

Standard Lichess Interface

- Players use their mouse to drag pieces to new squares
- All information is displayed on the screen
- This is what the other player sees

Electronic Chess Board User Interface

- All 64 squares have a button and an LED
- To move a piece, you click the button on its starting square, then the button on its final square
- When the other player moves a piece, the LEDs on the starting and final squares light up





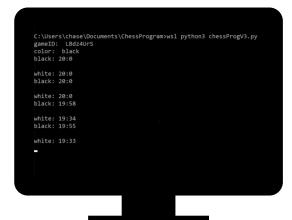
```
C:\Users\chase\Documents\ChessProgram>wsl python3 chessProgV3.py
gameID: LBdz4UrS
color: black
black: 20:0
white: 20:0
black: 20:0
white: 20:0
black: 19:58
white: 19:34
black: 19:55
white: 19:33
```

 The time left on each player's clock is displayed on the monitor at the start of their move

Electronic Chess Board Communication Flow



Python communicates with the Lichess API



Shift registers drive the LED matrix

Launchpad sends LED information to the shift registers



Python and

Launchpad

Launchpad reads input from the button matrix

