**Basic Expense Tracker (WinForms)**

**Application Description:**

This WinForms application tracks daily expenses. The UI includes:

* Textboxes: txtDescription, txtAmount
* A DateTimePicker: dtpDate
* A Button: btnAddExpense
* A ListBox: lstExpenses (displays entries as “Date - Description - Amount”)

**Task 1: Corrective Maintenance**

* Fix the following bugs:
  1. Application accepts empty description or amount.
  2. Allows invalid or negative expense values (e.g., “abc”, “-200”).
* Use MessageBox.Show() for error alerts and guide the user with clear messages.
* **Submission Requirements:**
  1. Updated code with validation
  2. Bug Tracking Sheet with:
     + Description of original bugs
     + Solutions and code changes made

**Task 2: Perfective Maintenance**

* Improve the application with the following features:
  1. A **Clear** button to reset input fields.
  2. A **Delete** button to remove a selected expense entry.
  3. Add **GroupBox** and **Labels** for improved layout and UI clarity.
* **Submission Requirements:**
  1. Updated application with enhancements
  2. Perfective Change Log explaining:
     + Each improvement
     + Benefits to usability and appearance

**Question 1: Git Version Control and Change Tracking**

* Use Git for version control:
  + v1.0 — Initial working version
  + v1.1 — Validation fixes
  + v2.0 — Feature enhancements
* **Submission Requirements:**
  + Git screenshots or logs for each version
  + Change Impact Analysis Report that outlines:
    - What files/components were updated
    - Potential side effects of the changes

**Question 2: Testing and User Documentation**

1. Write **manual test cases** for:
   * Adding a valid expense
   * Handling invalid inputs (empty/negative/non-numeric)
   * Deleting a record
   * Clearing input fields
2. Provide a **test results table** (Pass/Fail).
3. Create a **brief user guide** (with screenshots) explaining:
   * How to add, clear, and delete expenses
   * Rules for input (e.g., amount must be a positive number)

**v1.0 Code (Initial Version)**

**private void btnAddExpense\_Click(object sender, EventArgs e)**

**{**

**string description = txtDescription.Text;**

**string amountText = txtAmount.Text;**

**DateTime date = dtpDate.Value;**

**string expenseEntry = $"{date.ToShortDateString()} - {description} - {amountText}";**

**lstExpenses.Items.Add(expenseEntry);**

**txtDescription.Text = "";**

**txtAmount.Text = "";**

**}**