Video Game Design: Whac-A-Mole
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Introduction:

We plan to design a Whac-A-Mole video game: players whack each mole as it appears. The faster the players hit, the higher score players get.

Design Outline:

1. Hardware: design a whack-a-mole game in Verilog, using VGA connection to display the whack-a-mole game in a screen. Use part of the keyboard as a matrix keyboard to play. Press the start button, we can play the game through the matrix keyboard in a setting time (one minute), hitting the moles and getting scores.

2. Software: keyboard scanning, display different music for score feedback during game, and we want send local scores to global rank after game.

Design Components:

- Keyboard scanning
- Game state control
- Game scoring
- Clock frequency division
- VGA display
- Music generating for score feedback
- Global scores for multi-players

Reference: