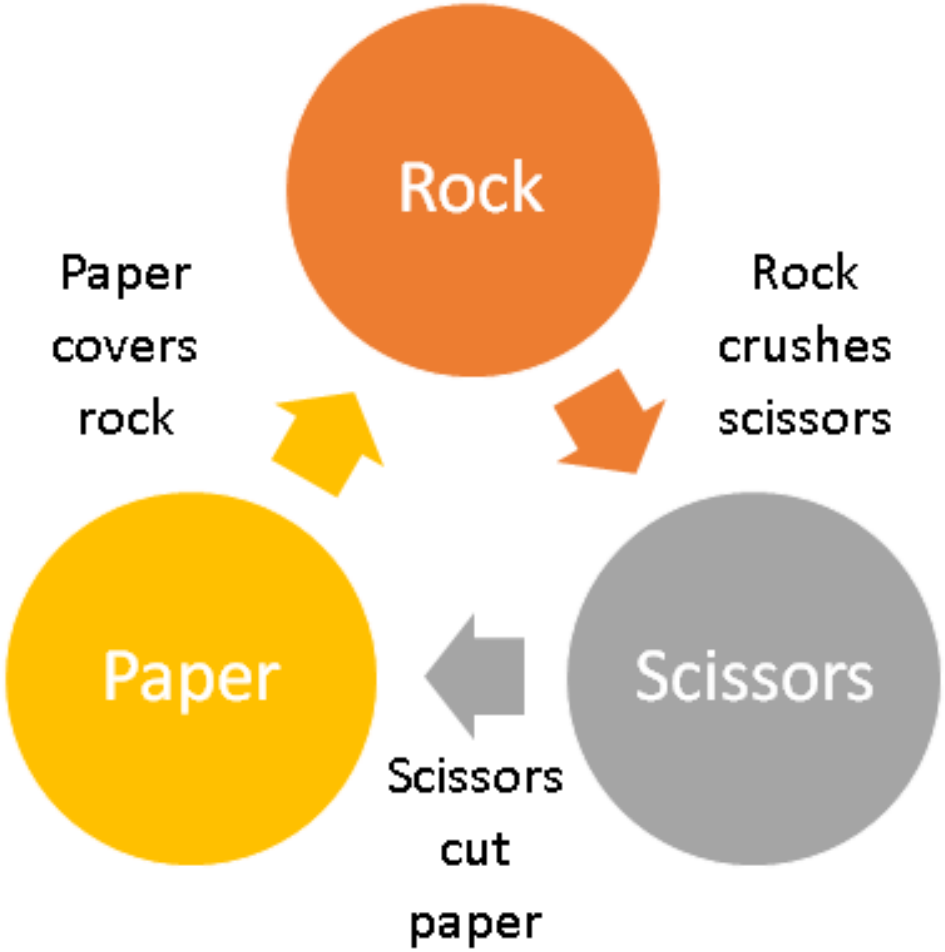
ROCK, PAPER, SCISSORS!

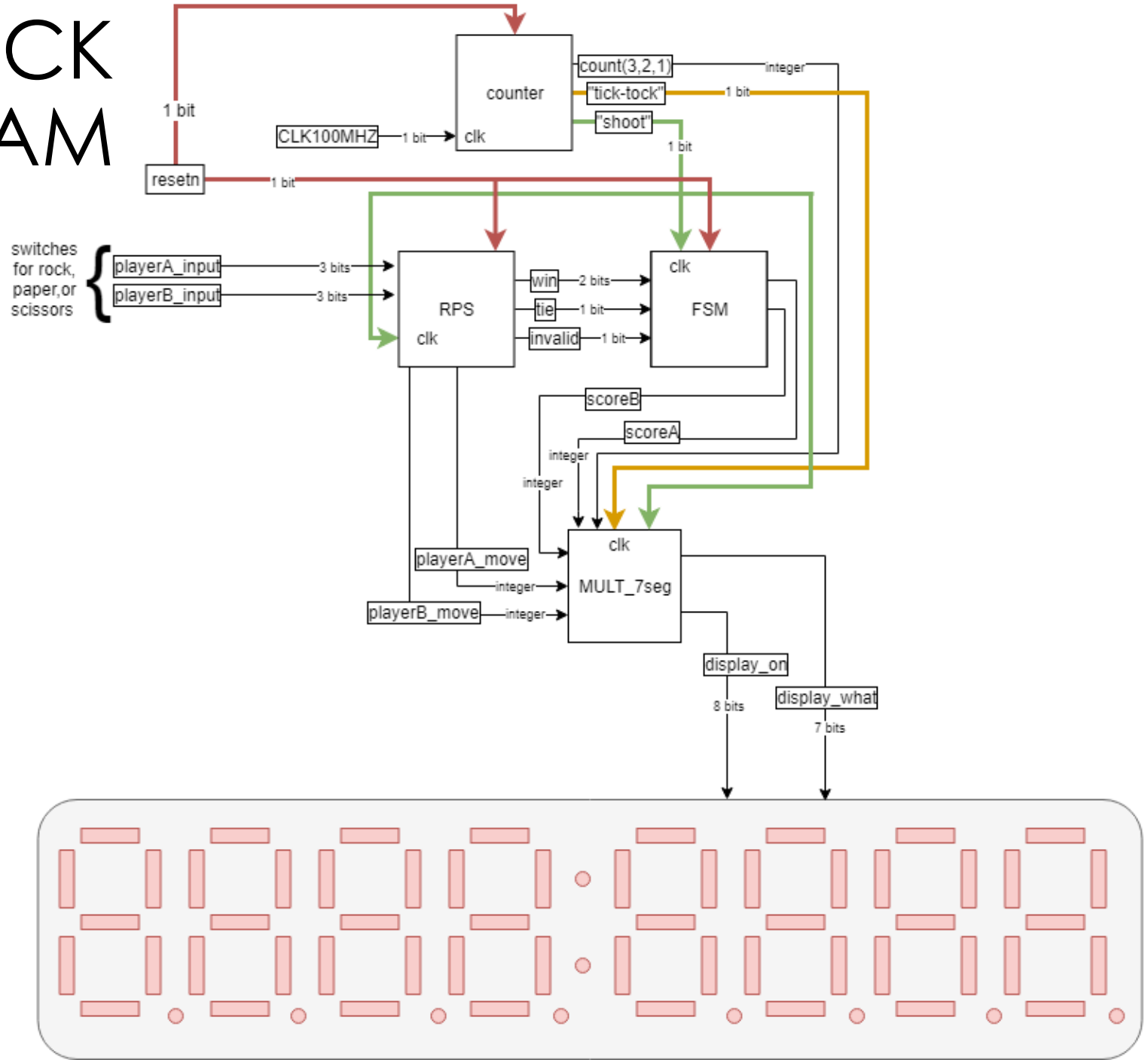
Justin Thomson, Rachel Pilarowski, Marwan Oro

RULES



- First player to 3 wins
- 3-2-1 “shoot”

BLOCK DIAGRAM



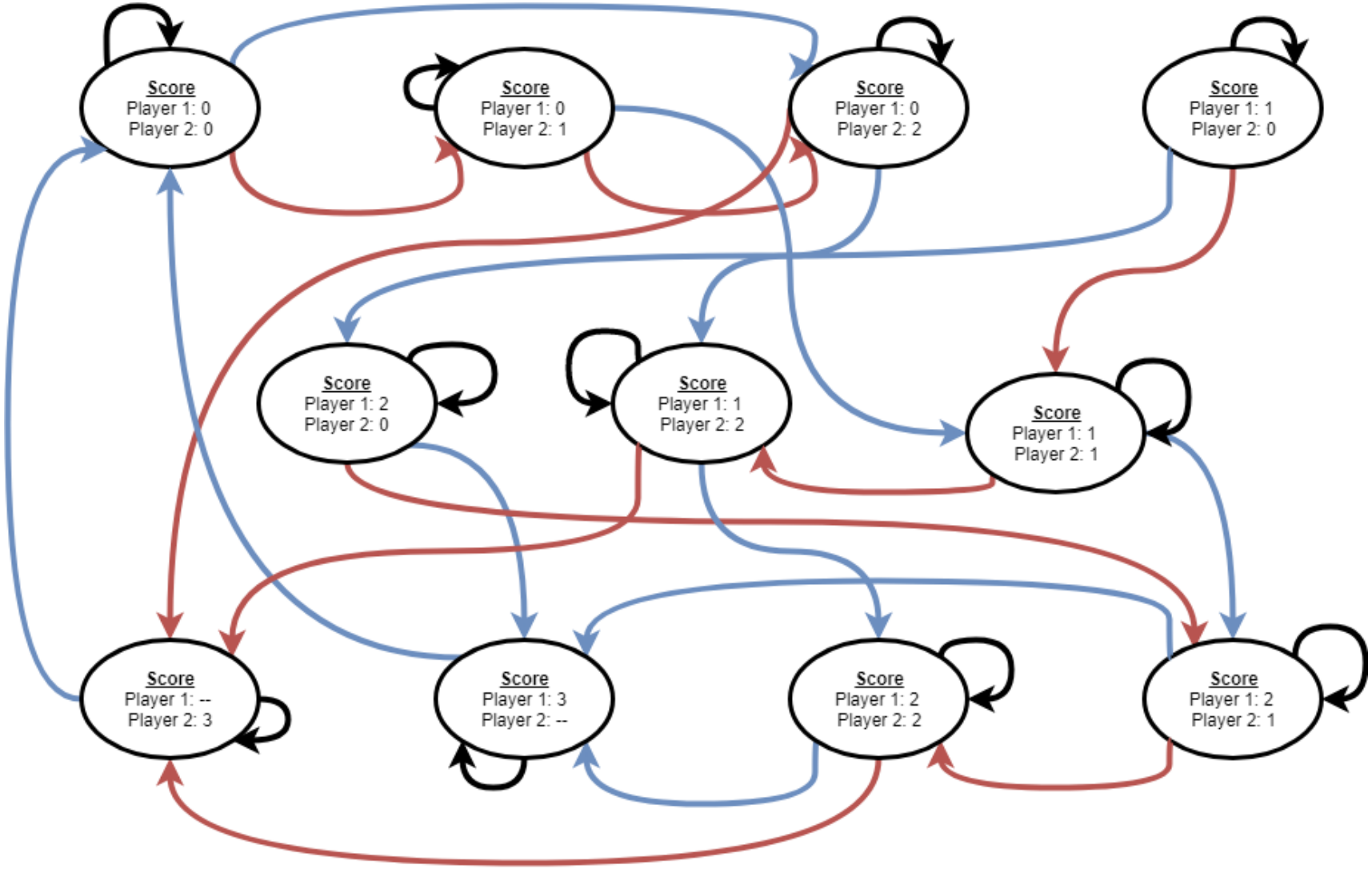
COMPARATOR

- 6 switches – 3 for each player
- Determines which player won
- Determines “Invalid” input or “Tie”
- Outputs what each player chose
  - “r” = rock
  - “P” = paper
  - “S” = Scissors
- Only processes on “shoot”
  - Shoot comes from counter

FSM

- 11 states
  - Represent the scores of each player
- Changes state based on which player won the round
  - Keeps track of the scores
- Outputs to the multiplexing display

STATE MACHINE



Player 1 Scores a Point

Draw, or invalid move

Player 2 Scores a Point

COUNTER

- The main driver of the project
- Controls:
  - When to compare two players' moves
  - Controls state changes
- Counts the amount of time to trigger certain processes

MULTIPLEXING DISPLAY

- Used to determine when individual segments are displayed
  - Also determines what is displayed when enabled
- Allows for the user to receive feedback based on the state of the game