SENG1040

Assignment #3

Date of submission: Jan 29, 2019

Question 1

a.

a. A ₅	A ₄	A ₃	A ₂	Aı	Ao	SIGNAL
0	0	0	0	0	0	CS_RAM
0	0	0	0	0	1	CS_RAM
0	0	0	0	1	0	CS_RAM
0	0	0	0	1	1	CS_RAM
0	0	0	1	0	0	CS_RAM
0	0	0	1	0	1	CS_RAM
0	0	0	1	1	0	CS_RAM
0	0	0	1	1	1	CS_RAM
0	0	1	0	0	0	CS_RAM
0	0	1	0	0	1	CS_RAM
0	0	1	0	1	0	CS_RAM
0	0	1	0	1	1	CS_RAM
0	0	1	1	0	0	CS_RAM
0	0	1	1	0	1	CS_RAM
0	0	1	1	1	0	CS_RAM
0	0	1	1	1	1	CS_RAM
0	1	0	0	0	0	CS_RAM
0	1	0	0	0	1	CS_RAM
0	1	0	0	1	0	CS_RAM
0	1	0	0	1	1	CS_RAM

0	1	0	1	0	0	CS_RAM
0	1	0	1	0	1	CS_RAM
0	1	0	1	1	0	CS_RAM
0	1	0	1	1	1	CS_RAM
0	1	1	0	0	0	CS_RAM
0	1	1	0	0	1	CS_RAM
0	1	1	0	1	0	CS_RAM
0	1	1	0	1	1	CS_RAM
0	1	1	1	0	0	CS_RAM
0	1	1	1	0	1	CS_RAM
0	1	1	1	1	0	CS_RAM
0	1	1	1	1	1	CS_RAM
1	0	0	0	0	0	CS_ROM
1	0	0	0	0	1	CS_ROM
1	0	0	0	1	0	CS_ROM
1	0	0	0	1	1	CS_ROM
1	0	0	1	0	0	CS_ROM
1	0	0	1	0	1	CS_ROM
1	0	0	1	1	0	CS_ROM
1	0	0	1	1	1	CS_ROM
1	0	1	0	0	0	CS_ROM
1	0	1	0	0	1	CS_ROM
1	0	1	0	1	0	CS_ROM
1	0	1	0	1	1	CS_ROM

0	1	1	0	0	CS_ROM
0	1	1	0	1	CS_ROM
0	1	1	1	0	CS_ROM
0	1	1	1	1	CS_ROM
1	0	0	0	0	CS_LED
1	0	0	0	1	
1	0	0	1	0	CS_COM
1	0	0	1	1	CS_COM
1	0	1	0	0	
1	0	1	0	1	
1	0	1	1	0	
1	0	1	1	1	
1	1	0	0	0	CS_LCD
1	1	0	0	1	CS_LCD
1	1	0	1	0	CS_LCD
1	1	0	1	1	CS_LCD
1	1	1	0	0	CS_LCD
1	1	1	0	1	CS_LCD
1	1	1	1	0	CS_LCD
1	1	1	1	1	CS_LCD
	0 0 1 1 1 1 1 1 1 1 1 1 1 1	0 1 0 1 0 1 1 0 1 0 1 0 1 0 1 0 1 0 1 0 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	0 1 1 0 1 1 0 1 1 1 0 0 1 0 0 1 0 0 1 0 1 1 0 1 1 0 1 1 0 1 1 1 0 1 1 0 1 1 0 1 1 0 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	0 1 1 0 0 1 1 1 0 1 1 1 1 0 0 0 1 0 0 1 1 0 0 1 1 0 1 0 1 0 1 1 1 0 1 1 1 0 1 1 1 1 0 0 1 1 0 0 1 1 0 1 1 1 0 1 1 1 0 1 1 1 0 1 1 1 0 1 1 1 0 1 1 1 0 1 1 1 1 0 1 1 1 0 1 1 1 0 1 1 1 0 1 <	0 1 1 0 1 0 1 1 1 0 0 1 1 1 1 1 0 0 0 0 1 0 0 0 1 1 0 0 1 1 1 0 1 0 0 1 0 1 1 0 1 0 1 1 1 1 0 1 1 1 1 1 0 0 1 1 1 0 0 0 1 1 0 0 1 1 1 0 1 1 1 1 0 1 1 1 1 0 1 1 1 1 0 1 1 1 1 0 1 1 1 1 1 0 1 1 1 1

b.
$$\begin{aligned} &\mathsf{CS_RAM} = \overline{\mathsf{A}}_5 \\ &\mathsf{CS_ROM} = \mathsf{A}_5 \ \overline{\mathsf{A}}_4 \\ &\mathsf{CS_LED} = \mathsf{A}_5 \ \mathsf{A}_4 \ \overline{\mathsf{A}}_3 \ \overline{\mathsf{A}}_2 \ \overline{\mathsf{A}}_1 \ \overline{\mathsf{A}}_0 \\ &\mathsf{CS_COM} = \mathsf{A}_5 \ \mathsf{A}_4 \ \overline{\mathsf{A}}_3 \ \overline{\mathsf{A}}_2 \ \mathsf{A}_1 \\ &\mathsf{CS_LCD} = \mathsf{A}_5 \ \mathsf{A}_4 \ \mathsf{A}_3 \end{aligned}$$

c. **(1)**CS_RAM A5 x1 CS_ROM A4 x1 CS_LCD A3 x1 €1)cs_coм A2 x1 Al xl CS_LED A0 x1