Assignment No : B4

Expense Splitting Web Application Defect Report

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Defect ID: DEF001

Severity:

High – The defect critically affects the application's core functionality and causes system crashes, which directly impacts the user experience.

Priority:

Urgent – This issue should be fixed immediately as it blocks a major feature of the application, making it unusable for its intended purpose.

Environment:

- **Browser:** Google Chrome v115.0 – Latest stable version used to access the application.
- **Operating System:** Windows 10 – Standard OS environment for development and testing.
- **Database:** MongoDB v6.0 – NoSQL database storing user data and group expenses.
- **Backend:** Node.js v18.0 – Server-side runtime environment used to execute JavaScript code.
- **Frontend:** React v18.2 – Frontend JavaScript library used to build the UI components.

Defect Summary:

When a user attempts to settle a group expense, the web application crashes and returns a "500 Internal Server Error." This error occurs immediately after clicking the "Settle Up" button, preventing the expense settlement process from completing.

Steps to Reproduce:

To reproduce the defect, follow these steps:

1. Log in to the application using valid user credentials.
2. Navigate to the "Groups" page, which lists all user-created groups.
3. Select a group that has multiple pending expenses (more than one expense entry).
4. Click the "Settle Up" button to settle the group expenses.
5. Observe that the application crashes, showing a "500 Internal Server Error."

Expected Result:

Upon clicking "Settle Up," the group expenses should be calculated and settled automatically. The application should update the balances of all group members, reflecting the amount they owe or are owed. The user should see a success message indicating that the settlement was successful.

Actual Result:

Instead of settling the expenses, the application returns a "500 Internal Server Error," and the balances remain unchanged. The crash interrupts the process, making it impossible to complete the settlement.

Attachments:

The following items are attached to help with troubleshooting:

- **Screenshot:** A screenshot showing the "500 Internal Server Error" message displayed in the browser.

- **Console Logs:** The browser's console log output at the time of the crash.

- **Backend Logs:** Server logs showing the exact exception that caused the error.

Possible Cause (If Known):

The error is likely due to an unhandled exception in the backend code. It may be caused by missing or incorrect validation of input data during the settlement process, or an issue with the database query that calculates the user balances.

Suggested Fix (Optional):

- Review the backend error logs to identify the root cause of the exception.

- Ensure that all input data passed to the settlement function is properly validated.

- Verify that the database queries related to the calculation of group balances are correctly structured and handled.

Assigned To:

Backend Developer – Responsible for investigating and resolving the issue.

Status:

Open – The defect has been logged and is pending investigation.

Comments:

This issue impacts a critical feature of the application and needs to be addressed as a priority. Users are currently unable to settle their group expenses, which could lead to frustration and abandonment of the app if not fixed quickl