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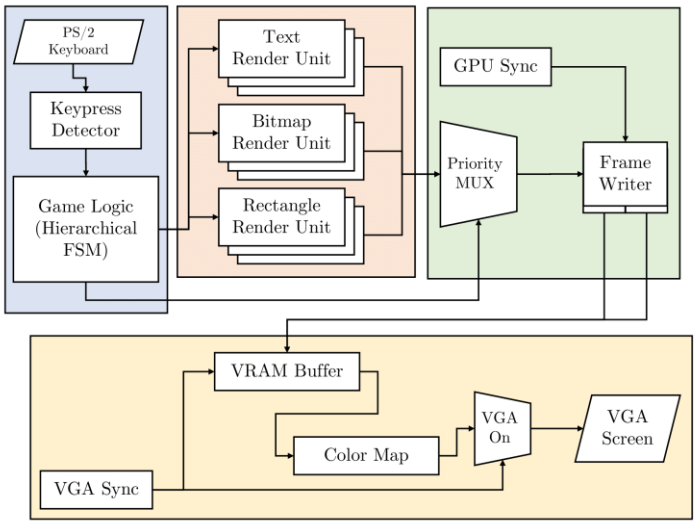
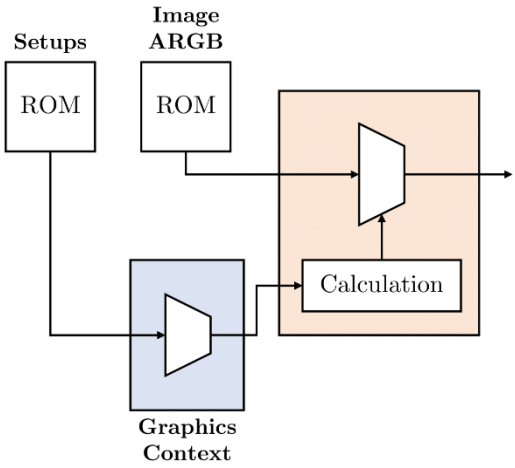
VerilogPong

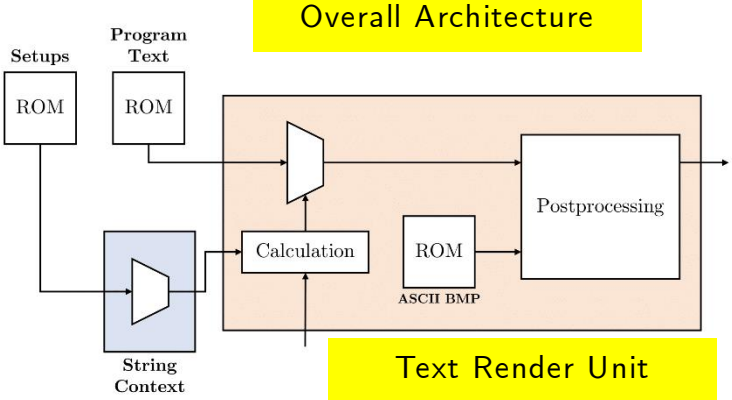
An FPGA-based Pong game with some twists written in Verilog HDL. This game has two pongs (balls). The paddles can be moved in both X and Y direction. The game will end if either player has scored 21 or more. It also features a "dealbreaker" scoring which the player has to score 2 more balls than another player to win. The design is very modular and scalable, like in this example, I scaled paddles to move in both X and Y directions and summon two pongs.



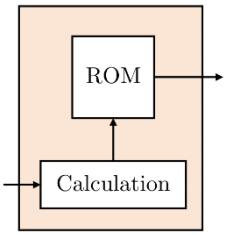
Overall Architecture



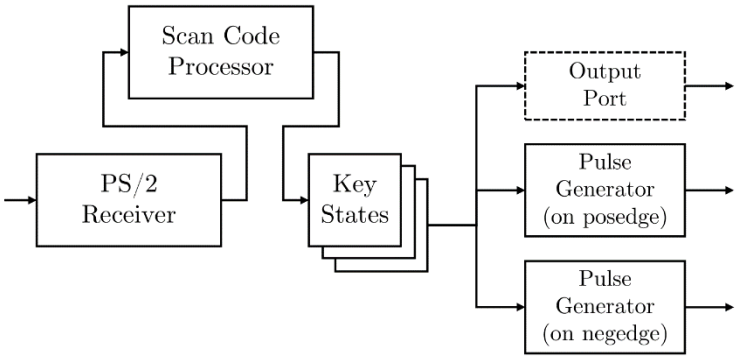
Bitmap Render Unit



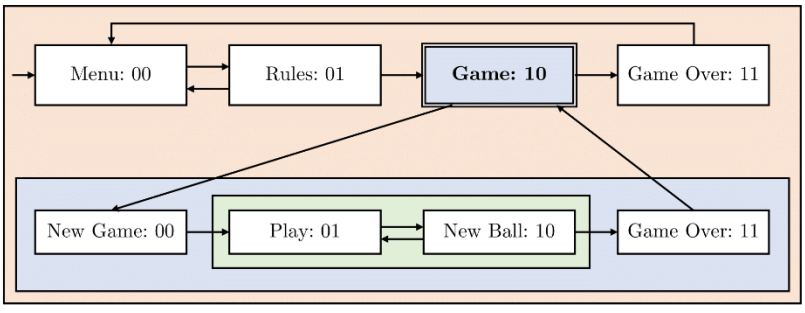
Text Render Unit



Rectangle Render Unit



PS/2 Keyboard Controller



Hierarchical Finite State Machine