
Image CAPTCHA Verification System

Project Overview

This project implements an image-based CAPTCHA verification system for web applications. Users are required to select images based on a specific criterion (e.g., "Select all images with a car"). The CAPTCHA dynamically regenerates with new images and categories if the user fails the challenge.

Features

- **Dynamic Categories**: CAPTCHA questions change after each failure with a new category (e.g., cars, trees, houses).
- **Interactive UI**: Users can select images by clicking on them. Correct selections are highlighted with a green border, and incorrect ones with a red border.
- **Regenerating CAPTCHA**: A new set of images and a different object category is loaded upon incorrect submissions.
- **Responsive Design**: The interface is mobile-friendly and adaptable to various screen sizes.

Technologies Used

- **HTML**: Markup structure for the CAPTCHA system.
- **CSS**: Styling for the layout, interactive borders, and responsive design.
- **JavaScript**: Handles dynamic image shuffling, user interactions, and verification logic.

How It Works

1. A set of images is displayed based on a randomly chosen category (e.g., cars, trees).
2. The user selects images that match the displayed category.
3. On submission:
    - Correct selections are highlighted with a green border.
    - Incorrect selections are highlighted with a red border.
4. If the user fails, a new CAPTCHA is generated with a different category and set of images.

Setup Instructions

1. **Clone the Repository**:
2. git clone <repository-url>
3. **Navigate to the Project Directory**:
4. cd image-captcha-project
5. **Add Images**:
    - Place your image files in the project directory. Update the paths in the imagesData JavaScript object in script.js.
6. **Run the Project**:
    - Open the index.html file in a web browser.

File Structure

image-captcha-project/

├── capatcha.html # Main HTML file

├── style.css # CSS for styling

├── script.js # JavaScript logic for CAPTCHA

├── README.md # Project documentation

├── images/ # Folder for CAPTCHA images

Customization

1. **Adding More Categories**:
    - Update the imagesData object in script.js with new categories and images.
    - Example:
    - tree: [
    - { src: "tree1.jpg", alt: "Tree", correct: true },
    - { src: "tree2.jpg", alt: "Tree", correct: true }
    -]
2. **Changing Styles**:

- Modify the style.css file to update the layout or visual elements.

3. **Changing Image Sizes**:
    - Adjust the CSS for .captcha-image:
    - .captcha-image {
    - width: 100px;
    - height: 100px;
    - object-fit: cover;
    - }

Screenshots

Future Enhancements

- Add more complex categories or multi-level verification.
- Introduce accessibility features for visually impaired users.
- Integrate with backend services for user verification.

License

This project is open-source and available under the MIT License.

Contributing

1. Fork the repository.
2. Create a new feature branch:
3. git checkout -b feature-name
4. Commit your changes:
5. git commit -m "Add feature-name"
6. Push to the branch:
7. git push origin feature-name
8. Open a pull request.

Feel free to modify this README to better suit your specific use case or project style.

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