

README(Bang!)

#Big-Bang-Simulator

A Bang board game simulator written in C by team 10

分為四個 struct :

Game :

```
1  typedef struct _game
2  {
3      uint32_t _total_card_cnt; // = 80
4      uint8_t _total_player_cnt;
5      uint8_t _alive_player_cnt;
6      player **_player;
7      uint8_t _turn;
8      card **_discard;
9      uint32_t _discard_cnt;
10     card **_deck;
11     uint32_t _deck_cnt; // if = 0 shuffle from _discard
12     char *_logfile_name;
13 } game;
```

Card :

```
1  typedef struct _card
2  {
3      uint8_t _suit; // 1 spade 2 heart 3 diamond 4 club
4      uint8_t _number;
5      const char *_name;
6      const char *_skill;
7      /*
8       * bang
9       * throw
10      * draw
11      * missed
12      * specify_palyer_nodis
13      * others_players
14      * plus_hp
15      * specify_palyer_dis
16      * plus_dis
17      * distance
18      * minus_dis
19      */
20 } card;
```

Player :

```
1  typedef struct _player
2  {
3      uint8_t _id;
4      char *_name;
5      uint8_t _position; // 角色位置
6      role *_role;
7      char *_identity; // Sceriffo, Vice, Fuorilegge, Rinnegato
8      int8_t _max_hp; // after checking the role is Sceriffo or not
9      int8_t _hp;
10     uint8_t _hand_cnt; // must not higher than _hp at the end of round
11     card **_hand;
12     card *_gun; // 0, 1, 2, 3, 4, 5
13     card *_horse; // -1, 0, 1
14     card *_jail;
15     card *_dynamite;
16     card *_barrel;
17 } player;
```

Role :

```
1  typedef struct _role
2  {
3      const char *_name; //名稱
4      const char *_skill; //功能
5      uint8_t _lvalue; //生命值
6  } role;
```

特殊(手牌/裝備)的功能：

- Volcanic --> 可以使用任意張數 bang。
- Prigione --> 限制任意一位玩家的一回合活動，被關的玩家到他的回合開始前，從牌頂抽取一張進行判定，如果花色是愛心，則玩家越獄成功，棄掉監獄繼續進行回合，若不是愛心，棄掉監獄並暫停一回合。
- Duello --> 目標玩家棄掉一張 bang 接著元玩家也要出 bang，輪流出牌，直到其中一人沒出 bang，此人損失一點血量。
- Emporio --> 計算目前玩家還在遊戲中的人數，從牌庫中翻開相同數量的牌，每位玩家挑選一張收入自己手牌中。
- Dynamite --> 打出此牌後，放在自己的面前，停留一整輪，下次開始回合前，先進行抽牌判定，如果不在黑桃 2~9 的範圍內，則將炸藥傳給左手邊的玩家，即下一家，若在範圍內，則當局玩家立刻損失 3 點血量並棄掉此牌繼續進行回合。
- Indianii --> 所有其餘玩家棄掉一張 bang，否則損失一點生命值。

(先判定炸藥後判定監獄)

我們出現的 bug：

1. 無限出任意張數 Bang
2. 雜貨舖出現 segmentation fault(已解決)

💣💣函式輸入只能數字(要合法輸入)

↓↓這是我們一進去的畫面，會先告訴我們自己的身份、角色和角色的技能

```
=====
Big Bang Simulator
(う-`')つ~~~~~ \('□')/
Created by Team 10
=====

Game log will be stored in log.txt
Player Joker draw a card 🃏 ξ( ☞☞)!
Player Joker draw a card 🃏 ξ( ☞☞)!
Player Joker draw a card 🃏 ξ( ☞☞)!
Player Joker draw a card 🃏 ξ( ☞☞)!
Player Akira draw a card 🃏 ξ( ☞☞)!
Player Akira draw a card 🃏 ξ( ☞☞)!
Player Akira draw a card 🃏 ξ( ☞☞)!
Player Akira draw a card 🃏 ξ( ☞☞)!
Player Akira draw a card 🃏 ξ( ☞☞)!
Player Bob draw a card 🃏 ξ( ☞☞)!
Player Bob draw a card 🃏 ξ( ☞☞)!
Player Bob draw a card 🃏 ξ( ☞☞)!
Player Cloud draw a card 🃏 ξ( ☞☞)!
Player Cloud draw a card 🃏 ξ( ☞☞)!
Player Cloud draw a card 🃏 ξ( ☞☞)!
Player Cloud draw a card 🃏 ξ( ☞☞)!
GAME START

Turn 1:Player Joker draw a card 🃏 ξ( ☞☞)!
Player Joker draw a card 🃏 ξ( ☞☞)!
Health : 4/4
position : 1
identity : Fuorilecce
role name : SlabTheKiller
role skill: Players trying to cancel his "Bang!" cards need to play 2 "Missed!". The "Barrel" effect, if successfully used, only counts as one "Missed!"
=====

Joker(YOU)(4) Akira(5) Bob(3) Cloud(4)
What do you want to do?
0: End turn.
1: BANG
2: BANG
3: MANCATO
4: MUSTANG
5: CATBALOU
6: BIRRA
-----
Your Choice > █
```

↑↑就能選擇想要出的牌了！！

這是我們抽到每張牌時，會長的樣子：

<手牌>

```
-----
Card BANG info:
Action: BANG someone within distance
-----
-2: Return to your handcard.
-1: Move to trash.
1: Use the card to Akira
2: Use the card to Bob
3: Use the card to Cloud
-----
Your Action > 1
Player Joker discard BANG 🃏 ξ( ➡️👤)!
Player Joker used BANG( 🃏👤)👤👤👤. succeeded
Player Akira discard MANCATO 🃏 ξ( ➡️👤)!
Player Akira used MANCATO👤succeeded
-----
```

← ← 當我們選擇 **BANG** 並決定好對象時，

它就會告訴我們是否有發動成功。

```
-----
Card MANCATO info:
Action: prevent from BANGed
-----
-2: Return to your handcard.
-1: Move to trash.
1: Use the card to Akira
2: Use the card to Bob
3: Use the card to Cloud
-----
Your Action > 1
Player Joker used MANCATO👤failed
-----
```

← ← 當我們出 **MANCATO** 並決定好對象時，

它就會告訴我們是否有發動成功。

```
-----
Card BIRRA info:
Action (self): Regain your one life point
-----
-2: Return to your handcard.
-1: Move to trash.
0: Use/Equip the card to yourself.
-----
Your Action > 0
Your HP is full.
-----
```

← ← 當我們出 **BIRRA** 時，就可以選擇要放回手

牌還是丟掉或是用在自己身上。

```
-----
Card PANICOI info:
Action: Draw a card from a player at distance 1
-----
-2: Return to your handcard.
-1: Move to trash.
1: Use the card to Akira
2: Use the card to Bob
3: Use the card to Cloud
-----
Your Action > 1
You can draw a card from Player Akira
What do you want to draw?
1: Equipments
2: Hand cards
3: Cancel
Your choice: 2
1
2
3
4
5
Which one do you choose: 3
Draw success!
Player Joker discard PANICOI 🃏 ξ( ➡️👤)!
Player Joker used PANICOIΣL(@□@;)J succeeded
-----
```

← ← 當我們出 **PANICOI** 並決定好對象時，

您就可以選擇要換什麼牌的第幾張。

```
-----
Card CATBALOU info:
Action: Force any one player to discard a card
-----
-2: Return to your handcard.
-1: Move to trash.
1: Use the card to Akira
2: Use the card to Bob
3: Use the card to Cloud
-----
Your Action > 1
Player Akira discard VOLCANIC 🃏 ξ( ➡️👤)!
discard success
Player Joker discard CATBALOU 🃏 ξ( ➡️👤)!
Player Joker used CATBALOU👤succeeded
-----
```

← ← 當我們出 **CATBALOU** 並決定好對象時，

它就會告訴我們是否有發動成功。

```

Card GATLING info:
Action (all): Shoots a BANG! to all the other players
-----
-2: Return to your handcard.
-1: Move to trash.
0: Use/Equip the card to yourself.
-----
Your Action > 0
Player Joker discard GATLING 🃏 ξ( 🎯>👤)!
Player Joker used GATLING 🎯 succeeded

```

← ← 當我們出 **GATLING** 時，就可以選擇要放回手牌還是丟掉或是用在自己身上。

```

Card INDIANI info:
Action (all): who played this card, may discard a BANG, or lose one life point
-----
-2: Return to your handcard.
-1: Move to trash.
0: Use/Equip the card to yourself.
-----
Your Action > 0
Player Akira discard BANG 🃏 ξ( 🎯>👤)!
Player Bob discard BANG 🃏 ξ( 🎯>👤)!
Player Joker discard INDIANI 🃏 ξ( 🎯>👤)!
Player Joker used INDIANI(👤>🎯)J succeeded

```

← ← 當我們出 **INDIANI** 時，就可以選擇要放回手牌還是丟掉或是用在自己身上。

```

Card DUELLO info:
Action: draw BANG until the one can't draw HP-1
-----
-2: Return to your handcard.
-1: Move to trash.
1: Use the card to Akira
2: Use the card to Bob
3: Use the card to Cloud
-----
Your Action > 1
Player Akira discard BANG 🃏 ξ( 🎯>👤)!
Do you want to throw bang?
1: Yes
2: No
Choice: 1
But you don't have "BANG"cards to throw.
So you will lose one life.
Player Joker used DUELLO 🎯 succeeded

```

← ← 當我們出 **DUELLO** 並決定好對象時，它就會告訴我們是否有發動成功。

```

Card SALOON info:
Action (all): Regain everyone one life points
-----
-2: Return to your handcard.
-1: Move to trash.
0: Use/Equip the card to yourself.
-----
Your Action > 0
Player Joker discard SALOON 🃏 ξ( 🎯>👤)!
Player Joker used SALOON 🍷🍷🍷🍷 succeeded

```

← ← 當我們出 **SALOON** 時，就可以選擇要放回手牌還是丟掉或是用在自己身上。

```

Card DILIGENZA info:
Action (self): Draw 2 cards from the deck
-----
-2: Return to your handcard.
-1: Move to trash.
0: Use/Equip the card to yourself.
-----
Your Action > 0
Player Joker draw a card 🃏 ξ( 🎯>👤)!
Player Joker draw a card 🃏 ξ( 🎯>👤)!
Player Joker discard DILIGENZA 🃏 ξ( 🎯>👤)!
Player Joker used DILIGENZA 🃏 succeeded

```

← ← 當我們出 **DILIGENZA** 時，就可以選擇要放回手牌還是丟掉或是用在自己身上。


```

Card EMPORIO info:
Action (all): Everyone gets a card (雜貨鋪)
-----
-2: Return to your handcard.
-1: Move to trash.
0: Use/Equip the card to yourself.
-----
Your Action > 0
draw a card 🃏 ξ( 🎲> 😊)!
draw a card 🃏 ξ( 🎲> 😊)!
draw a card 🃏 ξ( 🎲> 😊)!
draw a card 🃏 ξ( 🎲> 😊)!
1: MANCATO
2: GATLING
3: BANG
4: MANCATO
Which one do you choose: 3
Player Joker discard EMPORIO 🃏 ξ( 🎲> 😊)!
Player Joker used EMPORIO 🏠 succeeded

```

← ←當我們出 **EMPORIO** 時，就可以選擇要放回

手牌還是丟掉或是用在自己身上，並選一張

牌。

```

Card WELLSFARGO info:
Action (self): Draw 3 cards from the deck
-----
-2: Return to your handcard.
-1: Move to trash.
0: Use/Equip the card to yourself.
-----
Your Action > 0
Player Joker draw a card 🃏 ξ( 🎲> 😊)!
Player Joker draw a card 🃏 ξ( 🎲> 😊)!
Player Joker draw a card 🃏 ξ( 🎲> 😊)!
Player Joker discard WELLSFARGO 🃏 ξ( 🎲> 😊)!
Player Joker used WELLSFARGO 🏠🏠🏠 succeeded

```

← ←當我們出 **WELLSFARGO** 時，

就可以選擇要放回手牌還是丟掉

或是用在自己身上，並選一張

牌。

<裝備牌>

```
-----
Card MUSTANG info:
Equipment: The distance between other players and you is increased by 1(other watch you)
-----
-2: Return to your handcard.
-1: Move to trash.
0: Use/Equip the card to yourself.
-----
Your Action > 0
Player Joker discard MUSTANG 🃏 ξ( ♠>👤)!
Player Joker equiped MUSTANG 🏆 succeeded
-----
```

← ← 當我們出 **MUSTANG** 時，就可以選擇要放回手牌還是丟掉或是用在自己身上。

```
-----
Card REV. CARABINE info:
Equipment: 4-distance gun
-----
-2: Return to your handcard.
-1: Move to trash.
0: Use/Equip the card to yourself.
-----
Your Action > 0
Player Joker discard VOLCANIC 🃏 ξ( ♠>👤)!
Player Joker discard REV. CARABINE 🃏 ξ( ♠>👤)!
Player Joker equiped REV. CARABINE succeeded
-----
```

← ← 當我們出 **REV. CARABINE** 時，就可以選擇要放回手牌還是丟掉或是用在自己身上。

```
-----
Card VOLCANIC info:
Equipment: 1-distance gun (unlimited BANG)
-----
-2: Return to your handcard.
-1: Move to trash.
0: Use/Equip the card to yourself.
-----
Your Action > 0
Player Joker discard SCHOFIELD 🃏 ξ( ♠>👤)!
Player Joker discard VOLCANIC 🃏 ξ( ♠>👤)!
Player Joker equiped VOLCANIC succeeded
-----
```

← ← 當我們出 **VOLCANIC** 時，就可以選擇要放回手牌還是丟掉或是用在自己身上。

```
-----
Card SCHOFIELD info:
Equipment: 2-distance gun
-----
-2: Return to your handcard.
-1: Move to trash.
0: Use/Equip the card to yourself.
-----
Your Action > 0
Player Joker discard SCHOFIELD 🃏 ξ( ♠>👤)!
Player Joker equiped SCHOFIELD succeeded
-----
```

← ← 當我們出 **SCHOFIELD** 時，就可以選擇要放回手牌還是丟掉或是用在自己身上。

```
-----
Card WINCHESTER info:
Equipment: 5-distance gun
-----
-2: Return to your handcard.
-1: Move to trash.
0: Use/Equip the card to yourself.
-----
Your Action > 0
Player Joker discard WINCHESTER 🃏 ξ( ♠>👤)!
Player Joker equiped WINCHESTER succeeded
-----
```

← ← 當我們出 **WINCHESTER** 時，就可以選擇要放回手牌還是丟掉或是用在自己身上。

```

Card PRIGIONE info:
Equipment: Play this card in front of any player regardless of the distance: you put him in jail! If you are in jail, you must "draw!" before the beginning of your turn:
if you draw a Heart card, you escape from jail: discard the Jail, and continue your turn as normal;
otherwise discard the Jail and skip your turn.
-----
-2: Return to your handcard.
-1: Move to trash.
1: Use the card to Akira
2: Use the card to Bob
3: Use the card to Cloud
-----
Your Action > 1
Player Joker equiped PRIGIONE 🚪 failed

```

↑ ↑ 當我們出 **PRIGIONE** 並決定好對象時，它就會告訴我們是否有發動成功。

```

Card DINAMITE info:
Equipment: When you start your next turn (you have the Dynamite already in play), before the first phase you must "draw!": if you draw a card showing Spades and a number between 2 and 9, the Dynamite explodes! Discard it and lose 3 life points; otherwise, pass the Dynamite to the player on your left (who will "draw!" on his turn, etc)
-----
-2: Return to your handcard.
-1: Move to trash.
1: Use the card to Akira
2: Use the card to Bob
3: Use the card to Cloud
-----
Your Action > 1
Player Joker discard DINAMITE 💣 ξ( ❄>🙄)!
Player Joker equiped DINAMITE 🌟 succeeded

```

↑ ↑ 當我們出 **DINAMITE** 並決定好對象時，它就會告訴我們是否有發動成功。

```

Card REMINGTON info:
Equipment: 3-distance gun
-----
-2: Return to your handcard.
-1: Move to trash.
0: Use/Equip the card to yourself.
-----
Your Action > 0
Player Joker discard REMINGTON 🗡 ξ( ❄>🙄)!
Player Joker equiped REMINGTON succeeded

```

← ← 當我們出 **VOLCANIC** 時，
就可以選擇要放回手牌還是丟掉
或是用在自己身上。

```

Card BARREL info:
Equipment: prevent from card heart
-----
-2: Return to your handcard.
-1: Move to trash.
0: Use/Equip the card to yourself.
-----
Your Action > 0
Player Joker discard BARREL 🍷 ξ( ❄>🙄)!
Player Joker equiped BARREL 🍷🔥 succeeded

```

← ← 當我們出 **BARREL** 時，就可以選擇要放回手牌還是丟掉或是用在自己身上。


```
Card REMINGTON info:
Equipment: 3-distance gun
-----
-2: Return to your handcard.
-1: Move to trash.
0: Use/Equip the card to yourself.
-----
Your Action > 0
Player Joker discard REMINGTON 🃏 ξ( ⚙️➡️😊)!
Player Joker equiped REMINGTON succeeded
```

← ← 當我們出 **REMINGTON** 時，
就可以選擇要放回手牌還是丟掉
或是用在自己身上。

組員：

邱可菡

洪軾凱

劉庭瑄