

Dice Game Design



PIRATES' COVE

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BRAINSTORM

Goal:

The goal of this assignment is to design and develop a game that features one or more dice. Though the game might have other components, the dice should constitute the core mechanic – the center stage.

Research:

Before designing the game, I wanted to research some of the board and dice games that I really enjoyed. I wanted to check if it was possible to transfer that essence over to my new game. So initial brainstorming involved gathering inspirations from different games and noting down some of the key features that my game should have.

- I. **Money as endogenous value:** The game is most engaging when its endogenous value is 'Money'. As proven by the success of 'Monopoly', players are most invested for wealth than any other value. The next engaging factor is Health. So I decided that my game should feature one or both of these two factors.
- II. **Intuitive Actions:** The game mechanics, especially the action verbs, should be simple and intuitive for players to easily pick-up. For e.g. – Hit and Miss from 'Battleship'.
- III. **Play as Characters:** Based on my fun experience playing 'Citadels', I understand that players like to assume a role or character while playing. This role-playing-mechanic, however small or large part of the gameplay, brings the engagement level to a whole new level.
- IV. **Play against people, not tokens!** -When I played 'Cash n Guns', I really enjoyed the physical nature of this game. The mechanic of playing against each other, instead of some tokens on a board game – seems more engaging and fun. The competition feels real.

Ideas:

I want my game to be easy for kids and adults to pick up. But I also want to make sure that there is a good balance between chance and strategy. Kids should be able to play it but it will be the adults who enjoy the game better.

Target Demographic: Adults

Target Genre: Casual-party

1. The theme could be Zombies vs. humans. Or it could be zombies plotting together.
2. Another theme - Pirates searching for hidden treasure.
3. For the pirates/zombies theme, the dice could represent the different actions that the players can get to perform.
4. Spaceships pilots racing through an asteroid belt.
5. For racing theme, the dice could represent the movement speed or energy.
6. War between kings of different territories.
7. In the war theme, the dice could represent the attack points or defend points.
8. A random die can be used for the extra randomness.
9. Lot of dice can be used for a poker-like game.
10. Special cards can be used for extra powers or plays.

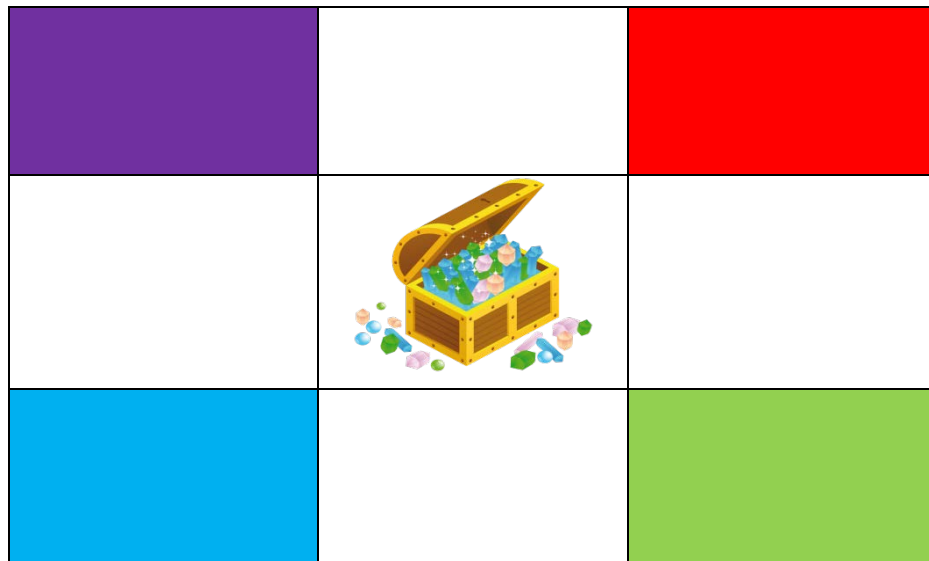
Development:

Of all the above ideas, the most exciting idea for me is the Pirates theme. The world of pirates engenders a lot of interesting action words – attack, kill, Loot, poison, betray and switch-alliances etc. Since Pirates is a common resonant theme, it is easy for players to pick up the rules designed around these actions.

Actions chosen: Attack, Defend, Loot and Collect

INITIAL RULES

The rules of my initial game are found below



How to play:

1. The game can be played by 2-4 players, competing against each other.
2. Goal of the game is to become the richest pirate.
3. Each player starts in one of the corners of the board.
4. Players use a single die and coins to denote wealth.
5. There is a central pile of coins denoting the treasure. The game ends when the treasure is emptied.
6. All players roll their die at the same time.
7. They secretly make note of the actions they have got for this rounds.
8. On the count of 3, they all choose their targets to execute their actions on. An action can be performed only on the player who is in the adjacent center.

Dice :	1	2	3	4	5	6
Action :	Attack		Defend		Loot	Collect

9. 'Attack' action makes the target unconscious, so he won't be able to perform any action.
10. 'Defend' action shields the player from the target's attack.
11. 'Loot' action lets player steal equal portions from the target's wealth.
12. 'Collect' action lets player collect one coin from the central treasure.

Analysis:

1. Pirate theme is very resonant among the players. Hence it becomes easy to explain the rules and get the players engaged in the game.
2. Dice chooses the action, while the player chooses the target. There is a good balance between chance and strategy.
3. Intuitive actions like attack, defend and Loot makes the game simple and fun.

PLAYTESTING

Though the initial brainstorm helped me identity various ideas for my dice game, Playtesting actually helped me improve the game and make it more fun.

Version#1 (2/1/2013)

Participant(s): Myself (simulating 4 players)

Feedback and Observations:

- I. The 'dice-chooses-action' mechanic seemed to work and made sense.
- II. The board of the game did not work for me. It was tough to balance and did not add much fun to the game.
- III. Rolling a single die was not satisfying enough.

Changes to rules:

- I. Experiment the game with no board. Instead of tokens, the players play against each other.
- II. Players use actions directly on the other players.
- III. Bring in the use of the second die somehow.

Version #2 (2/2/2013)

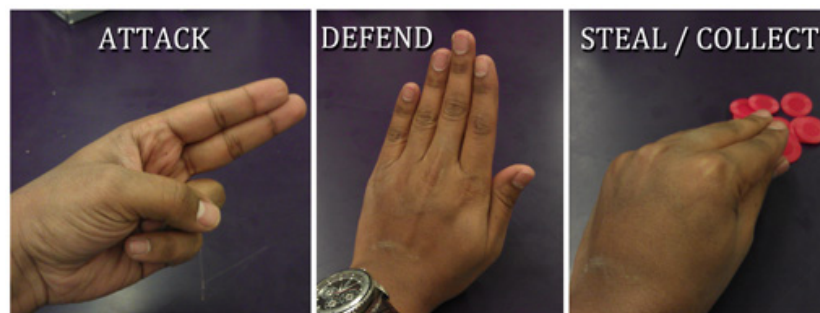
Participant(s):Heem, Shine, Tia, Rik and myself

Number of Playtests:2 (back-to-back)

Average score:3.4(3 , 3 , 3.5 , 4)

Feedback and Observations:

- I. The dice mechanic worked really well. The players understood the mechanics immediately.
- II. A more random factor needs to be introduced in the dice to make it more fun.
- III. The decision of removing board was proven right. It was way-less confusing and comparatively more fun.
- IV. I explained that players must choose the target for their actions and point them directly.
- V. I observed that players intuitively used different hand-signals for each action. It was fun to players use these hand gestures.



- VI. As the initial rules lacked an '*order of execution*' for the actions, it was very confusing during the first playtest. I updated the rules for the second playtest.
- VII. Attack mechanic worked well. But I observed that there was no condition/constraint on how many times a person can be attacked.
- VIII. Loot action seemed too powerful without a defense.

Changes to rules:

- I. Board is permanently removed from the game. The game will be more fun and engaging playing against each other, instead of tokens on the board.
- II. The hand gestures can be added in the rule-set directly.
- III. 'Order of Execution' for the actions to be updated:

Defend > Attack > Loot > Collect

- IV. All defense actions executed first. Then all attacks are executed, followed by Loot and then collect.

- V. 'Health' system needs to be introduced to bring a constraint to the attack system. Every successful attack reduced the health by one. If health reaches zero, the player is eliminated.
- VI. 'Defend' action should also block 'Loot' as well as 'attack'.
- VII. A wild action is introduced in the die to bring that random factor.

Dice :	1	2	3	4	5	6
Action :	Attack		Defend	Loot	Collect	Wild action

- VIII. When players roll a '6', they can choose whichever action they decide.

Version #3 (2/4/2013)

Participant(s): Playtest group - Heem, Ted, Julianne and myself

Number of Playtests: 1

Average score: 3.83 (3.5, 4, 4)

Feedback and Observations:

- I. The dice mechanic was proven to be simple and fun. The order of execution worked out really well.
- II. The targeting system of pointing to the player directly worked. I also explained the hand gestures along with the rule-set.
- III. This mechanic removed the limit of number of players. But the game might get too confusing if more than 6 players.
- IV. Defend action blocking the 'attack' and 'Loot' action seemed balanced to a certain extent.
- V. Attack was too powerful. I observed there was no counter-action for attack that brought a fun variation in the game.
- VI. Each player was given a health of 5 units. It was fun to see how players ganged up on particular players to kill him/her off.
- VII. The two different actions of Loot & collect did not balance well. Given a choice, the players were more interested and satisfied with 'Loot' than 'collect'.

Changes to rules:

- I. Number of players: 2-6
- II. New rule: a successful-defense-against-an-attack would bounce back and reduce health of the attacker.

- III. This rule serves as the counter-action for attack.
- IV. Health system brought about the change in the goal : Be the 'richest' pirate **alive** at the end of the game.
- V. Experiment with removing "Collect" action. This would mean a change in the end condition also.
- VI. The central treasure must be removed. 'Loot' and 'Collect' must be merged into a single action – 'Loot'.

Version #4 (2/5/2013)

Participant(s): Game design class – Shine, Chris, Euka, Evan and myself

Number of Playtest: 1

Average score:4 (3.5 , 4 , 4 , 4.5)

Feedback and Observations:

- I. All new players enjoyed the dice mechanic, targeting system and the simple rules.
- II. The game was indeed fun and chaotic for 5 players.
- III. It was really fun and simple to have just 'Loot', instead of Loot and collect.
- IV. This brought about the change in the end condition – The game ends in 10 rounds.
- V. Experimented with a variation in the dice mechanic – players roll two dice, hence two actions every round.
- VI. They have to choose and execute only one action in the first 5 rounds – choose to execute just one dice at the moment of targeting.
- VII. They have to execute both actions in the last 5 rounds. Game ends after 10 rounds.
- VIII. It was not strategic to keep one's own actions as a secret. It was actually thrilling to openly see everyone's actions before targeting.

Changes to rules:

- I. End condition and goal is now changed – The richest pirate alive at the end of 10 rounds wins the game.
- II. A fun variation in the dice mechanic – players roll two dice for all 10 rounds.
- III. Players must choose to execute only one action from the two dice for first 5 rounds and then execute both actions for the last 5 rounds.
- IV. Every round, after rolling the dice, players must show everyone what their actions are, by using hand gestures. This creates the suspense of '*which action will be targeted on who?*'

Version #5 (2/7/2013)

Participant(s): Myself (Simulating other players)

Feedback and Observations:

- I. Based on the previous playtest, I wanted to address some of the issues that I observed.
- II. The attack system was a bit imbalanced. As players do not gain much advantage by attacking, it did not seem balanced to have attack with such a high probability of occurring.
- III. The game being just 10 rounds, it was getting very hard to kill a player, with a health of 5.
- IV. I play-tested by myself, trying a lot of combinations of probabilities for the actions with corresponding values for health

Changes to rules:

- I. The starting health of a player is now changed to : 3
- II. The final probability distribution for the dice actions are

Dice :	1	2	3	4	5	6
Action :	Defend		Attack	Loot		Wild action

Version #6 (2/10/2013)

Participant(s): Ben, Mayank, Shine, Rik and myself

Number of Playtests: 2

Average score:4 (3 , 4 , 4.5 , 4.5)

Feedback and Observations:

- I. The Goal, end condition and mechanics were easy to understand and worked very well.
- II. It was very clear that players enjoyed the targeting system and had most fun with it.
- III. The new probability distribution seemed to balance the actions with their powers and importance.
- IV. Though the game was balanced and fun overall, there were certain moments and instance which seemed very frustrating and imbalanced.
- V. For instance, when more than two players targets on the same player, either attack or loot, it seems very frustrating.

- VI. Though it is very much fun to gang up on a single person, that person feels left out once he is killed very early at the game.
- VII. Currently, when a player is killed off, all his/her wealth is discarded. This does not seem intuitive or fun.

Changes to rules:

- I. New rule: The player(s) who take the final shot and kill off a player share his wealth.
- II. This created a new incentive to kill off another player, thus bringing a purpose for attack.
- III. I must brainstorm different ways to make a dead player come back to the game.
- IV. Also brainstorm ways to prevent player being ganged-upon by other players.

Version #7 (2/11/2013)

Participant(s): Myself (Simulating other players)

Feedback and Observations:

- I. My main objective of this playtesting session was to identify ways to prevent players being ganged-upon by other players.
- II. Some of the ideas that I brainstormed are
 - a. Players have an option to 'chicken out' from that round if they feel it is too risky.
 - b. Players have the option of buying back their health, when low on health, e.g. 1 health = 5 units
 - c. Introduce different power cards that give a chance to counteract such unfair situations.
- III. Of all the ideas, I was most excited about the power cards, because that introduced a new gameplay without complicating new rules.
- IV. The other ideas tackled only specific imbalances. Power cards can be used to tackle all the imbalances.
- V. I began brainstorming about all possible imbalance situations.
- VI. Since I chose pirates theme, it was fun to use the aesthetics of '*Pirates of the Caribbean*' for my power cards.

Changes to rules:

The power cards that I designed are:

- I. Calypso – Cancel the current round
- II. Royal Armada – End the game immediately
- III. Kraken – Your target misses the turn

- IV. Jack Sparrow – You miss the turn
- V. BlackBeard – If current health is just one, then increase health by one
- VI. Davy Jones – When two or more players attacks, you are protected
- VII. Captain Barbossa – If undefended, your target is attacked
- VIII. Jack the monkey – If your Loot is blocked by a defense, this card unblocks it.
- IX. Will Turner - If your bullet deflects back to you, you are unharmed.
- X. Elizabeth Swann - If two or more players loot you, your wealth is protected
- XI. Skeleton Crew - This card cancels any of the above mentioned cards.

Power cards are used once and discarded. The players can draw a new power card every time, they roll a double - same number in both dice.

Version #8 (2/11/2013)

Participant(s): Heem, Shine, Julianne, Rik and myself

Number of Playtest: 1

Average score: 4.25 (3.5 , 4.5 , 4.5 , 4.5)

Feedback and Observations:

- I. The power cards added a very fun variant to the gameplay.
- II. Players get a power card, only when they roll a double - this seemed fun.
- III. But since the game is too short, rolling a double does not produce enough opportunities to get power cards.
- IV. One important feedback was if the game could last longer, now that a new mechanic has been introduced.
- V. Players were confused if both actions of their actions can be targeted on the same player.

Changes to rules:

- I. New rule: The player(s) can target both their actions on the same player, unless both are the same action.
- II. Experiment with increasing the number of rounds.
- III. Brainstorm a way to increase the access to power cards.

Version #9 (2/12/2013)

Participant(s): Myself

Feedback and Observations:

- I. The power card was indeed a fun gameplay variant.

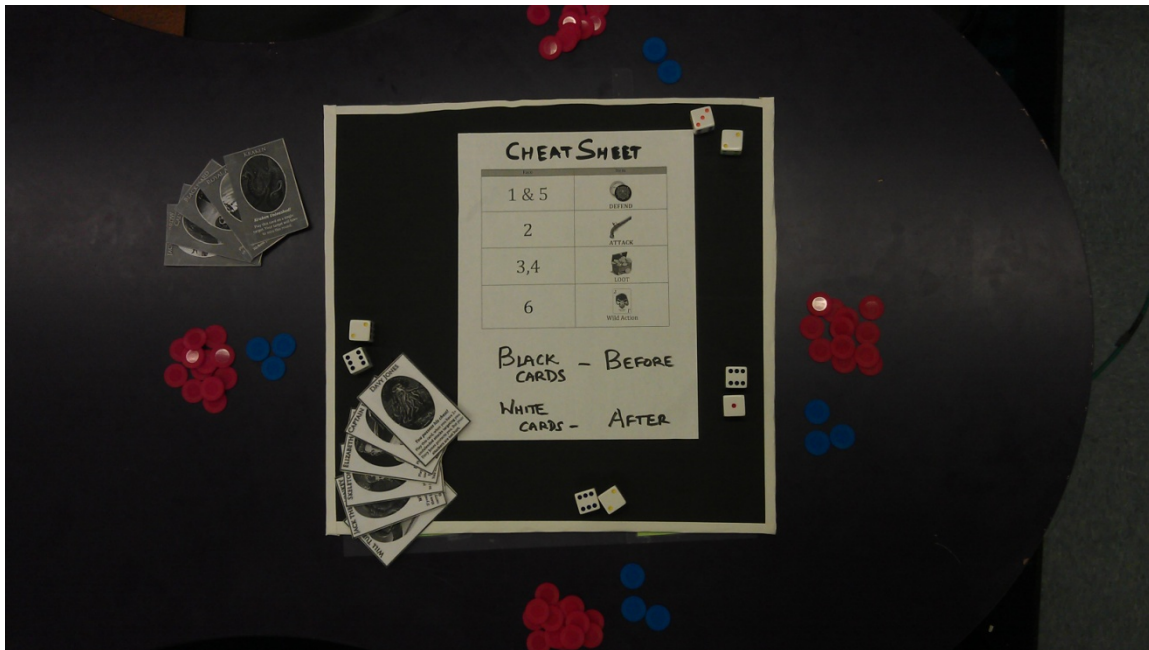
- II. But some cards made more sense playing before the targeting phase, while other made more sense playing after the targeting phase.
- III. I brainstormed to visually differentiate them and also update the rules accordingly.
- IV. I also brainstorm to identify a way to increase access to power cards without giving too much freedom.

Changes to rules:

- I. 5 power cards were re-designed as RED CARDS and the remaining 6 cards as WHITE CARDS
- II. The Red cards can be played only before targeting phase, after the dice roll.
- III. The White cards can be played only after the targeting phase.
- IV. New rule : Every player draws a power card at the beginning. Power cards are used only once and discarded. A new power card can be drawn every time a double is rolled.

Playtest Photos





FINAL VERSION (#10)

About:

Players: 3-6

Time taken: About 20 mins

Goal: Be the '**Richest**' Pirate **alive** at the end of the game.

Game elements:

There are three basic actions in the game:

- I. **Attack** : If you choose a target to attack, that player loses one health point. He is rendered unconscious and hence cannot perform any other action, if any, on that round. When health reaches zero, the player is dead and is out of the game. The dead player's wealth is distributed equally among the player(s) who made the final attack that killed him off.
- II. **Loot** : If you choose a target to loot, you get to take 50% of your target's wealth (the earnings of your target in the current round is not included in the loot). If more than one player loots from the same target, the target's pile is split equally between those players. For e.g. if two players loot from *Player X*, then his wealth (accumulated till last round, not the current round's earnings included) is split three ways. If 3 players loot from X, then it's a 4-way split and so-on. Any remainder coins from the split goes to the target.
- III. **Defend** : You have to choose a specific target to defend from. If your defense target did indeed attempt to 'attack' or 'loot' you, then their actions are cancelled. You are not defended against actions by players whom you did not target your defense at.
Note: If your target successfully defends your attack on him, then the bullet deflects back to you, hence you lose a health.

Rolling the Dice:

Each face of the dice is associated with one of the three actions. Every round, the player rolls two dice at the same time - hence two actions for every round. Use your hands to gesture the action and point it on a specific player, indicating your action on that target.

Note: *Wild action* lets you choose an action of your choice.

Dice :	1	2	3	4	5	6
Action :	Defend		Attack	Loot		Wild action

Power cards:

There are 11 power cards in the game - 5 'Red' and 6 'White' cards. The power cards are used once (only one at a time) and discarded. Each player gets one card at the beginning of the game. A new power card can be drawn, every time a player rolls a double in his two dices. The player can save up the power cards and use them when he feels appropriate.

Initial setup:

- All players sit around the table in a circle.
- **Each player gets:** 2 x D6 dice, 10 coins, 3 health tokens.
- All the 11 power cards are shuffled.
- Each player is dealt one card at the beginning of the game.
- Rest of the cards are kept up in a single pile, face down.

How to play:

The game is played for 12 rounds. The richest pirate alive at the end of 12 rounds wins. Each round is played by five simple steps

Step 1 : Roll dices and Display your actions

All players roll both their dices at the same time and note down their actions based on the dice value. Then they display both their actions using hand gestures for other players to know.



Step 2 (Optional) : Play a 'RED' power card if necessary

After seeing everyone's actions, if a player has an appropriate 'RED' power card that he wants to use, he uses it at this point. A player can use only one card per round. Unless, the power card directs otherwise, the game moves on the next step.



Step 3 : Choose targets at the same time

After displaying actions, the players who were not affected by 'RED' power cards enter the target phase. At the count of three, all players point at their respective targets using their appropriate hands and gestures. This happens like a quick shootout.

Note 1: In first 5 rounds, the players can execute only one of their two actions every round. Hence after rolling the dice, they display both their actions. But at the target phase, they choose and execute only one on a single target. The remaining 7 rounds, the players must execute both their actions every round.

Note 2: In the last 7 rounds, the players execute both their actions on targets. They can choose the same target for both their actions, unless they are the same action. For e.g. a player cannot double attack, double loot nor double defend the same target.

Step 4 : Execute the actions one by one.

After holding on the shootout position, the players start executing their actions one by one. There is a particular order of execution.



All defense actions are executed simultaneously. Then all attacks are executed simultaneously, followed by loot actions. Remember, Actions are executed simultaneously. For e.g. if *players A* and *B* are targeting to attack each other, then during execution, both of them lose health.

Remember, if an attack is defended, then the bullet deflects back and attacks the attacker.

Remember, during a loot, only the player's wealth accumulated till last round is split among the looters. Current round's earnings is not part of the loot.

Remember, if a player is killed off at this stage, his wealth is split across the attacker(s) who attacked him this round.

Step 5 (Optional) : Play a 'WHITE' power card if necessary



After seeing how actions were executed, if a player has an appropriate 'WHITE' power card that he wants to use, he uses it at this point. A player can use only one card per round, so if the player has already used a RED card in this round, he cannot use the WHITE card. White cards mostly alter or undo certain actions done during the execution phase.



Thus a round is completed. The game lasts for a total of 12 rounds.

RETAIL PRICE ESTIMATE


References:

	<p><u>Players:</u> 2-8</p> <p><u>Time taken:</u> 45-60 mins</p> <p><u>Skills:</u> Strategic thought, Diplomacy</p> <p><u>Age range:</u> 10+ years</p> <p><u>Production value:</u> Fairly high</p> <p><u>Expansions:</u> 1</p>	\$25.00
	<p><u>Players:</u> 3-4</p> <p><u>Time taken:</u> 60-80 mins</p> <p><u>Skills:</u> Trading, planning, Resource management</p> <p><u>Age range:</u> Adults</p> <p><u>Production value:</u> Very high</p> <p><u>Expansions:</u> 5+</p>	\$38.00

Taking these two games as reference, I was able to understand the attributes and fun quotient of the game that lead of the current retail of the prices. Both games have high production value and engage players for a longer time. They target the demographics of mostly adults. These factors determined the high prices of the game.

My estimate:

Based on the reference, I understood the production value and engagement time of my game. Taking into account all the attributes , I would initially estimate a retail price of **\$15.** But I must also consider the 'Pirates of the Caribbean' theme. If proper license and rights can be obtained from Disney, then that increases the production value of the game. I could also get marketing support from Disney. Hence that would increase the value of the game, hence it can be sold at \$20.

 <p>PIRATES' COVE</p>	<p><u>Players:</u> 2-6</p> <p><u>Time taken:</u> 15-25 mins</p> <p><u>Skills:</u> Casual strategy</p> <p><u>Age range:</u> 10+ years</p> <p><u>Production value:</u> Very good</p> <p><u>Theme:</u> 'Pirates of the Caribbean'</p>	<p>\$20.00</p>
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CHEAT SHEET

Print this out for reference during play.

DICE	ACTION
1, 2	 DEFEND
3	 ATTACK
4, 5	 LOOT
6	 Wild Action



- 1st 5 rounds - only one action. Remaining 7 rounds - both actions.
- Cannot perform Double action on the same target.
- Your own bullets, if defended, deflect back and attack you.
- Attackers split the spoils of the dead pirate.
- Red cards are played before Target phase.
- White cards are played (after/with) execution phase.