# 21 Card Trick

## Use Case UC1:  Shuffle

**Scope:**  Dealer

**Level:**  Deck

**Primary Actor:**  Dealer

**Stakeholders and Interests:**

- User:  Wants to see different cards displayed each time the game is run to ensure the integrity of the game.

**Preconditions:**  User plays game.

**Success Guarantee (or Postconditions):**  Random cards appear in a random order each time the game is run.

**Main Success Scenario (or Basic Flow):**

1. The simulated deck of 52 cards is put into a random order.
2. 21 cards are selected for the game, and the rest are discarded.

**Extensions (or Alternative Flows):**

- N/A

**Special Requirements**

- N/A

**Technology and Data Variations List**

- N/A

**Frequency of Occurrence:**

- Once, as the game is first run.

**Open Issues**:

N/A

# Use Case UC2:  Deal

**Scope:**  Game

**Level:**

**Primary Actor:**  Dealer

**Stakeholders and Interests:**

- User:  Needs to see the cards laid out in such a way as to be able to pick a card and column.

**Preconditions:**  Cards are shuffled.

**Success Guarantee (or Postconditions):**  Cards are laid out in 3 columns and 7 rows.

**Main Success Scenario (or Basic Flow):**

1.  Cards are dealt out one at a time, from the top of the pile.

2.  Cards are dealt left to right into three columns.

3.  After the third card in the row is dealt, the cards are dealt to the next row below.

4.  This process is followed until all 21 cards have been dealt out.

5.  The cards should be laid out in 3 columns and 7 rows.

**Extensions (or Alternative Flows):**

N/A

**Special Requirements**

- User needs to be able to visually see what each card is (although they do not need to see the entire card.)

**Technology and Data Variations List**

N/A

**Frequency of Occurrence:**

Four times during each game.

**Open Issues**:

N/A

# Use Case UC3:  Pick Up Cards

**Scope:**  Game

**Level:**

**Primary Actor:**  Dealer

**Stakeholders and Interests:**

- Dealer:  In order for the trick to function properly, the cards MUST be picked up in the correct order.

**Preconditions:**  User picks column.

**Success Guarantee (or Postconditions):**  The column the user selects is "picked up" second, and the seven cards in that column become the middle seven in the 21-card stack.

**Main Success Scenario (or Basic Flow):**

1.  Either of the two columns the user DID NOT pick is picked up first and put into the stack.
2.  The column the user DID pick is picked up second and put into the stack.
3.  The remaining column is picked up third and put on the top of the stack.
4.  The seven cards in the column the user picked are now in the middle of the stack (Cards #8 – 14)

**Extensions (or Alternative Flows):**

- The column the dealer picks up first does not matter, as long as the column the user picks is picked up second.

**Special Requirements**

- The cards are dealt out in rows, but are picked up by columns.

**Technology and Data Variations List**

- N/A

**Frequency of Occurrence:**

- Three times during the game.

**Open Issues**:

- N/A

# Use Case UC4:  Reveal Card

**Scope:**  Game
**Level:**
**Primary Actor:**  Dealer
**Stakeholders and Interests:**
- User:  Wants to see the Dealer correctly identify the secret card.
**Preconditions:**
1.  Cards are shuffled.
2.  Cards are dealt.
3.  Player selects column.
4.  Cards are picked up.
5.  Cards are dealt.
6.  Player selects column.
7.  Cards are picked up.
8.  Cards are dealt.
9.  Player selects column.
10.  Cards are dealt.

**Success Guarantee (or Postconditions):**  The revealed card matches the secret card.
**Main Success Scenario (or Basic Flow):**
1.  The card that was dealt $11^{th}$ is the secret card.  ($2^{nd}$ Column, $4^{th}$ Row.)
2.  Identify the card to the Player.

**Extensions (or Alternative Flows):**
- N/A
**Special Requirements**
- N/A
**Technology and Data Variations List**
- N/A
**Frequency of Occurrence:**
- Once, at the end of the game
**Open Issues**:
- N/A

# Use Case UC5: Select Card

**Scope:** Game

**Level:**

**Primary Actor:** Player

**Stakeholders and Interests:**

- Dealer: Needs Player to select and memorize card.

**Preconditions:**

- Cards need to be dealt by Dealer so that user may see them in order to select one.

**Success Guarantee (or Postconditions):**

- Player has one of the cards selected and memorized.

**Main Success Scenario (or Basic Flow):**

1. Player is asked to think of and memorize one of the cards that have been dealt.

**Extensions (or Alternative Flows):**

1. Player may be asked to make sure they've memorized the card.

**Special Requirements**

- N/A

**Technology and Data Variations List**

- N/A

**Frequency of Occurrence:**

- Once, at the beginning of the game.

**Open Issues**:

- N/A

# Use Case UC6:  Select Column

**Scope:**  Player
**Level:**
**Primary Actor:**  Player
**Stakeholders and Interests:**
- User:  Needs to be able to see card in the column.
- Dealer:  Needs Player to select the correct column.
**Preconditions:**
- Cards need to be dealt
**Success Guarantee (or Postconditions):**
- Report is generated
**Main Success Scenario (or Basic Flow):**
1. Cards are displayed for Player.
2. Player is asked to select column.
3. Player choice is recorded.
**Extensions (or Alternative Flows):**
- N/A
**Special Requirements**
- Columns need to be easily identifiable for Player to select
**Technology and Data Variations List**
- N/A
**Frequency of Occurrence:**
- Three times during the game after the cards have been dealt
**Open Issues**:
- N/A