Haegang Yang

Homework 12

- All homework must be turned in on PDF format. This can be scanned or typed in any paper size, but the format must be PDF and the file must be readable. This document can be modified for your homework submission. An additional homework template is available on Canvas to assist you in creating your answers, and content from lecture notes can be used.
- All final answers must be circled or in green.
- All homework must have a name on the top of **every** page.
- Submission errors (not in PDF, illegible, etc.) will not be re-graded.

Problem 1 (5 points)

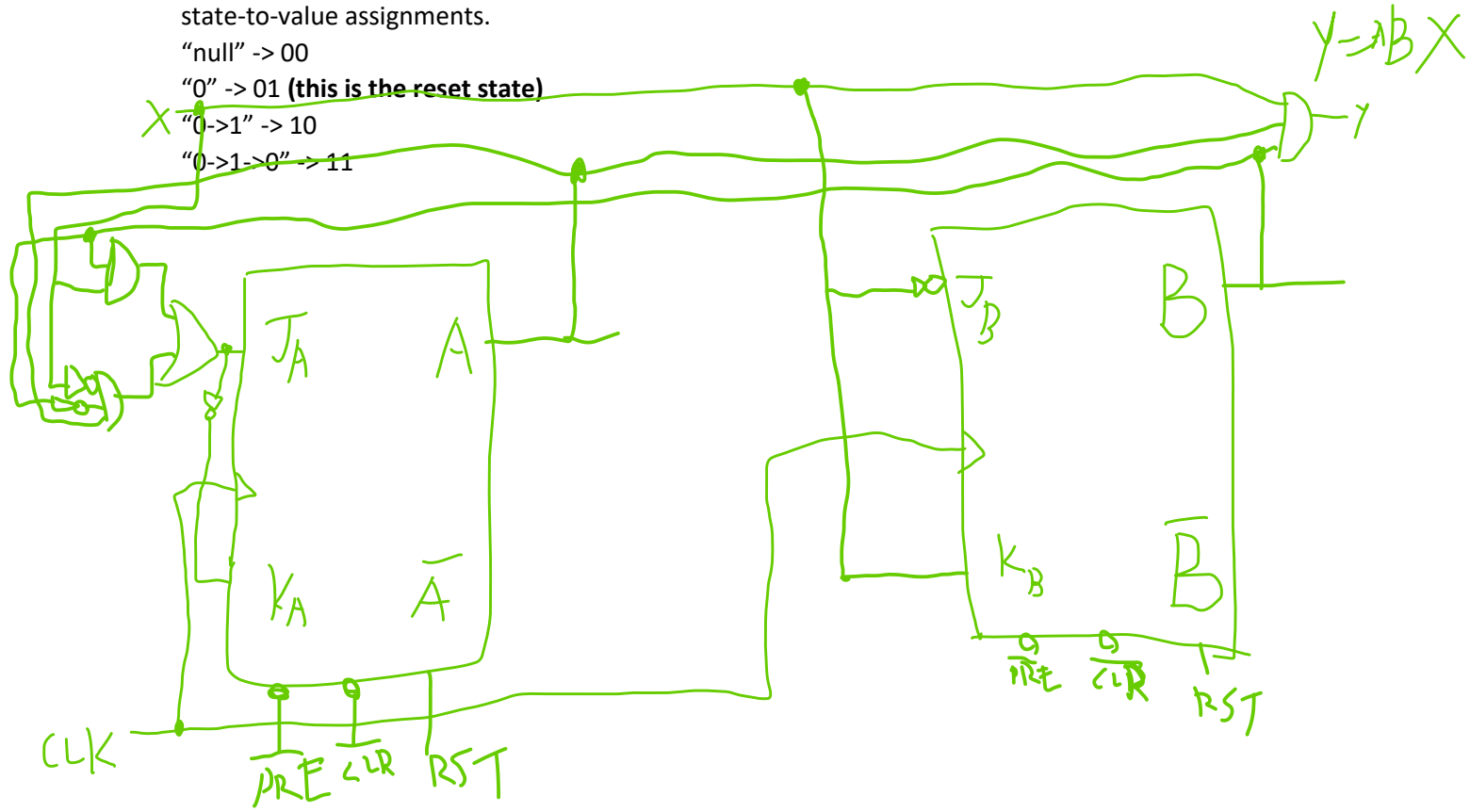
For **Problem 1** on HW 10 (use the provided solution), create the hardware using **JK-flip flops with active-low $\overline{PRE}$ and $\overline{CLR}$** and an **active-high RST**. When creating this hardware, using the following state-to-value assignments.

"null" -> 00

"0" -> 01 **(this is the reset state)**

"0->1" -> 10

"0->1->0" -> 11



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Problem 2 (5 points)

For **Problem 2** on HW 10 (use the provided solution), create the hardware using D flop flops **active-low** $\overline{PRE}$ **and** $\overline{CLR}$ and an **active-low** $\overline{RST}$ as a **one-hot** state machine. When creating this hardware, using the following state names.

"null" -> A

"0" -> B

"0->1" -> C (which is the reset state)

"0->1->0" -> D

"0->1->0->1" -> E