# Quiz Game Website

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# 20211235

**Introduction**

Welcome to "Quiz Games," a web application where education meets entertainment through technology. This document offers a detailed tour of our homepage, highlighting its interactive features, design elements, and the technologies that bring our ideas to life.

**Technologies Used:**

**Overview of Technology Stack:**

* **Frontend:** HTML5, CSS3, and JavaScript enhance user interaction and visual design.
* **Backend:** Node.js with Express.js framework manages server-side operations.
* **Email Integration:** Nodemailer for sending emails via a contact form.
* **Libraries and APIs:** FontAwesome for icons, Howler.js for sound management in "Guess the Country".

**Main page**

When you first visit the "**Quiz Games"** website, you're welcomed by an interface that's both visually appealing and functionally smooth. The design aims not only to capture your attention but also ensures an intuitive user experience from the outset.

The **header** of the website features the creatively styled title, setting the tone for what's ahead. Next to this, you'll find a **theme switcher** button, allowing users to alternate between a Golden and a Silver theme. This feature not only enhances the visual appeal but also offers a way to personalize the browsing experience based on user preference.

Incorporated into the header is a sophisticated **audio player** developed using Howler.js. This component manages a playlist preloaded in the game folder and provides controls for playing, pausing, and switching songs, seamlessly integrating sound management within the user interface.

The **navigation** bar, enhanced with Font Awesome icons, provides easy access to various sections of the site, illustrating effective use of web icons for intuitive site exploration.

The **Core** of the website houses interactive cards for each game. When hovering over the image become more colourful and by clicking on these cards, they expand to reveal an iframe where the game loads dynamically. This interaction model facilitates direct engagement with the games from the homepage, minimizing load times and enhancing user engagement.

Additionally, the inclusion of the Hope University logo, styled with shadow effects to add depth, lends an academic credibility to the site.

O imagine care conține captură de ecran, Software de grafică, Software multimedia, modelare 3d

Descriere generată automatO imagine care conține captură de ecran, Software multimedia, calculator, software

Descriere generată automatThe **footer** extends the interaction by linking to social media platforms, promoting broader engagement. It also features a dynamic falling leaves animation, adding an aesthetic touch that enriches the seasonal theme of the website.

Image 1 Golden Theme Image 2 Silver Theme

**Guess the Country ( Scrambled letter Country)**

This game serves not only as entertainment but also as an educational tool, helping players improve their geographical knowledge and spelling skills.

When players land on the game page or try to play from the iFrame card from the main page, they see a clean and straightforward layout with a catchy title, "Guess the country." The page begins with a start screen that invites users to click "PLAY NOW!" to dive into the game.

Once the game starts, the gameplay screen displays scrambled letters of a country's name in a designated area with the starting letter of the country with a different style. Players need to type their guess into an input box. As they type, the game checks if the entered name matches the correct country name. If the guess is correct, the game progresses to the next country, updating the score for each correct answer.

O imagine care conține text, captură de ecran, Font, proiectare

Descriere generată automat

Image 3 Guess the country.

**Technical Details**

**Country List**: The game utilizes a pre-defined list of country names sourced from a text file, ensuring a diverse and extensive pool of challenges.

**Shuffling Algorithm**: The script employs a Fisher-Yates shuffle to randomize the order of the countries. Additionally, the letters of each country's name are shuffled to create the puzzle, though the first letter of each country remains tracked and subtly highlighted to hint the players.

**Progress Tracking**: The game includes a counter thumb and a progress bar that fills as time passes, adding a sense of urgency. If the bar fills up before a correct guess, the game automatically moves to the next scramble, increasing the challenge.

**Guess the Flag**

Provides a dynamic and educational way to engage with geography, making learning about countries and their flags both fun and interactive. This game is perfect for players of all ages looking to test their knowledge or learn something new in a visually stimulating way.

If in the previous game we use a Country.txt document that contains all the countries in the world, here are preloaded in the code the countries, also the correct and wrong answers.

O imagine care conține captură de ecran, text, siglă, Grafică

Descriere generată automatThe player interacts by clicking on one of the three options. Each choice triggers visual feedback based on the accuracy of the answer. After a brief pause (set by a timeout function), the game loads the next flag and set of options until all flags have been presented. Once all flags are guessed, the game displays a final screen with the total correct and incorrect answers and offers an option to start over.

Image 4 of Guess the flag.

**Technical Details**

**Flag Images**: The game uses a predefined list of flag images (e.g., "fr.svg" for France, "de.svg" for Germany). These images are preloaded to ensure smooth gameplay. The first idea was to use an API such as Rest API but sometimes was making the game slower or some images weren’t loading properly.

**Answer Verification**: When a player selects an option, the game immediately checks if the choice is correct. Correct answers are highlighted in green, while incorrect ones turn red, providing instant feedback. The correct answer is always highlighted, whether the player's choice was right or wrong, enhancing learning.

**Progress Tracking**: The game tracks the number of correct and incorrect answers. This information is displayed at the end of the game on the final screen, allowing players to see their performance.

**Contact US**

Form itself is set against a lightly coloured background that ensures readability and a focus on the input fields.

**Form Features and Validations**

The contact form is detailed, asking for the user's name, email, phone number, date of birth, a text message, gender, and location, along with consent to terms and conditions. Each field comes with its own validation mechanism, ensuring data integrity and user accountability:

* Name: Must contain only alphabetic characters.
* Email: Checked against a standard email format.
* Phone Number: Restricted to 10 digits to match standard formats.
* Date of Birth: Users must be at least 18 years old.
* Message: Requires a minimum length to ensure meaningful communication.

**Client-side Validation**

JavaScript validations provide immediate feedback to users before form submission, enhancing user experience by preventing the need for page reloads. Valid entries are indicated with green check marks, while errors are highlighted with red icons, providing clear visual cues to the user.

**Server-side Interaction**

The backend, set up with Node.js and Express, integrates with Nodemailer for email functionality, allowing form data to be sent directly to an administrator's email. This setup ensures that user queries are not only received but are also actionable, facilitating prompt responses.

**Security and Data Handling**

The form includes a Google reCAPTCHA integration to prevent spam and abuse, ensuring that only genuine users can submit requests. This tool is crucial for maintaining the integrity of interactions on the website.

O imagine care conține text, captură de ecran, software, Sistem de operare

Descriere generată automat

Image 5 Contact form