Continuous Assessment 4 (CA4) - Visual Programming

Module Code: SEN3306
Module Title: Visual Programming
Learning Outcome Covered: LO4 - Demonstrate the ability to test and document visual solutions.
Weightage: 10%

Task Description:

You are required to perform testing and documentation on a given C# .NET Windows Forms application. The application will be a simple "Student Management System" with basic CRUD (Create, Read, Update, Delete) functionalities.

Part A: Testing (5 Marks)

1. Identify at least **five test cases** to validate the application. The test cases should include:
   o **Functional Testing** (e.g., checking if adding a student works correctly)
   o **Boundary Testing** (e.g., testing field validations)
   o **Error Handling** (e.g., checking invalid inputs)
   o **Performance Testing** (e.g., checking response time for large datasets)
2. Perform the tests and document the results in a **Test Case Table** with the following format:

Test Case No.	Test Description	Expected Output	Actual Output	Status (Pass/Fail)
TC1	Add a valid student entry	Student added successfully	Student added successfully	Pass
TC2	Enter invalid student age (negative number)	Error message displayed	Error message displayed	Pass
...	...	...	...	...

Part B: Documentation (5 Marks)

1. Create a **User Manual** for the given application, covering:
   o Application Overview
   o Installation Instructions
   o Features and Functionalities
   o Step-by-Step Guide on Using the Application
   o Troubleshooting Tips
2. Prepare a **Technical Documentation** including:
   o System Requirements
   o Software Architecture Overview
   o Explanation of the Key Components (Forms, Controls, and Event Handling)
   o Code Snippets (where necessary)

Submission Guidelines:

- Submit a **PDF document** containing both Part A (Testing Report) and Part B (Documentation).
- Ensure that the document is **well-structured and properly formatted**.
- Include your **name, student ID, and submission date** on the cover page.
- Deadline: **24.04.2025**

Marking Scheme:

Component	Marks
Test Case Identification & Execution	5
User Manual & Technical Documentation	5
Total	10

Notes:

- Ensure that test cases cover different aspects of the application.
- The documentation should be clear and concise, suitable for both **end-users** and **developers**.
- Plagiarism will result in **zero marks**.