



Program Design
Final Report

Ginger Soda

薑汁汽水

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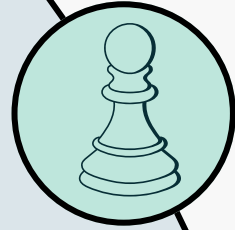
Game

introduction



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Gameplay (Monopoly)



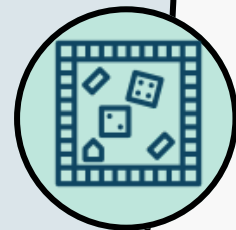
Who

Players: 2.



How

Players roll the dice and advance on the board according to the points rolled.



What

Various **events** to the squares the players getting money or “GINGER SODAS.”



When

Wining Condition: Compare the number of “GINGER SODAS” when game rounds end.


Board in Map

- Different colors correspond to different squares.
- Map will be randomly regenerated each time the game is replayed.




Normal Square

- Nothing happened



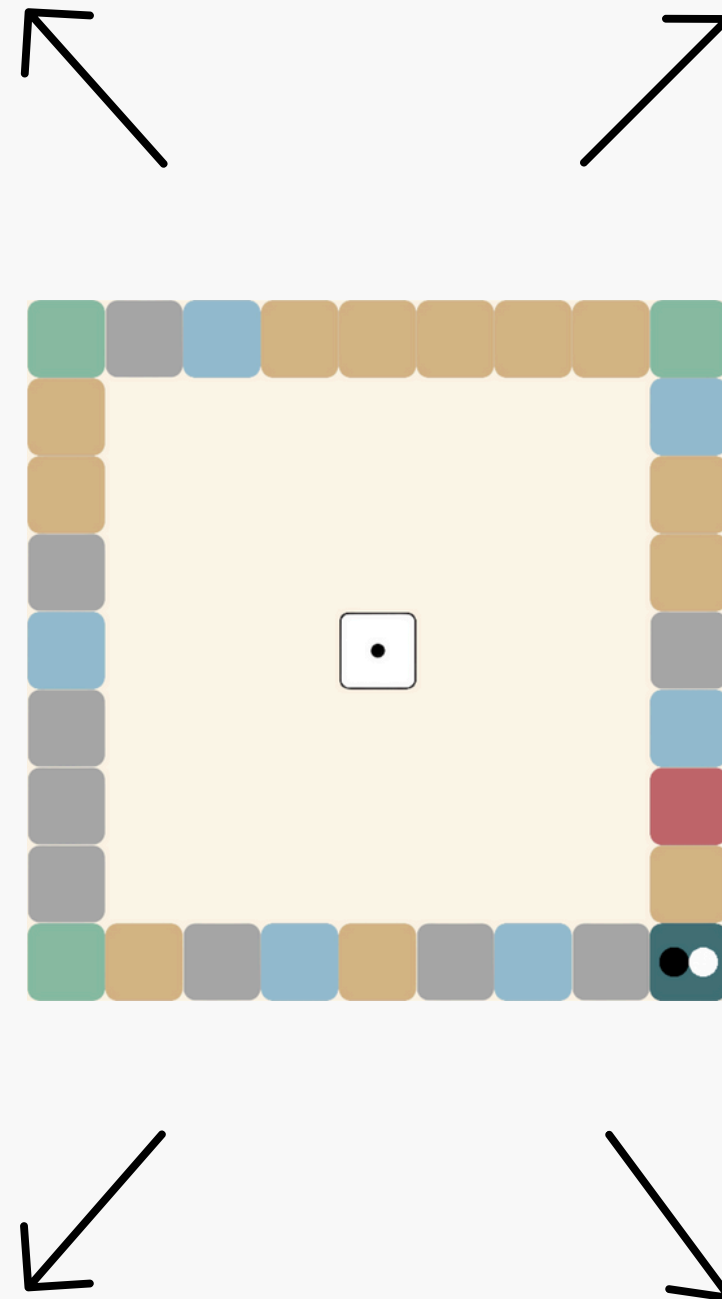
Chance Square

- Various events based on players' fortune



Start Square

- The beginning square



Game Square

- Play different mini-games



Vending Machine

- Get "GINGER SODA"



Store Square

- Buy tools

Game Made

- Basic: C program
- Event: C++ program
- Game Engine: SDL





Basic Part

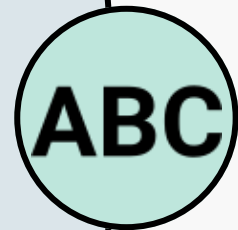


Data Types



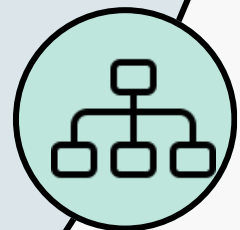
basic data types

int: players-2, money
bool: show_cursor in input bar
float: time



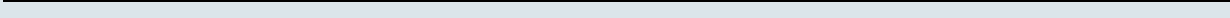
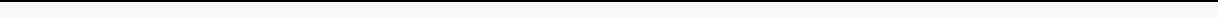
string type

description of tools,
players' name
question of events

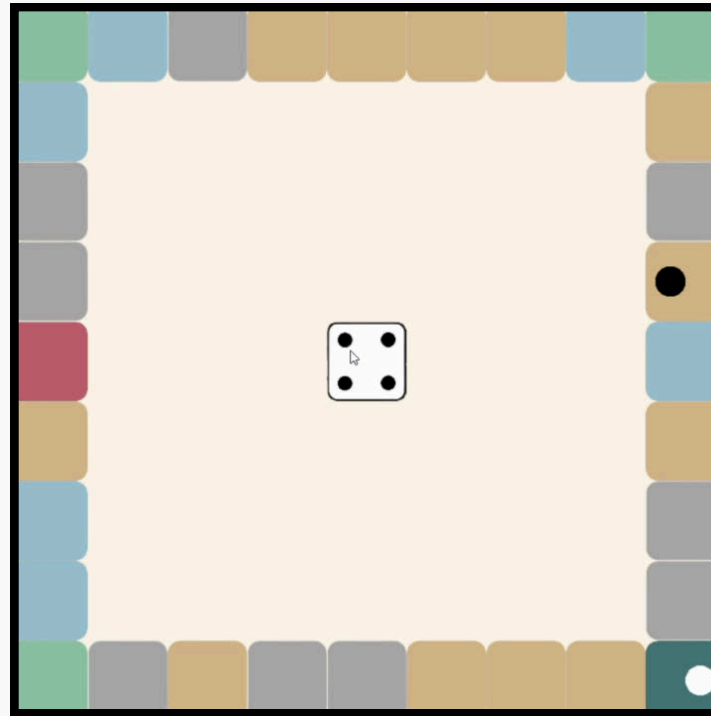


data structure

struct: Players' information
enum: Type of tools



Operations



Random

- event
- dice
- unknown soda
- Map square



File I/O

- players can input their name in input bar

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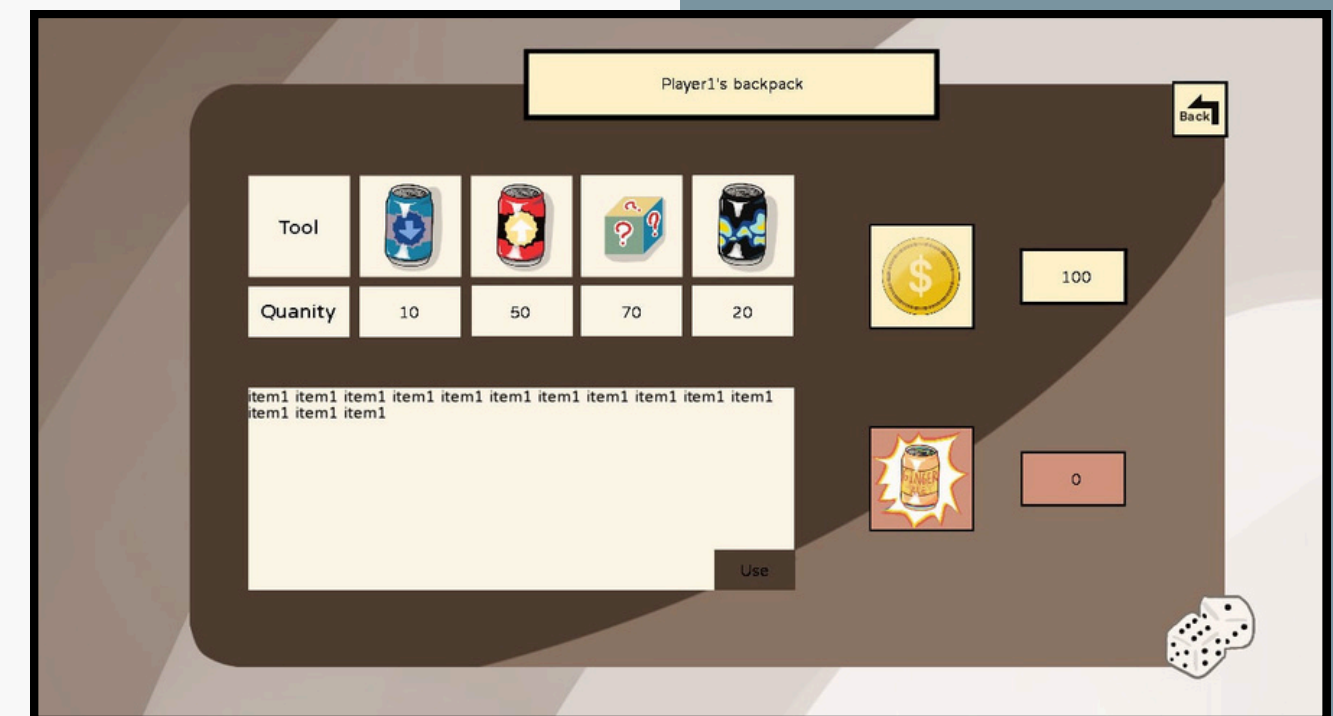
Advanced Part



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Backpack

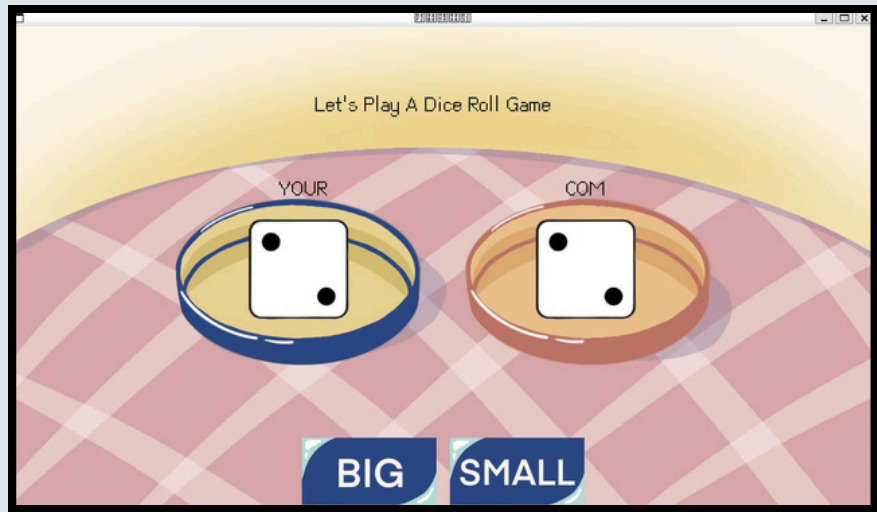
- Player can check the items he or she owns in the backpack.
- including, tools, money and ginger soda.
- player can use the tools in the backpack according to the description of the tooi



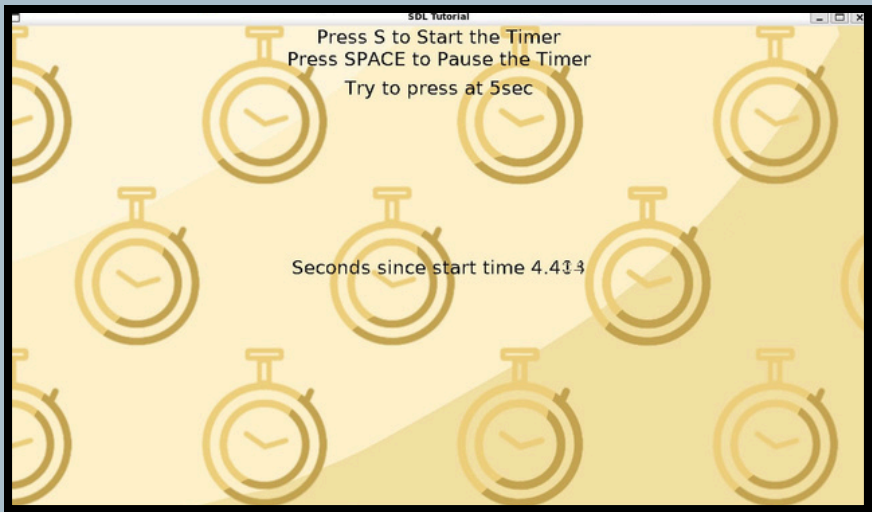
Mini Game

the square for playing mini-game

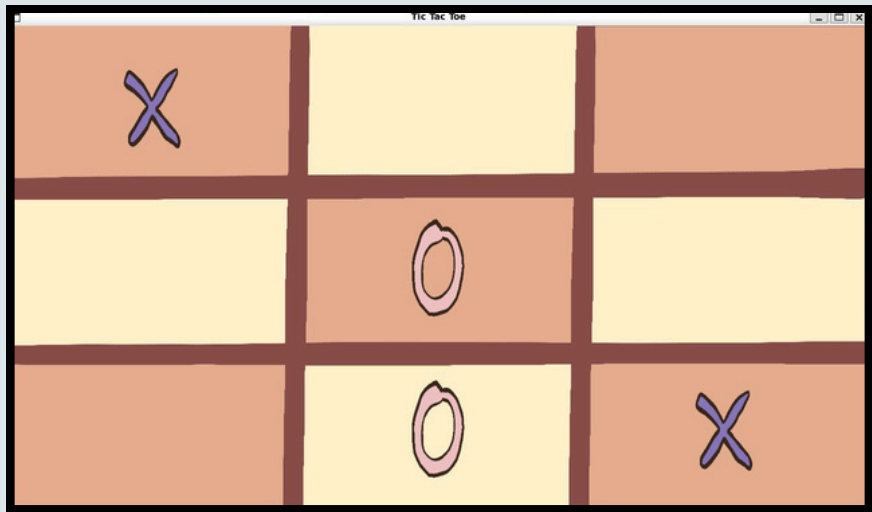
Dice Comparison



Timer Challenge



Tic-tac-toe



Store

the square for buying tools



Increase Soda

- Increase player 2 steps .

Decrease Soda

- decrease opponent 2 steps.

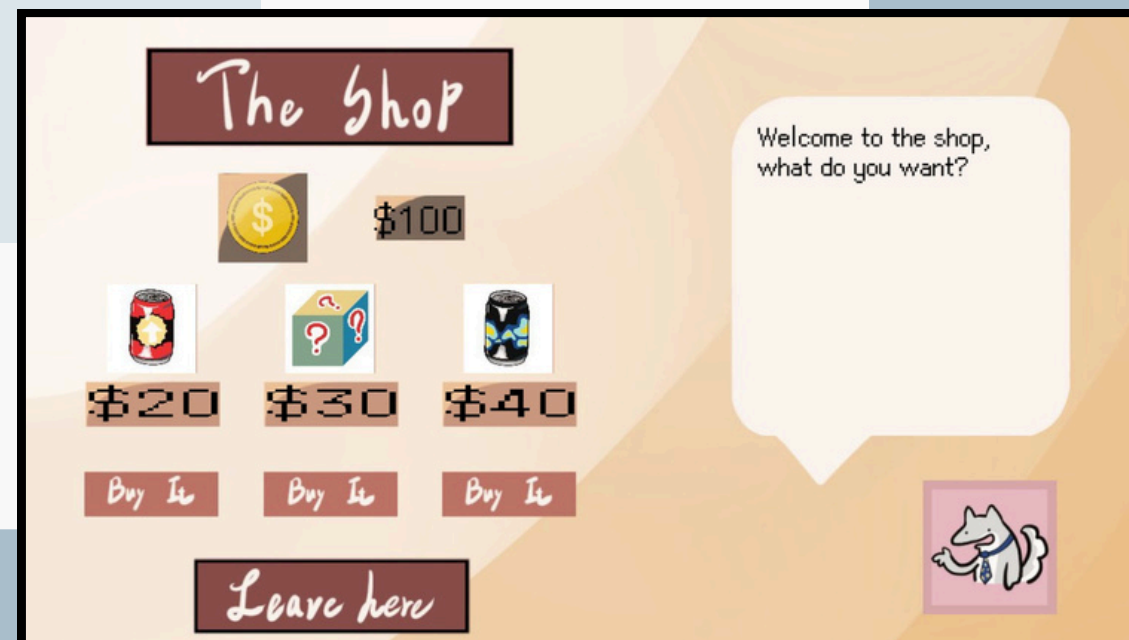


Gamble Roulette

- 2% Chance of Bankrupting opponent.

Unknown Soda

- Put special Effects (lucky or unlucky) for the player or opponent.



Advance Part - Event

the square for chance

- the player's items, including money and ginger soda, will increase or decrease.
- it will be lucky or unlucky.
- totally 8 events.



Task allocation



林鈺璇：地圖框架生成、主菜單畫面

林祖葳：小遊戲（骰子比大小）、商店

陳玟伶：玩家介面（背包）、期中期末簡報

何莉華：整合成畫面、期中期末報告口頭

高可欣：小遊戲（讀秒遊戲、井字遊戲）、事件、期中報告口頭





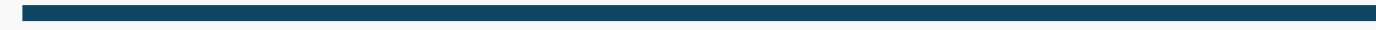
Program Demo





Thank you





Github Link

<https://github.com/yusyuannn/final-project>

