**Card Shuffler Documentation**

Documentation for card shuffler usages and reasonings behind methodology..

**Class: ‘CardComponent’**

This Angular component represents the functionality of managing a deck of cards, distributing them among players, and handling related operations.

Properties:

* numberOfPlayers: (number) The number of players participating in the card game. Defaults to 1.
* deck: (Card[]) An array of Card objects representing the deck.
* numberOfDecks: (number) The number of decks in play. Defaults to 1.
* players: (Player[]) An array of Player objects representing the participants.

Lifecycle Hook:

* ngOnInit(): Method called after the component is initialized. Initializes the deck on component load.

Public Methods:

* run(): Initiates the card game by handling deck creation, player initialization, and card distribution. Ensures fairness by opening additional decks if needed.
* distributeCards(): Shuffles the deck and distributes cards evenly among players.
* collectCards(): Collects all cards from the players, clearing their hands.

Private Methods:

* initializeDeck(): Populates the deck array with Card objects based on predefined suits and ranks from the environment.
* initializePlayers(): Initializes the players array with Player objects, considering the specified number of players.
* shuffleDeck(): Shuffles the cards in the deck using the Fisher-Yates algorithm.

Usage:

* Initialize the component properties by setting the number of players (numberOfPlayers).
* Call the run() method to start the card game, ensuring fair distribution among players.

Example Html:

<!-- app-card component usage in an Angular template -->

<app-card></app-card>