During validation testing, six test cases were run to verify the program's functionality and input validation capabilities. All test cases passed successfully, confirming that the program handles valid and invalid inputs as expected. Screenshots of the test results have been included below.

**Test Cases for Eco Budget Tracker:**

| **Test Case ID** | **Description** | **Expected Outcome** |
| --- | --- | --- |
| TC01 | Enter valid expense name, amount, category, and date | Expense is saved successfully, and no errors occur. |
| TC02 | Leave all fields empty | Validation error: "All fields must be filled!" |
| TC03 | Enter non-numeric value in "Amount" field | Validation error: "Amount must be a number!" |
| TC04 | Enter invalid date format (e.g., 12-31-2024) | Validation error: "Date must be in YYYY-MM-DD format!" |
| TC05 | Use extremely high values (e.g., $1,000,000) | Expense is saved successfully. |
| TC06 | Enter an empty category | Validation error: "All fields must be filled!" |

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| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Test Case ID** | **Input Data** | **Expected Outcome** | **Actual Outcome** | **Pass/Fail** |  |  |  |  |  |
| TC01 | Name: Lunch, Amount: 15.5, Category: Food, Date: 2024-12-10 | Expense is saved successfully. | Expense saved successfully. | Pass |  |  |  |  |  |
| TC02 | Name: [Empty], Amount: [Empty], Category: [Empty], Date: [Empty] | Validation error: "All fields must be filled!" | Validation error: "All fields must be filled!" | Pass | A screenshot of a computer  Description automatically generated |  |  |  |  |
| TC03 | Name: Dinner, Amount: abc, Category: Food, Date: 2024-12-10 | Validation error: "Amount must be a number!" | Validation error: "Amount must be a number!" | Pass |  |  |  |  |  |
| TC04 | Name: Rent, Amount: 1000, Category: Bills, Date: 12-31-2024 | Validation error: "Date must be in YYYY-MM-DD format!" | Validation error: "Date must be in YYYY-MM-DD format!" | Pass | A screenshot of a computer  Description automatically generated |  |  |  |  |
| TC05 | Name: Bonus, Amount: 1000000, Category: Income, Date: 2024-12-10 | Expense is saved successfully. | Expense saved successfully. | Pass | A screenshot of a computer  Description automatically generated |  |  |  |  |
| TC06 | Name: Shopping, Amount: 50, Category: [Empty], Date: 2024-12-10 | Validation error: "All fields must be filled!" | Validation error: "All fields must be filled!" | Pass | A screenshot of a computer  Description automatically generated |  |  |  |  |