

Huarong Dao

Teammate:

Jiusheng Zhang (jz3444)

Haobo Liu (hz3645)

Jingwei Zhang (jz3555)

Rui Chu (rc3414)

Nina Hsu (hh2961)

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 → *2DGame Logic* → *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)*