Web Game Reflection: Christmas Matches

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Game Objective:

The goal of the Christmas-themed Matching Blocks game is to deliver an enchanting and immersive gaming experience that seamlessly infuses the Christmas spirit into the gameplay. By incorporating visually stunning graphics, a user-friendly interface (UI), and high-quality sound effects, we aim to captivate players of all ages in an exhilarating and addictive puzzle-solving adventure. Our aim is to evoke the essence of Christmas through thematic elements while providing a seamless, intuitive, and enjoyable user experience. Through the strategic utilization of sound effects and a well-crafted UI, our objective is to elevate player engagement, ensuring that they are not only visually captivated by the Christmas theme but also immersed in the game's audio-visual ambiance. Ultimately, we aspire to create a game that not only entertains but also transports players into the magical world of Christmas, making it a must-play during the festive season.

How to play:

1. Select your preferred difficulty level from the options provided, such as Easy, Medium, or Difficult.
2. Initiate the game by clicking the "Start" button.
3. Uncover the hidden images by clicking on the blocks, continuing until you find matching pairs. Each matched pair will earn you points.
4. Keep uncovering blocks until all matching pairs have been revealed.
5. If needed, you can reset the game using the "Reset" button.
6. Monitor the time using the "Timer" displayed at the top of the game interface.

Technology Stack:

1. JavaScript

2.HTML

3. CSS

Setup and deployment instructions Setup Instructions for Local:

1. Clone the repository Git clone git@github.com:HiralThadeshwar31/CPSC-8710-Memory-game.git

2. Change your current directory to the game's directory.

3. Open the index.html file using a web browser to play the game locally.

Deployment:

1. Install netlify using cli

2. Enter the command netlify login on terminal

3. It will take you to the netlify account, login using your github credentials

4. Select the repository to be deployed

5. Click on Deploy Site, Netlify will then pull the latest code from the selected branch and deploy it

6. After deployment, a unique Netlify URL will be provided, such as Christmas Matches (65406280c9cac13f21428e20--christmas-matches.netlify.app).

7. Click on the link to access the deployed game

Credits:

1. [W3C schools](https://www.w3schools.com/)

2. [Mozilla Developer Networks](https://developer.mozilla.org/en-US/)

3. [Flaticon.com](https://www.flaticon.com/) for the all images used in the project

4. Kris DeBruine Media - [How to shuffle an array](https://www.youtube.com/watch?v=79AWYPyPEdU)

5. Adam Khoury - [Visualising the Fisher-Yates shuffle method](https://www.youtube.com/watch?v=tLxBwSL3lPQ&t=423s)

6. FreeCodeCamp.org for tutorials regarding breaking down Memory game logic

7. [Sandra Israel's Memory game process for inspiration](https://scotch.io/tutorials/howto-build-a-memory-matching-game-in-javascript#toc-what-is-the-memory-game)

8. Flip Cards based on [W3C flip card tutorial](https://www.w3schools.com/howto/howto_css_flip_card.asp)

9. [SVG Backgrounds](https://www.svgbackgrounds.com/) for free customisable SVG Backgrounds.

10. [CSS gradient generator](https://cssgradient.io/)

11. [Game reference](https://github.com/motazabdou/MS2-MemoryGame)

Reflection:

The creation of the Matching Blocks game presented a challenging yet gratifying journey that offered valuable insights into the realm of game design and development. Throughout this undertaking, I encountered a range of obstacles, identified effective strategies, recognized areas for enhancement, and acquired essential lessons that greatly enriched my game development skills and comprehension.

We adopted the Agile methodology to manage our project. Given the geographical dispersion of our team members, our first priority was to establish several communication channels. The majority of our meetings were dedicated to selecting the project and deliberating on design changes for the memory game we ultimately decided on.

Our routine stand-up meetings were held every Monday at 7:00 pm, during which we discussed the game's progress, assigned tasks, addressed any obstacles, and more.

Challenges faced:

- Our initial challenge was to choose a game that was both manageable to create and oversee.

- Another hurdle was finding the right equilibrium between complexity and simplicity. Achieving this balance was vital to ensure the game was easy for players to grasp while still offering a rewarding level of difficulty.

- Geographical dispersion among team members made it impossible to convene in person and have regular discussions.

- Technical obstacles also emerged during the development phase. Implementing smooth animations, responsive touch controls, and effective collision detection required meticulous coding and ongoing refinement.

- Compatibility issues across various devices and operating systems necessitated extensive testing and optimization, introducing complexity into the development process.

What worked:

- An essential factor for our success was the iterative development approach. Commencing with a basic prototype facilitated swift experimentation and the testing of various gameplay concepts. Feedback gathered from playtesting sessions played a pivotal role in refining game mechanics and the overall gaming experience. The iterative testing and feedback process aided in the early detection and resolution of issues, resulting in a polished final product.

- Holding regular Zoom meetings to brainstorm ideas and implement them simplified communication for everyone involved. Thorough documentation of each project stage and the creation of user stories provided clarity about completed work.

- Furthermore, the establishment of a well-defined art style and consistent visual design greatly enhanced the game's appeal. The creation of visually captivating and coherent graphics elevated the overall player experience, rendering the game more engaging and immersive. The inclusion of sound effects heightened user immersion during gameplay.

What didn’t work:

- An evident challenge we faced was scope management. Initially, the project aspired to encompass a broad array of features, but it became evident that certain elements had to be downsized or delayed to guarantee a punctual release.

- Acquiring the skill to prioritize features and concentrate on the fundamental gameplay mechanics could have streamlined the development procedure.

- Our game is exclusively compatible with the Google Chrome and Safari browsers.

Lessons learned:

- The development of the Matching Blocks game imparted several valuable lessons. To begin, it emphasized the paramount importance of simplicity. A straightforward and user-friendly gameplay mechanic often leads to the most enjoyable games. Complexity should emerge from the mastery of simple rules, offering depth without overwhelming players.

- Effective planning and prioritization are indispensable. The establishment of a clear project roadmap, the setting of achievable milestones, and the consistent reevaluation of the project's scope are all critical for successful development. Additionally, early and frequent incorporation of player feedback is of great significance for game improvement. Players provide invaluable insights essential for refining gameplay and addressing potential issues.

- Lastly, the significance of adaptability and resilience cannot be overstated. Unforeseen challenges are bound to surface during the development process. Being able to adapt to unexpected circumstances, welcoming feedback, and maintaining a commitment to iterative improvement are fundamental qualities that contribute to a successful journey in game development.