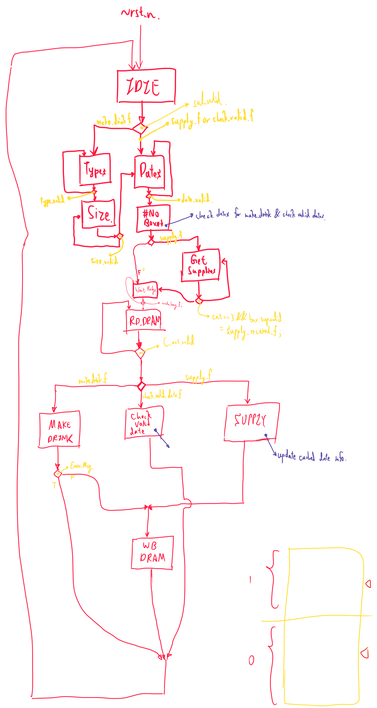
① Optimize WB latency.

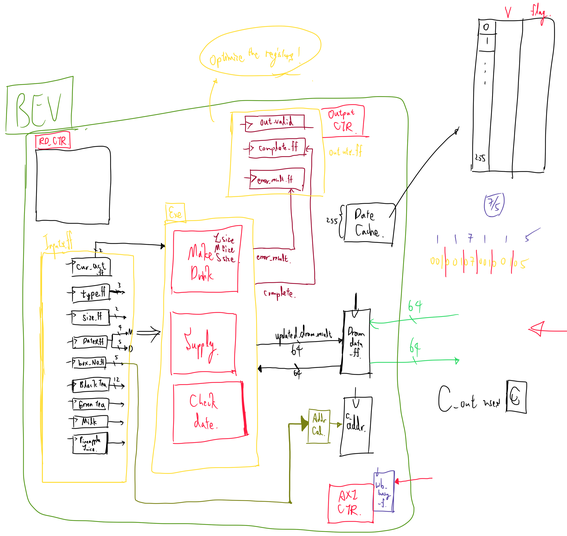
② User encoding scheme for fast expiration date determine.

1 bit encoding, info.

check $\geq \lceil 7/2 \rceil \Rightarrow$ check if $\geq 7/2$

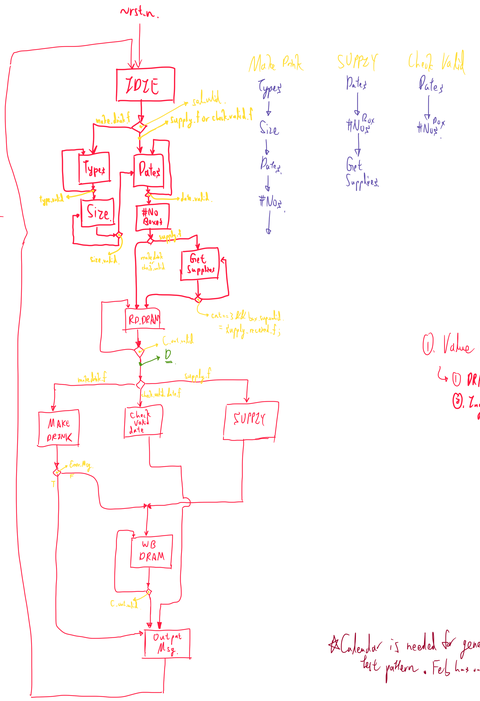
if $\geq 7/2 \Rightarrow 1$





① Check FSM

② Check inputs.



☆Cube can be used to speed up.

☆WB can also be used independently.

① Basic functional check, output.valid == 0 && out == 0.

① Value in correct

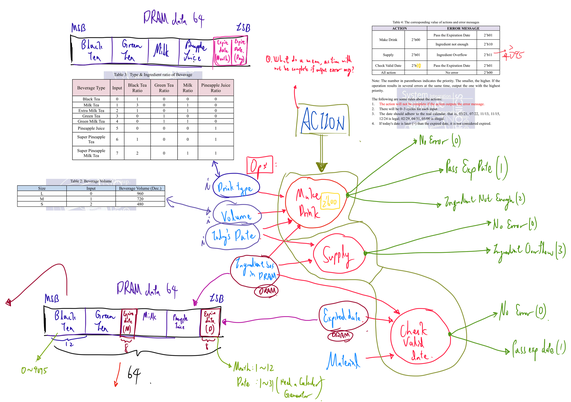
↳ ① DRAM WB incorrect → ① check before, after (DRAM → addr, Stage)

② Zipcodes value in name. → ① check size of zipcode.

7	6	5	4	3	2	1	0
42	37	55	62	11	56	21	43
BT		GT	M	Milk	pineapple	O.	

Make Drink	Supply	Check E.D.
① Type.	① Expired date CG	① Expired date CG
② Size.	② # of boxes 0~255 8	② # of box 8
③ Today's date CG	③ BT 0~4095 12	
④ # boxes with DRAM 0~255	④ GT 12	
	⑤ Milk 12	
	⑥ Pineapple Juice 12	

☆Calendar is needed for generating test pattern. Feb has only 28 days!



Which DRAM example shall be used??

Make Drink

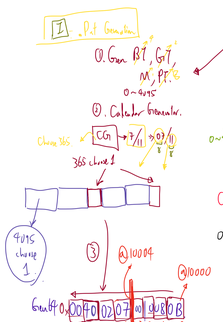
D → 0 → Type → Size → Today's date → No. boxes in PRAM.

Supply. → Shall the expired date be updated?? Yes update it!

D → 1 → Expired date → No. boxes in PRAM → BT → GT → M → Pineapple Juice.

Check Expired date

D → 2 → Expired date → # of zipcode box.



① AXI-CTR → Run AXI-CTR TB

② Make drink.

③ Supply.

④ Check Valid Date