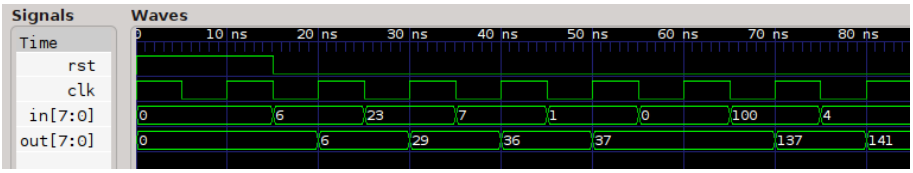
Accumulator X74712_en

Design a circuit that accumulates the values received at the input. The circuit receives an 8-bit input and generates an 8-bit output that represents the sum of all the inputs received at the previous cycles. After *rst* is asserted, the output must be zero. The following waveform illustrates the operation of the circuit.



Specification

```
module accumulator(in, out, clk, rst);
    input [7:0] in;
    input clk, rst;
    output [7:0] out;
```

Input

- *in* represents the 8-bit input number.
- *clk* is the clock signal.
- *rst* is the reset signal.

Output

- *out* represents the 8-bit output.

Problem information

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