**PaycheckCalculator Component Test Plan**

**1. Test Objective**

**To verify that the PaycheckCalculator component correctly renders, handles user input, makes API calls, and displays paycheck information.**

**2. Test Environment**

**• Node.js version: [Your Node.js version]**

**• React version: [Your React version]**

**• Jest version: [Your Jest version]**

**• React Testing Library version: [Your React Testing Library version]**

**3. Test Cases**

**3.1 TC001: Render and Calculate Paycheck**

**Steps:**

**1. Render the PaycheckCalculator component**

**2. Verify that Start Date and End Date inputs are present**

**3. Verify that the Calculate Paycheck button is present**

**4. Enter a start date and end date**

**5. Click the Calculate Paycheck button**

**6. Verify that the loading state is displayed**

**7. Verify that the paycheck summary is displayed correctly**

**Expected Results:**

**• Component renders without errors**

**• Start Date and End Date inputs are visible**

**• Calculate Paycheck button is visible**

**• After clicking Calculate Paycheck:**

**- Loading state ("Calculating...") is displayed**

**- Paycheck summary is displayed with correct information:**

**◦ Regular Hours: 40.00**

**◦ Overtime Hours: 5.00**

**◦ Regular Pay: $800.00**

**◦ Overtime Pay: $150.00**

**◦ Total Pay: $950.00**

**3.2 TC002: Handle API Error**

**Steps:**

**1. Render the PaycheckCalculator component**

**2. Enter a start date and end date**

**3. Mock an API error response**

**4. Click the Calculate Paycheck button**

**5. Verify that an error message is displayed**

**Expected Results:**

**• Component renders without errors**

**• After clicking Calculate Paycheck:**

**- Error message "An error occurred while calculating your paycheck. Please try again." is displayed**

**4. Test Data**

**Mock paycheck data for successful API call:**

**{**

**regularHours: 40,**

**overtimeHours: 5,**

**regularPay: 800,**

**overtimePay: 150,**

**totalPay: 950**

**}**

**5. Test Script**

A screen shot of a computer program

Description automatically generatedA computer screen shot of text

Description automatically generated

**6. Execution Instructions**

**1. Navigate to the project directory in the terminal**

**2. Run the following command:**

**npx jest src/app/components/\_\_tests\_\_/PaycheckCalculator.test.js**

**This test plan provides a structured approach to testing the PaycheckCalculator component, covering both successful calculation and error handling scenarios.**