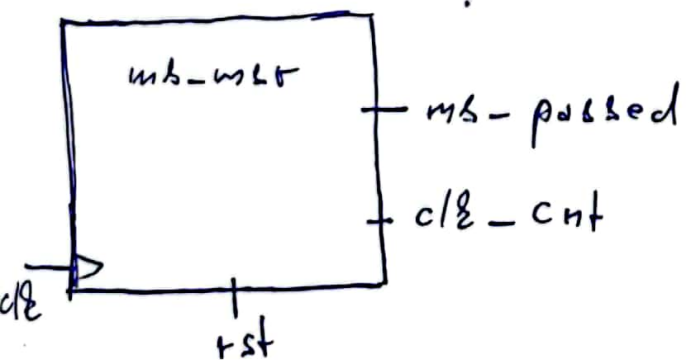


The diagram illustrates a counter system with the following components and connections:

- cnt\_reg**: A 13-bit register (cnt\_reg[12:0]) that stores the current count value.
- cnt\_reg reset**: A block that provides a reset signal to the cnt\_reg register.
- cnt\_reg == 5000**: A comparison block that checks if the current count is equal to 5000.
- cnt\_next**: The next count value, calculated as the current count ANDed with the reset signal and the comparison result.
- adder**: A block that adds the current count to a constant value (likely 1) to produce the next count.
- ms-passed**: A block that outputs a signal (1 or 0) indicating if the current count is greater than or equal to 5000.
- cnt-clk**: A block that outputs the current count value.
- ms-wrt**: A block that outputs the current count value and the ms-passed signal.



ms\_cnt

