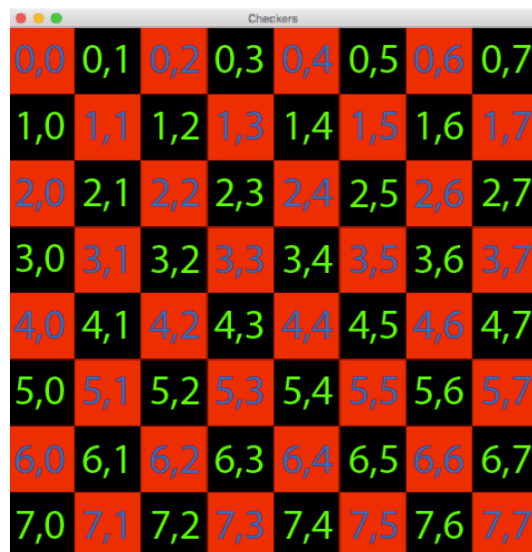


Checkers Game Data Model Concept

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1. General

Checker is two players strategy board game. We need to design App and UI works for this game. Constructed a model for checker, it is a 2D array of the space which shows below.



0,0	0,1	0,2	0,3	0,4	0,5	0,6	0,7
1,0	1,1	1,2	1,3	1,4	1,5	1,6	1,7
2,0	2,1	2,2	2,3	2,4	2,5	2,6	2,7
3,0	3,1	3,2	3,3	3,4	3,5	3,6	3,7
4,0	4,1	4,2	4,3	4,4	4,5	4,6	4,7
5,0	5,1	5,2	5,3	5,4	5,5	5,6	5,7
6,0	6,1	6,2	6,3	6,4	6,5	6,6	6,7
7,0	7,1	7,2	7,3	7,4	7,5	7,6	7,7

2. Object: Gamer (Player)

int Player: 1(player1), 2(player2), 3(computer)

int color: choose color

string name: record name

int total_number: total number of pieces for each player at the beginning

Method:

Choose_player(): pick two players for game

Choose_color(): pick one color

Move(): move the piece

3. Object: Checkboard

boolean king: check the piece is king or not

int color:

boolean lseaten: eat or not
(int, int) now_loaction:
(int, int) next_location: where to move

Method:

Move_Lup(): Location(-1,-1)
Move_Rup(): Location(-1,+1)
Move_Ldown(): Location(+1,-1)
Move_Rdown(): Location(+1,+1)
Upgrade_King(): If it is king, can move down
Location_check(): Limited positions
Is_eaten(): back to Boolean lseaten.

4. Object: Game

int Mode : choose two players
time total_time: each player can hold the total time per round
int checkboard_position: chose which grid to be used for game
int total_piece: the total piece for each players at the beginning

Method:

Initialize(): board
Refresh(): update move
Whowin(): one of the player total_piece == 0, the other win
Print result: player[i] + "win"