

Memory Card Game Documentation

Introduction

Overview: This document provides detailed documentation for a memory card game developed using HTML, CSS, and JavaScript.

Purpose: The purpose of this game is to test and enhance the player's memory skills by matching pairs of cards within a given time limit.

Audience: This documentation is intended for developers and individuals interested in understanding the implementation details of the memory card game.

Game Description

Game Objective: The objective of the game is to flip over cards and match pairs of identical cards.

Game Flow: The game flow consists of the following steps:

The player starts the game by clicking on a card to reveal its symbol.

The player then clicks on another card to reveal its symbol.

If the symbols on the two cards match, they remain face up.

If the symbols do not match, both cards are flipped back face down.

The player continues flipping cards until all pairs are matched or the time limit is reached.

The game ends when all pairs are matched or the time limit expires.

The player's score and time taken are displayed at the end of the game.

Technologies Used

HTML: Used to structure the game layout and define the card elements.

CSS: Used to style the game elements, including the card appearance and animation.

JavaScript: Used to implement the game logic, including card flipping, matching, and game timing.

File Structure

index.html: The main HTML file that serves as the entry point for the game.

styles.css: The CSS file that defines the game's visual styles.

script.js: The JavaScript file that implements the game's logic and functionality.

Implementation Details

HTML Structure:

The game board is represented by a grid layout, where each cell contains a card.

Each card is represented by a `<div>` element with a unique identifier.

The card's symbol is displayed within the `<div>` element.

CSS Styles:

The game board is styled using CSS grid and flexbox to arrange the cards in a grid layout.

The cards are styled with a back-face and front-face, representing the hidden and revealed states, respectively.

CSS animations and transitions are used to create flipping effects when revealing or hiding cards.

JavaScript Logic:

Event listeners are added to each card to handle the click events.

The game logic tracks the state of the flipped cards and checks for matches.

A timer is implemented to track the game duration and enforce the time limit.

The score is calculated based on the time taken and the number of moves made.

A modal is displayed at the end of the game to show the score and provide options to restart or quit the game.

Installation and Deployment

Download all the necessary files: index.html, styles.css, and script.js.

Place the files in the same directory.

Open the index.html file in a web browser to start playing the memory card game.

Conclusion

This documentation provided an overview of the memory card game implemented using HTML, CSS, and JavaScript.

The game aims to test and enhance the player's memory skills by matching pairs of cards.