Rock-Paper-Scissors Game Project Draft

## Introduction

This project is a Rock-Paper-Scissors game designed as a practical application for Data Structures and Algorithms (DSA). In this project, we use three data structures: **array**, **stack**, and **queue**, to manage game elements and features. The purpose of this project is to demonstrate the use of these data structures in a fun and interactive way.

## Game Overview

The Rock-Paper-Scissors game is a classic game where two players choose one of three options: Rock, Paper, or Scissors. The winner is determined by the following rules:  
- Rock beats Scissors  
- Scissors beat Paper  
- Paper beats Rock

## Data Structures Used

### 1. Array

The array data structure is used to store the scores of each player. This helps in easily tracking and displaying the score as the game progresses.

### 2. Stack

The stack is used to store the history of each round played.

### 3. Queue

The queue is used to handle player choices, storing the move each player throws in sequence. This ensures that Player 1 and Player 2 moves are processed in the correct order. Queue follows First-In-First-Out (FIFO) order.

## Game Modes

The game offers two modes:  
1. Single Player vs. Computer: In this mode, a human player competes against the computer. The computer randomly chooses Rock, Paper, or Scissors.  
2. Two Player Mode: Two human players can play against each other by entering their moves one after the other.

## Conclusion

The Rock-Paper-Scissors game project demonstrates practical use of data structures in managing gameplay data, round history, and player inputs. By using array, stack, and queue, we ensure organized data storage and efficient retrieval during the game, creating an enjoyable and functional gaming experience.

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