Huarong Dao

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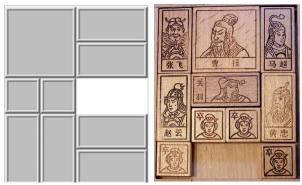
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1. Overview

Our plan is to implement a 2D game that takes a mouse and a keyboard as input, and outputs a VGA display. We choose *Huarong Dao*, a Chinese variation of *Klotski*, as a potential game logic. We might switch to other game logics, but we will stick to the overall logic:

 $Mouse/Keyboard\ input \rightarrow 2DGame\ Logic \rightarrow VGA\ Display$



Klotski Layout and Huarong Dao

2. Hardware

• Mouse interface

The mouse will allow users to interact with the game. For our game, e.g., clicking onto certain block to move the character, as well as other game-related functions (start, pause, and other options)

• VGA display

■ This display will be for the user to view the current game progress and interact with through the mouse actions.

• Keyboard interface

Addition to mouse interface, the keyboard can also use to select and move the characters. Also, keyboard actions can also allow users to input any necessary information the game needs.

• Memory storage

■ This hardware will be where the game logic is stored.

3. **Software**

- Game logic implementation
 - Game UI, puzzle layout libraries
- Mouse/Keyboard interaction

- Game score recorder
- AI algorithm to solve a puzzle (depending on specific games and time availability)