

# BLOOMS

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COMP1140 Assignment 2 – THU14V

# Feature

- A simple placement viewer (Task 5)
- A basic playable Blooms game
- A basic playable Blooms game that snaps pieces to the board and checks for validity (Task 8)
- Compute score of completed game
- Generate a valid move (makeMove1 makeMove2 in ComputerPlayer)
- Basic computer opponent (SinglePalyer with chosen difficulty 1 or difficulty 2)
- Advanced computer opponent (SinglePalyer with chosen difficulty 3)
- For game Viewer, front page, single player, muti Player and music have add on.

# Problems We faced

- Passing the test (eg. dot in single moves)
- Interface respond too slow
- Finish? Not Finish?
- Redundant codes.
- Computer Player make move too slow.
- BUGES eg. Mess up with javafx getx, getlayoutx, getscenex.

# Our Approach

- Team work
- Computer Player
- JavaFx

# Computer Player

- Tree Structure
- Generate Tree
- Algorithm
- Make Move

# Generate Tree

- Eliminate more than half moves
- Alpha-beta Pruning
- Selecte best 5 scores(nodes)
- Additional heuristic on scoring

# Graphical User Interface

- Allow players to resign
- Allow user to restart the game
- Users are allowed to play against either AI or another player
- Instruction(include rules, guide, definition) provided
- Main menu to allow you to select different options

# BLOOMS

SINGLE PLAYER

MULTIPLAYER

INSTRUCTIONS

TURN ON/OFF THE MUSIC

EXIT TO DESKTOP

# Starting Menu

To play this game, first select the type of the move that you want to take(single move, normal move, skip).  
Then select color that you want to place(a red,b yellow,c green,d blue).  
Each time remember to click the type of the move first and then the color.  
finally click the position on the board which is the place that you want to place this stone on.  
(if you are not doing this by order then you have to close this window and enter into it again)

resign



Difficulty:

restart

a

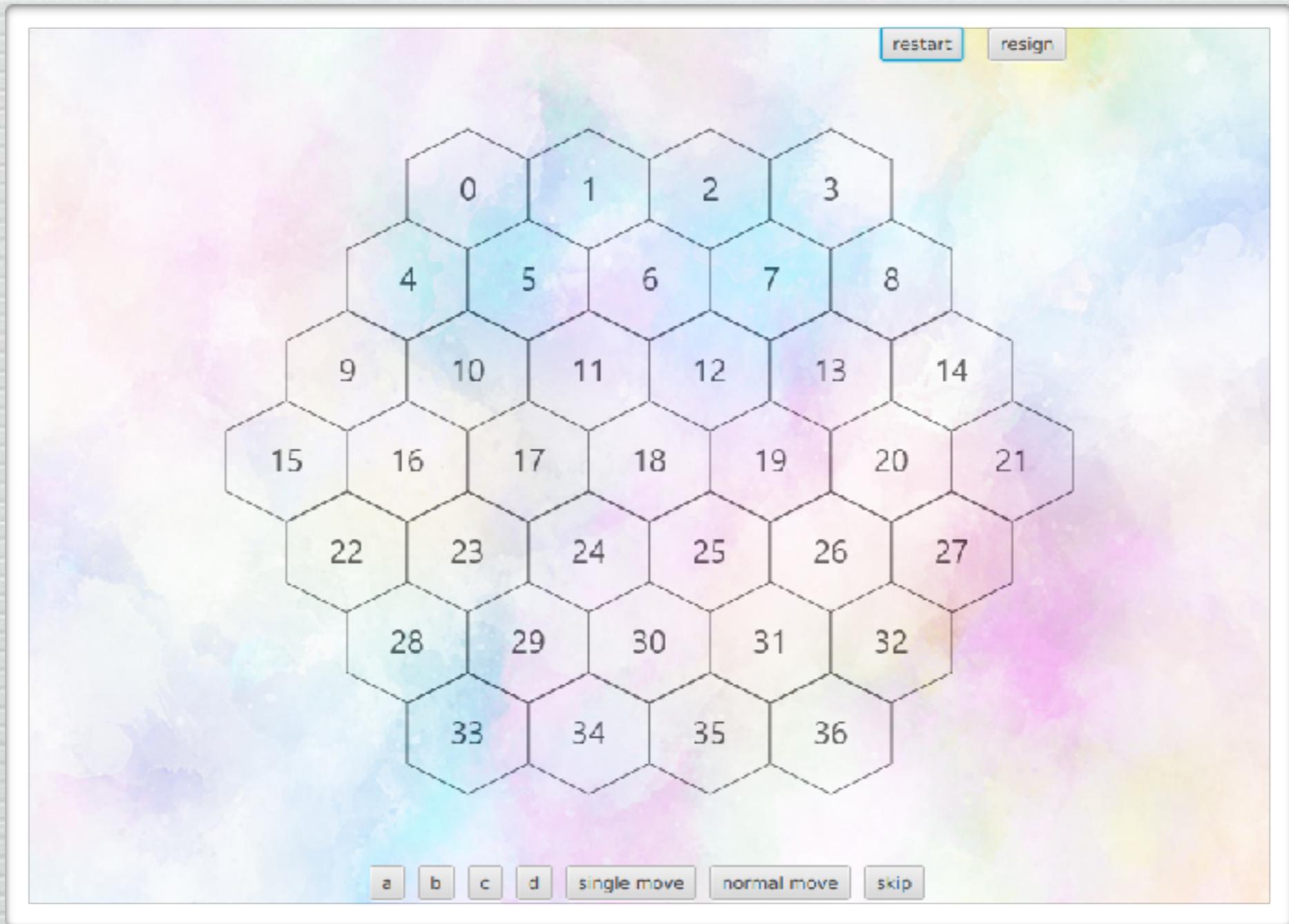
b

single move

normal move

skip

# SinglePlayer Viewer



# MultiPlayer Viewer

Player 1: 11

restart

resign

Player 2: 10



a

b

c

d

single move

normal move

skip

# Win

To play this game, first select the type of the move that you want to take(single move, normal move, skip).  
Then select color that you want to place(a-red,b-yellow,c-green,d-blue).  
Each time remember to click the type of the move first and then the color,  
finally click the position on the board which is the place that you want to place this stone on.  
(if you are not doing this by order then you have to close this window and enter into it again)

resign

Player: 2

Computer Player: 34



Difficulty:



restart

a

b

single move

normal move

skip

# Lose

Player 1: 2

restart

resign

Player 2: 2



# Invalid Move



## Rules

The following rules are taken from Nick Bentley's published game rules. In case of any ambiguity, the published rules are definitive.

1. To start, Player 1 places a stone of either of her colors on any empty space.
2. From then on, starting with Player 2, the players take turns.
  - On your turn, you must place one stone of either of your colors, or one stone of each of your colors. Alternatively, you may pass your turn.
  - You can place your stones on any empty spaces, with one restriction: you must place them such that, at the end of your turn (after you have captured all fenced enemy blooms), none of your blooms is fenced.
  - After placing your stones, capture all fenced enemy blooms. Return the captured stones to your opponent.

# Instruction

Questions?

Thank you for listening.