

Rubik's Cube Solver Test Case Document

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1. Introduction

This document outlines the test cases for the Rubik's Cube Solver project. The purpose of these test cases is to ensure that the implemented features function as expected and meet the project requirements.

2. Test Cases

2.1 Main Cube Solver Page

Test Case 1: Page Load

- **Description:** Ensure the main page loads without errors.
- **Steps:**
 1. Open the Rubik's Cube Solver website.
 2. Navigate to the main cube solver page.
- **Expected Result:** The page loads successfully without errors.

Test Case 2: Cube Solving

- **Description:** Test the functionality of solving a 3x3 Rubik's Cube.
- **Steps:**
 1. Enter a valid initial cube state.
 2. Try solving the cube. Make sure all colors and sides satisfy the expected outcome.
- **Expected Result:** The system should be able to run smoothly.

2.2 Hint Functionality

Test Case 3: Hint Display

- **Description:** Test the display of hints to assist users in solving the cube.
- **Steps:**
 1. Enter a valid initial cube state.
 2. Click on the hint button.

3. Follow the hints and solve the cube. This verifies if the algorithm in the backend is working properly.

- **Expected Result:** The system should provide step-by-step hints for solving the cube.

2.3 User Profile Page

Test Case 4: Profile Access

- **Description:** Ensure users can access and view their profile page.
- **Steps:**
 1. Log in with valid credentials.
 2. Navigate to the user profile page.
- **Expected Result:** The user's profile page is displayed with relevant information.

2.4 Secure Login Page

Test Case 5: Login Validation

- **Description:** Test the validation of user login credentials.
- **Steps:**
 1. Enter a valid username and incorrect password.
 2. Attempt to log in.
- **Expected Result:** The system should display an error message indicating incorrect login credentials.

Test Case 6: Successful Login

- **Description:** Test the successful login functionality.
- **Steps:**
 1. Enter valid login credentials.
 2. Log in.
- **Expected Result:** The system should redirect the user to the main cube solver page.