

# The TH Logger

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Final Project: ECE 378  
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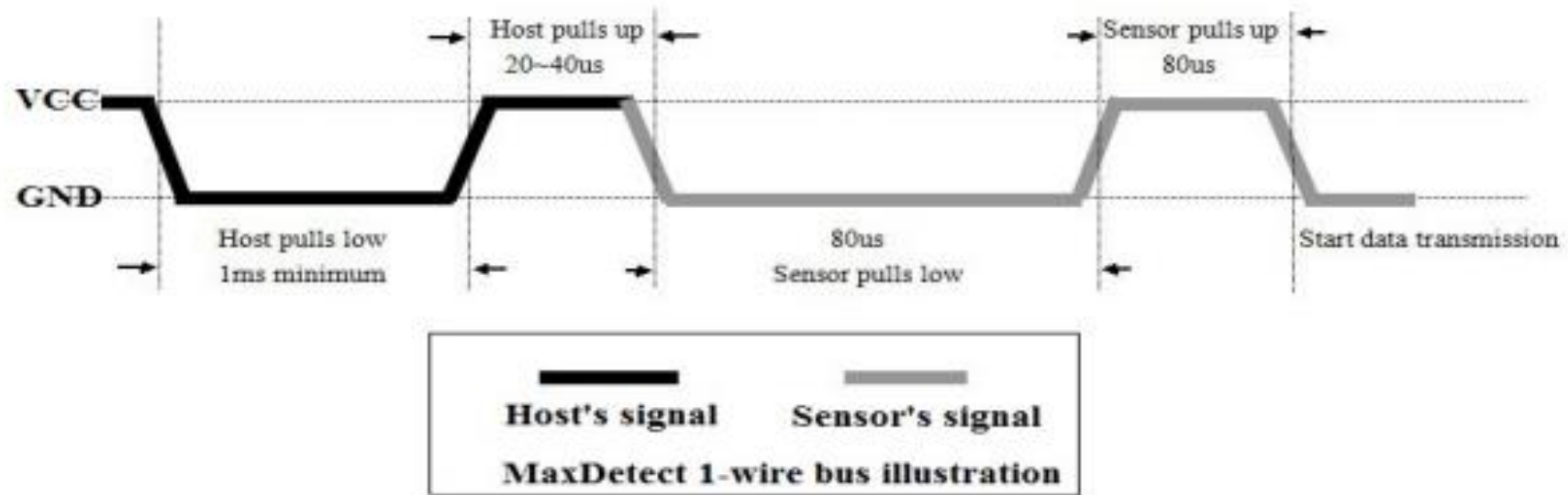
# External Temperature and Humidity Sensor (RHT03)

DHT22 pins	
1	VCC
2	DATA
3	NC
4	GND

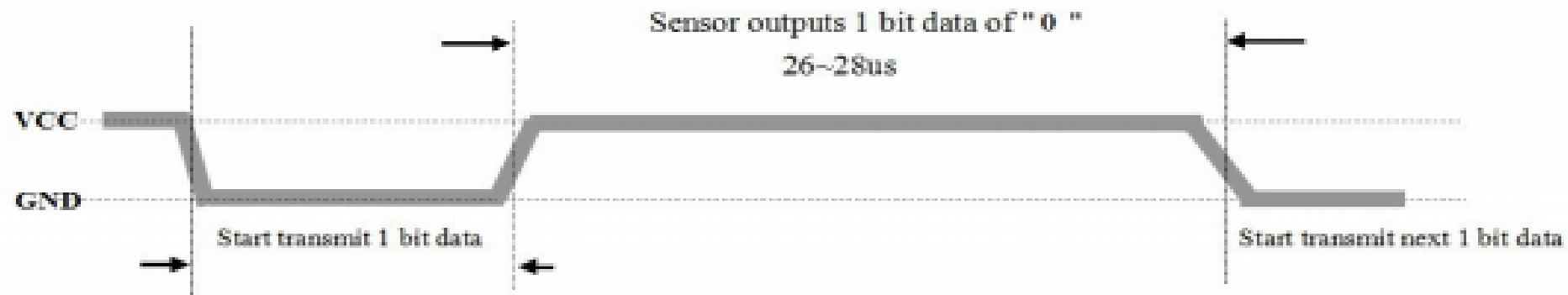


Model	RHT03	
Power supply	3.3-6V DC	
Output signal	digital signal via MaxDetect 1-wire bus	
Sensing element	Polymer humidity capacitor	
Operating range	humidity 0-100%RH;	temperature -40~80Celsius
Accuracy	<b>humidity <math>\pm 2\%</math> RH (Max <math>\pm 5\%</math> RH);</b> temperature $\pm 0.5$ Celsius	
Resolution or sensitivity	humidity 0.1%RH;	temperature 0.1 Celsius
Repeatability	humidity $\pm 1\%$ RH;	temperature $\pm 0.2$ Celsius

# Initial Transmission



# Detecting a '0'

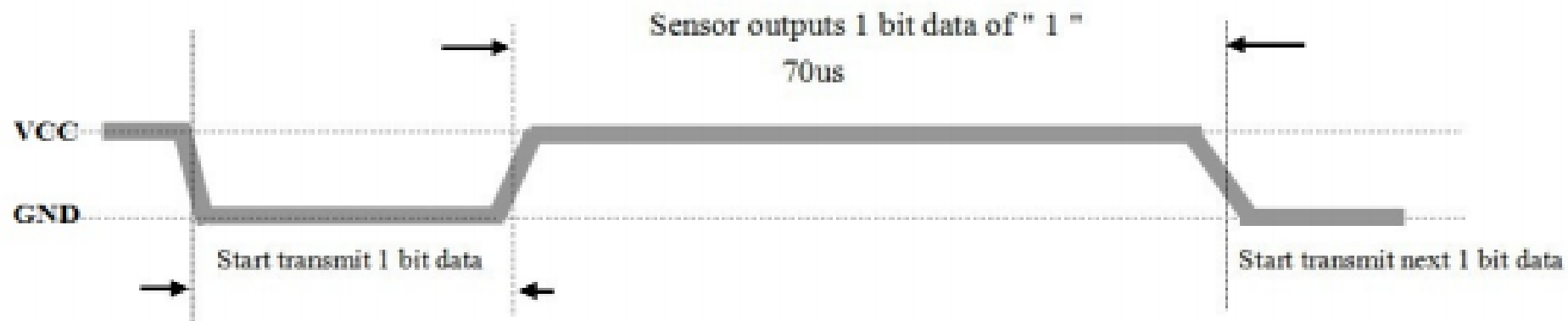


Host's signal

Sensor's signal

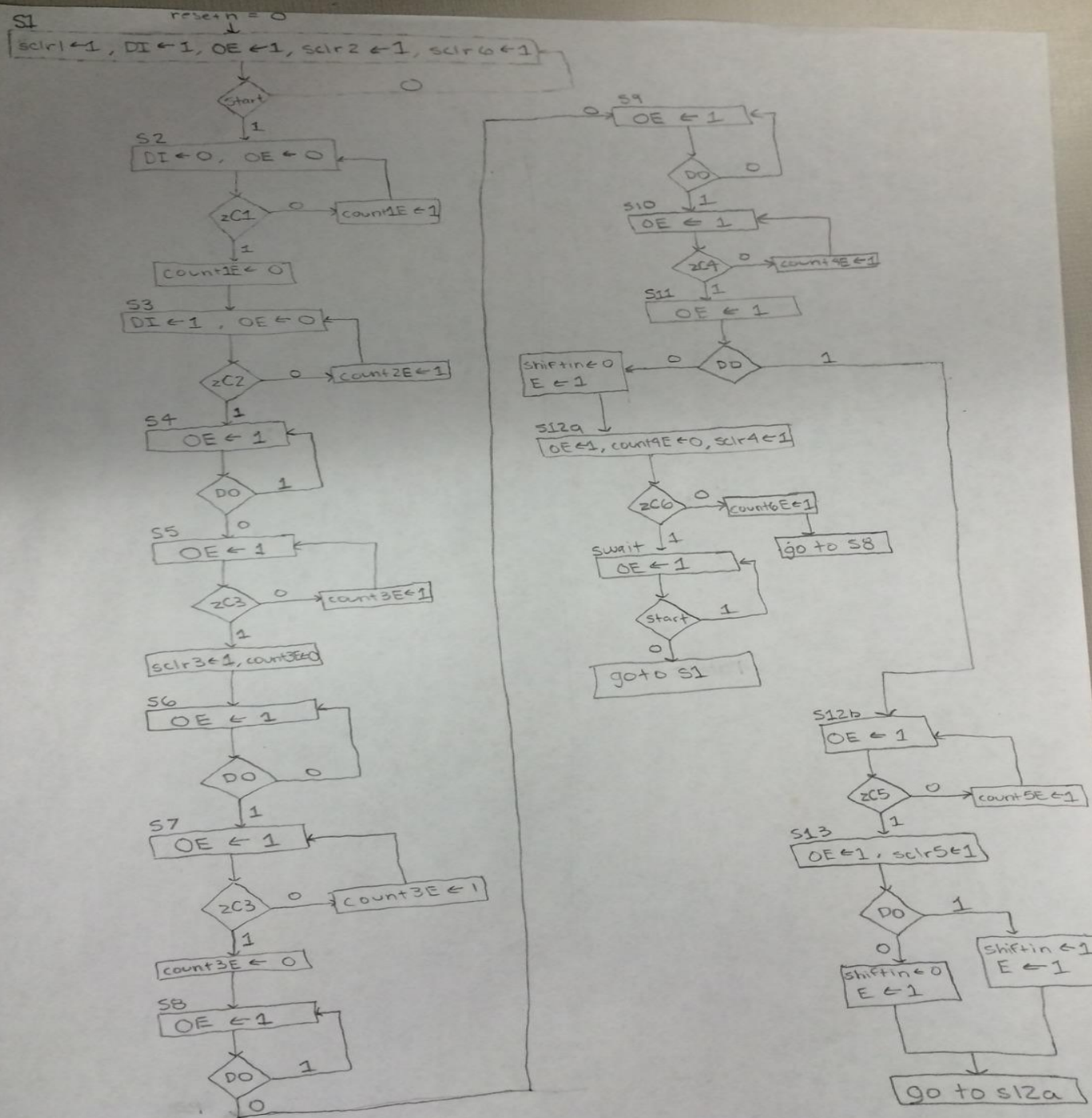
MaxDetect 1-wire bus illustration

# Detecting a '1'



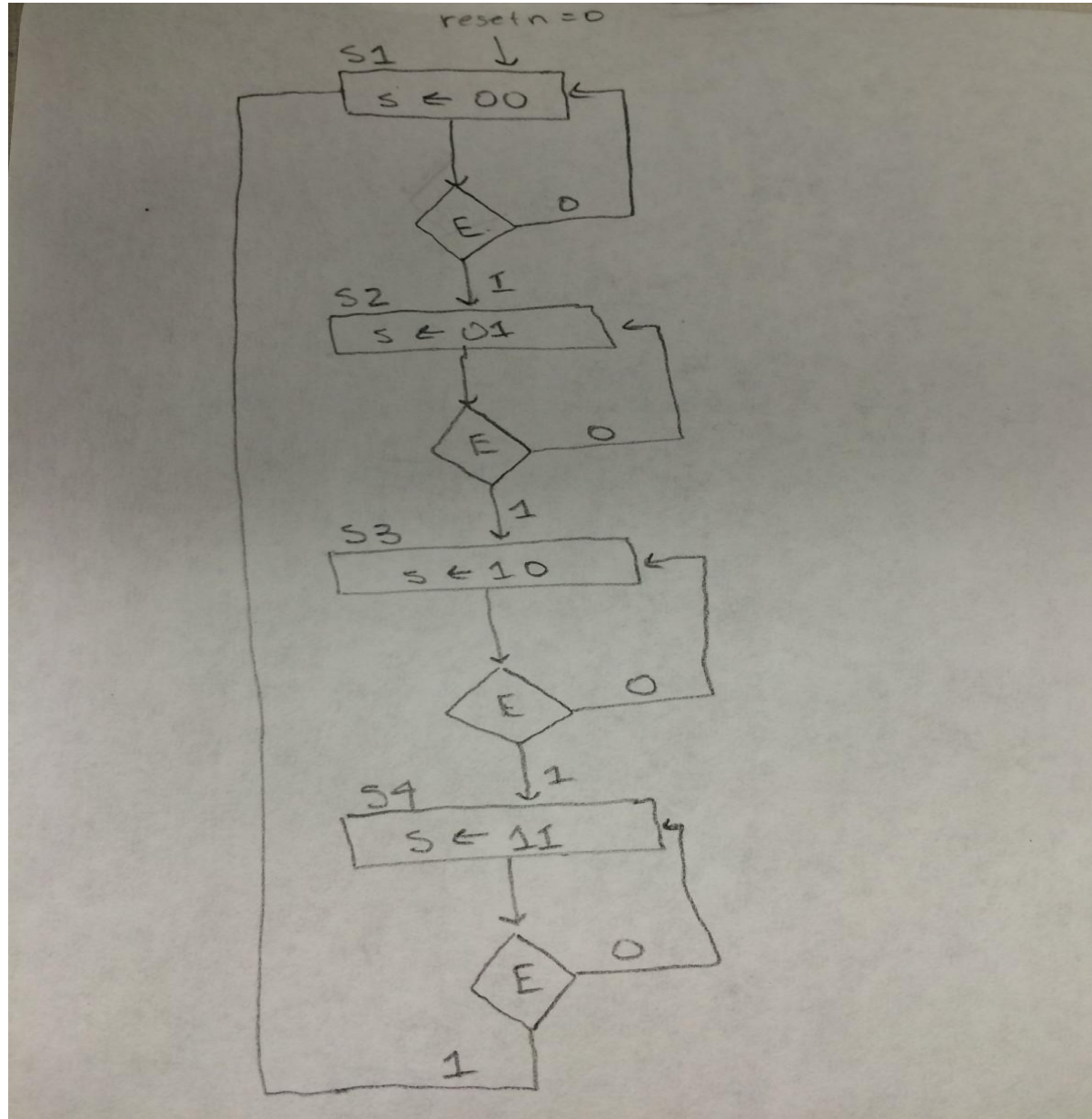
**Host's signal**      **Sensor's signal**

**MaxDetect 1-wire bus illustration**

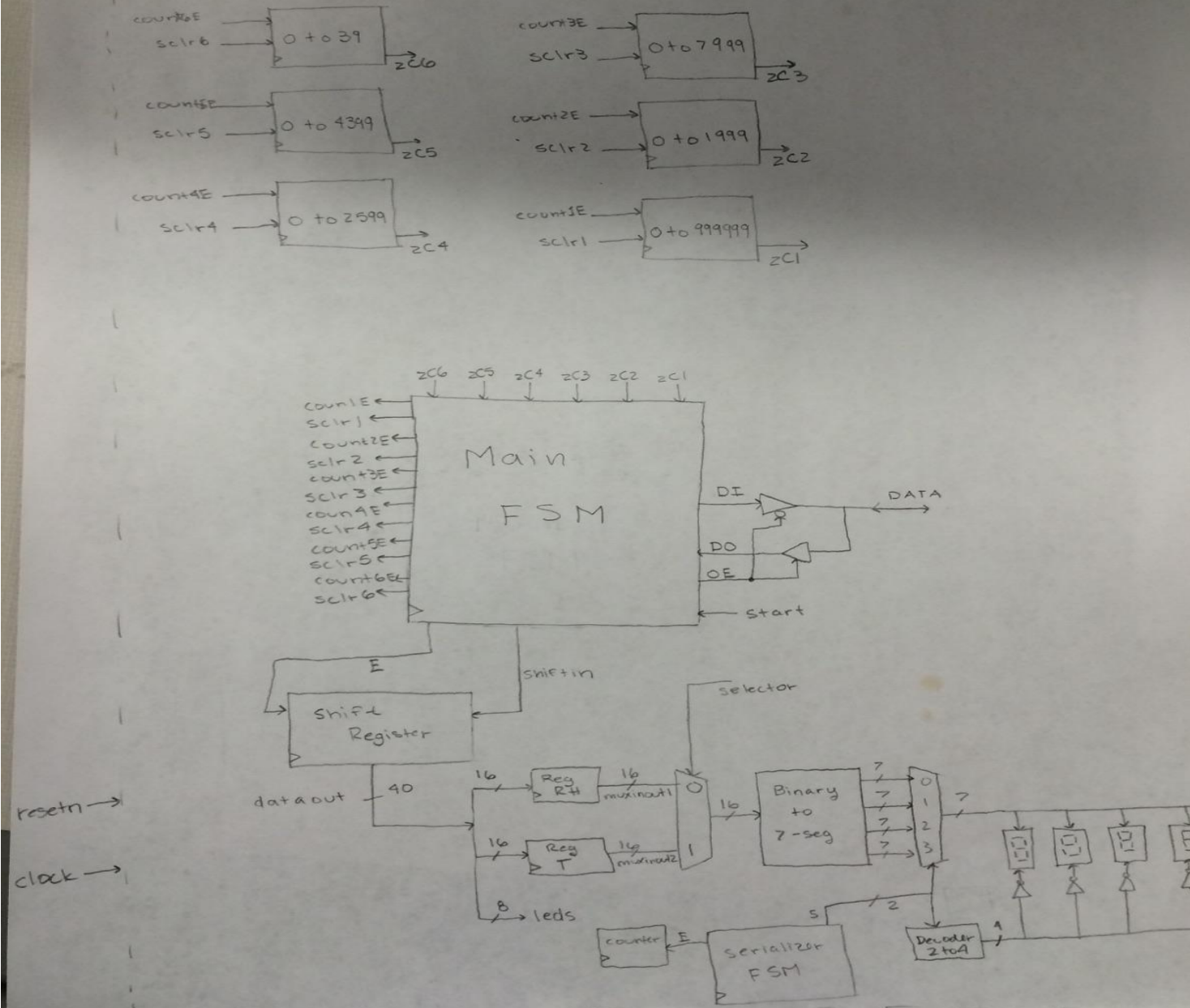


## The Main FSM (ASM Form)

# 7-Segment Serializer FSM (ASM Form)







# Circuit Design