorplan--





--Timing--

