CSc 235   PROJECT 1   KUTZTOWN

Topic: Design a combinatorial circuit
Points: 10
Due: TBA, on D2L in the designated dropbox. ***No late submissions will be accepted.***
Overview: In this project, you will design a simple combinatorial circuit.

Description: Design a circuit in Logisim that takes as input two 4-bit values, and determines if their sum is divisible by one or more of the values 2, 3, and/or 4. You will have an LED labeled for each of the values 2, 3, and 4, and they will light if the sum of the input values is divisible by each respective value.

Select and arrange the gates and wire them together correctly. You will need to use an adder, divider, some logic gates, and probably a decoder and/or multiplexor. You are also expected to determine and employ optimizations that will simplify your circuitry.

When one of the inputs is changed, an output may or may not change.

Notes:
- Use of splitters will be of great assistance to you in this project.
- Your circuit must be designed in a neat, tabular manner along the lines of example circuits from class. If it can't be read, it won't be graded.
- You do not need the divider to determine all results. Use it only when you must. Penalties will be levied for use of dividers when not absolutely necessary.
- Label your circuit using the field in the object. Penalties for not labeling your circuits.
- Test your circuit thoroughly before submitting it. Use a hex display on your sum to make it easy to test; leave the display in the circuit you submit.

Turnin:
One circ file from Logisim. You may turn in a file named *readme.txt* (all lower case) to describe design decisions, known bugs, limitations, etc; Set up turnin NOW. Not having turnin set up and tested is not a legitimate excuse for late submission.