1) Convert the hex values to decimal (they are 2’s complement 8-bit integers).

\( \text{x06} \quad \text{xC1} \quad \text{x3D} \quad \text{xF2} \)

2) Build this circuit in Logisim, and fill out the truth table. Can you simplify it?

3) Build a full adder circuit in Logisim. You can either construct something using the simple two-level approach (8 AND gates feeding into “sum” and “carry” OR gates), or you can simplify it. You should be able to do this without having to look up an adder circuit in the book.

4) Build a finite state machine in Logisim (with two lights) that does the following. There’s no on/off switch. You might want to take a look at the traffic light circuit to get you going.