**Student Grade Tracker (WinForms)**

**Application Description:**

A simple WinForms application that allows users to enter student names and grades. The UI includes:

* Textboxes: txtStudent, txtGrade
* A Button: btnAddGrade
* A ListBox: lstGrades (displays entries in the format “Student - Grade”)

**Question 1: Corrective Maintenance (10 Marks)**

* Fix the following issues:
  1. Allows adding entries with empty student names or grades.
  2. Accepts invalid grade values (non-numeric, below 0 or above 100).
* Use MessageBox.Show() to display appropriate error messages.
* **Submission Requirements:**
  1. Corrected source code
  2. Bug Tracking Sheet listing:
     + Original issue description
     + The fix applied

**Question 2: Perfective Maintenance (10 Marks)**

* Improve the application by:
  1. Adding a **Clear** button to reset all input fields.
  2. Adding a **Delete** button to remove selected student entries.
  3. Organizing controls using **GroupBox** and **Labels** for improved UI.
* **Submission Requirements:**
  1. Enhanced application code
  2. Perfective Change Log with details and rationale

**Question 3: Git Version Control and Change Tracking (10 Marks)**

* Initialize a Git repository and create commits for:
  + v1.0: Initial version
  + v1.1: Bug fixes (validation)
  + v2.0: UI improvements and added features
* **Submission Requirements:**
  + Git commit screenshots or log
  + Change Impact Analysis Report outlining:
    - What components were changed
    - Rationale and side effects

**Question 4: Testing and User Documentation (10 Marks)**

1. Write **manual test cases** for:
   * Valid grade entry
   * Invalid name or grade
   * Deletion of a record
   * Clearing fields
2. Provide a **Pass/Fail test result summary** table.
3. Write a **brief user guide** (with screenshots) covering:
   * How to add, clear, and delete student grades
   * Input validation rules (e.g., grade must be between 0 and 100)

**Controls Used (Drag and Drop from Toolbox):**

* TextBox: txtStudent
* TextBox: txtGrade
* Button: btnAddGrade
* ListBox: lstGrades