

# Group 4-2

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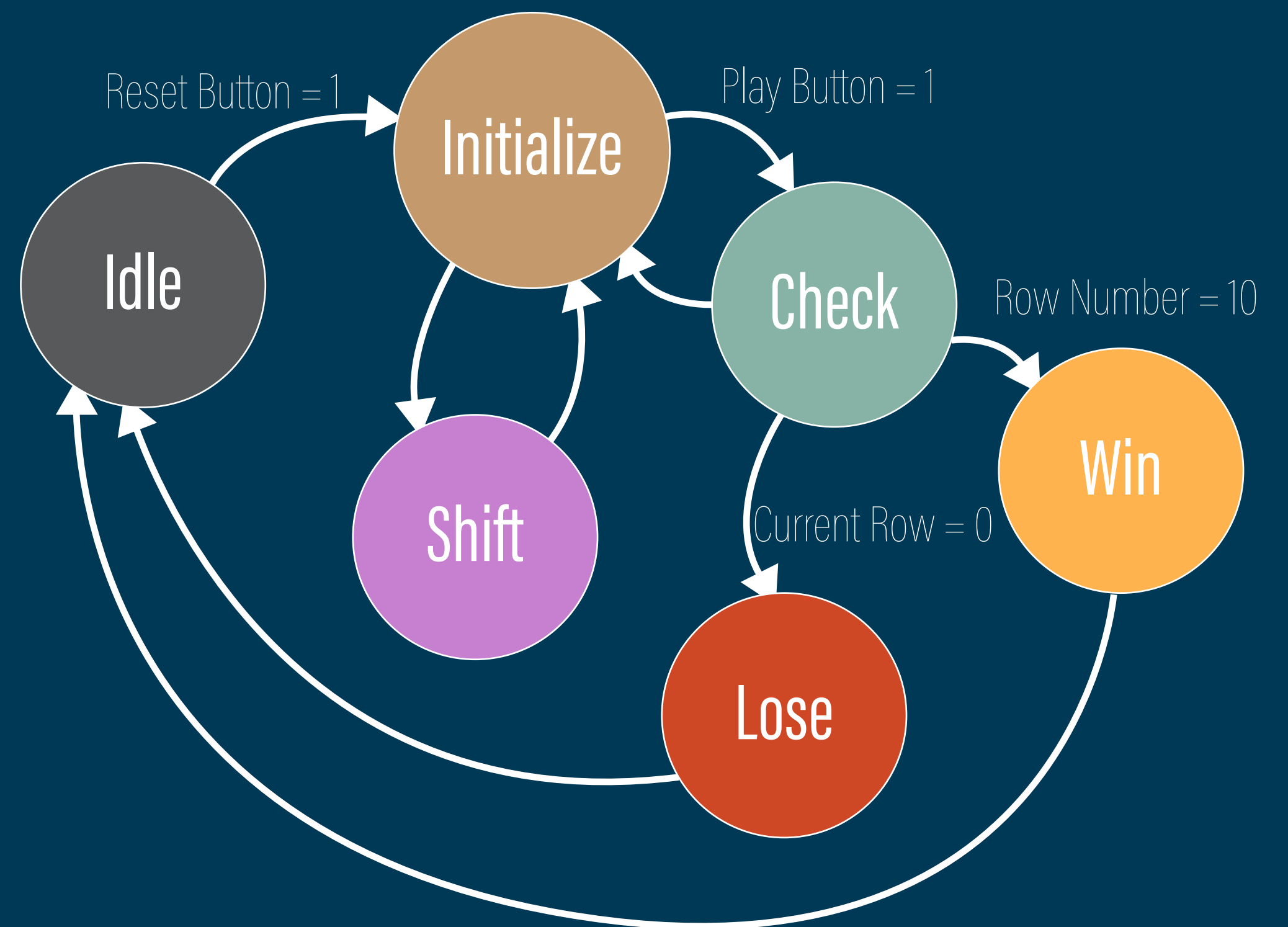
## Game Idea

Based on the arcade game Stacker, where the objective is to stack rows of blocks all the way to the top. At each level of the game, a row of blocks will move left and right until the user presses a button which stops the movement. If there are no blocks under where the user has stopped the current row, then the game will stop. Else, the game will continue, and the blocks will stack on top of the current pattern. As the levels increase, the speed of the blocks will increase, making it more difficult. User wins the game by reaching the top of the screen.

## Prototype



## Finite State Machine



## ALU functions

### ADD

increase the row number

### AND

check between current and previous rows

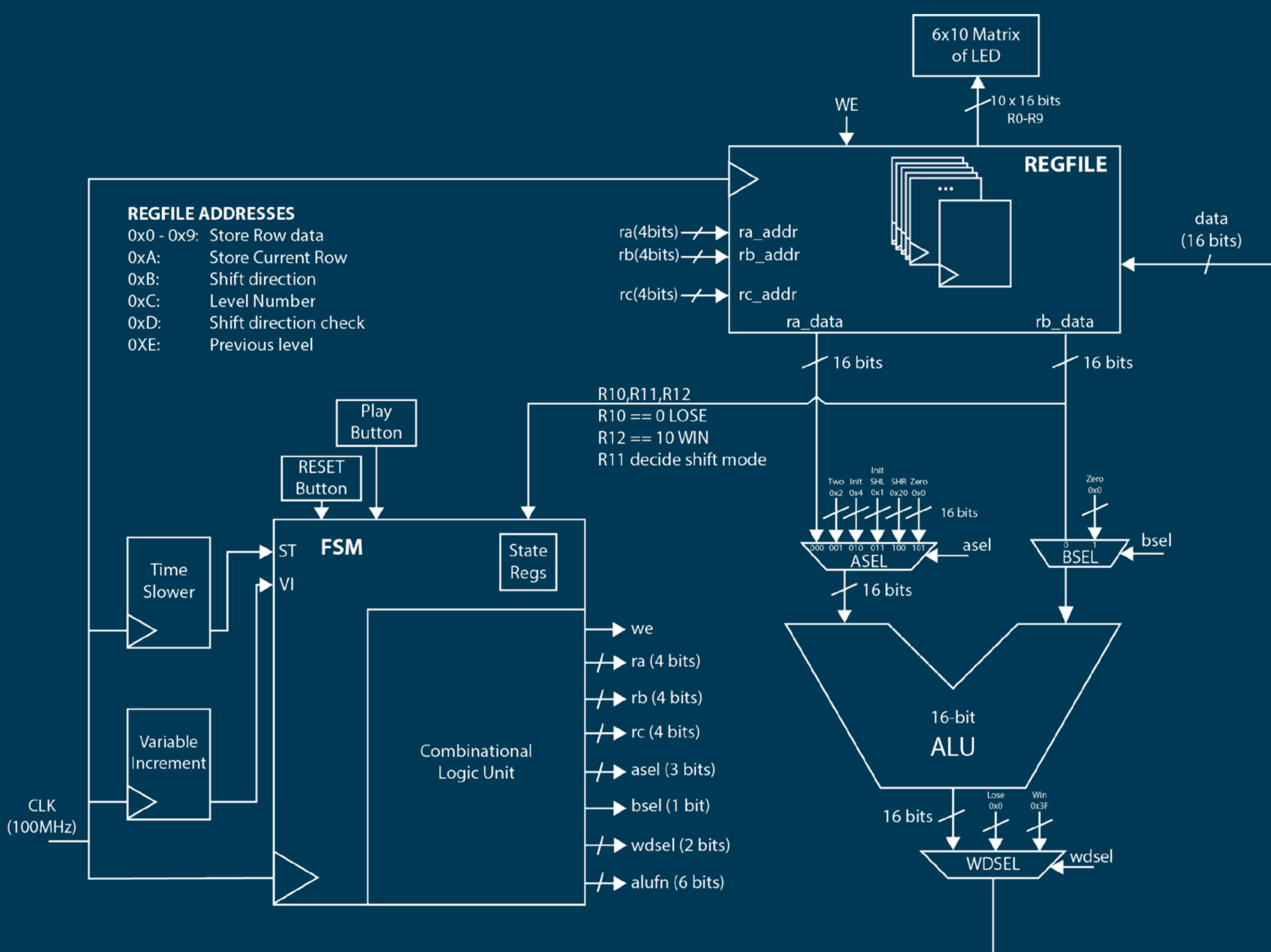
### SHL

shift the blocks left

### SHR

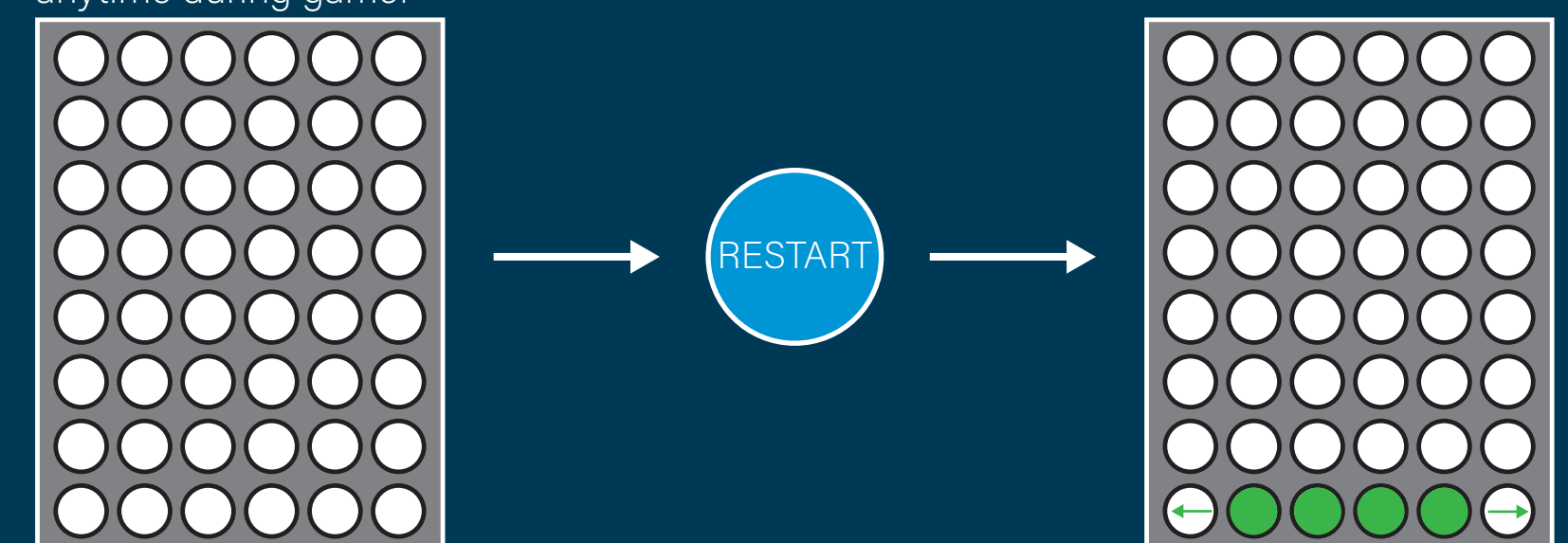
shift the blocks right

## Datapath

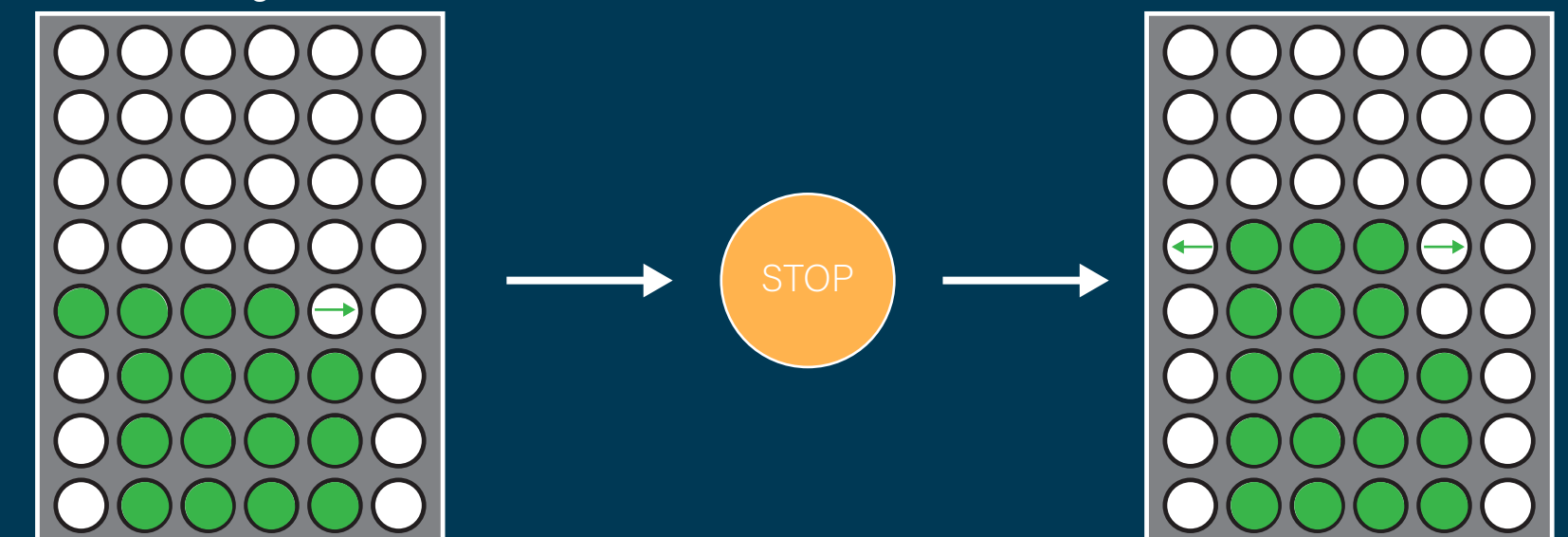


## Gameplay

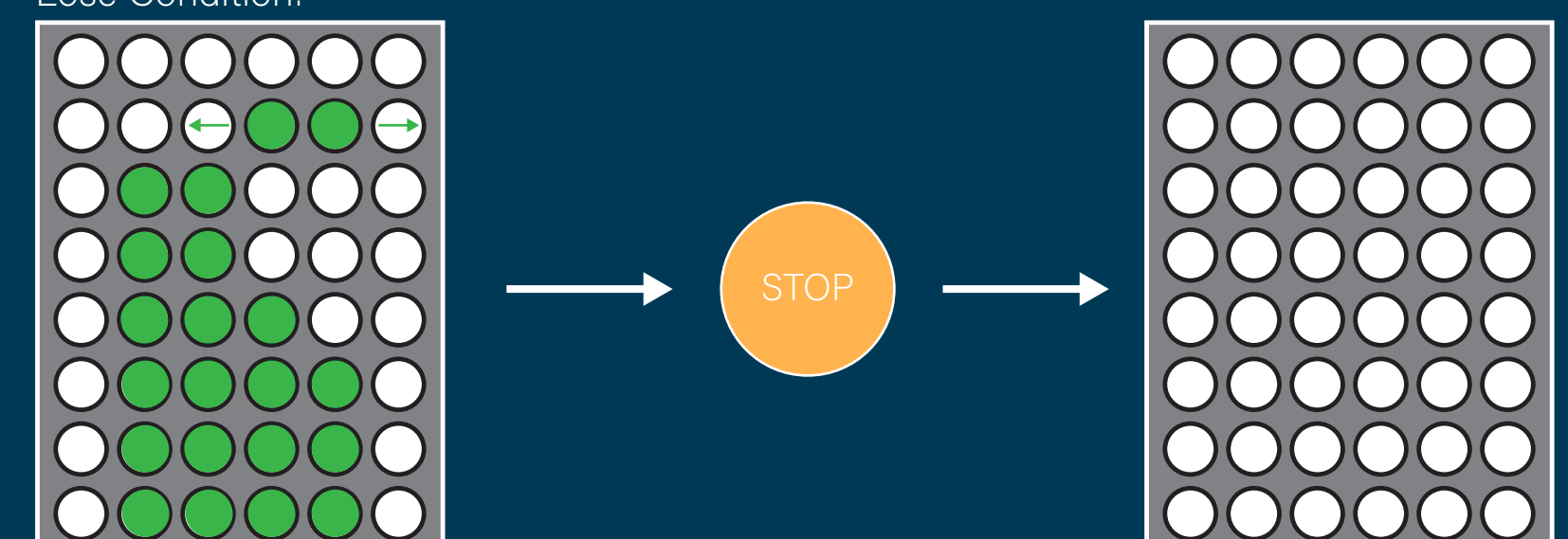
On Game Start & anytime during game:



While Shifting:



Lose Condition:



Win Condition:

