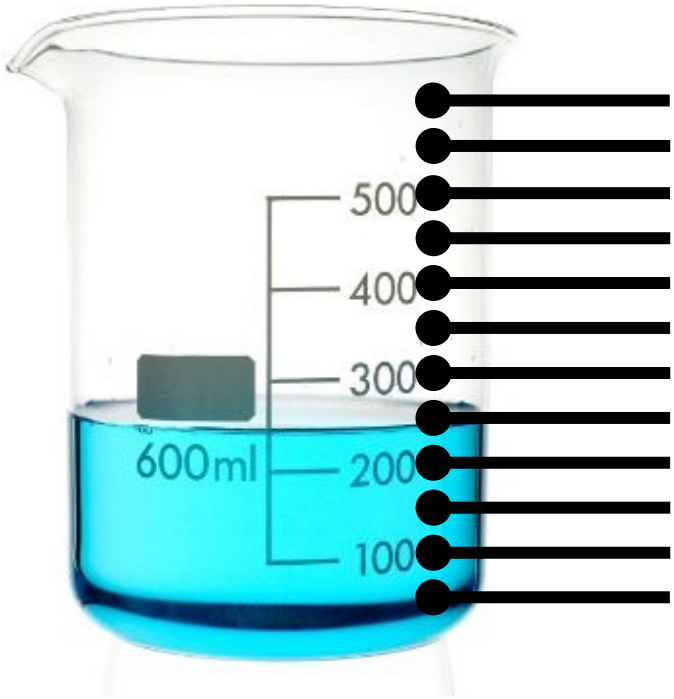
You have a beaker with 12 liquid sensors going up the side such that, as the beaker is gradually filled, the lowest sensor outputs an active signal, and then the next-highest sensor also outputs an active signal, etc., until finally, when the beaker is full, all sensors output an active signal.

You want a binary number representing the fill level of the beaker.

Describe a solution (as a block-level schematic) that uses an encoder to achieve this goal.



Things to think about:

- What should the priority of the encoder be?
- What should the encoder output when the beaker is empty? How can you achieve this?
- In your final implementation, what quantity of liquid does each “count” of the output represent assuming that (as above) it’s a 600 ml beaker with sensors arranged as shown?