B.Sc. in Computer Science and Engineering

School of Science and Technology

Bangladesh Open University

Object Oriented Programming-II Lab
Assignment–I

Submitted By:	**Submitted To:**
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Course Title : Object Oriented Programming-II Lab	Bangladesh Open University
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Experiment No: I.

Date: 14 Mar 25.

Title: Simple Form Application – Student Profile.

Context: The experiment is designed to develop a basic form-based Student Profile Application using C# Windows Forms. The application enables the user to input and process student details such as Name, Roll Number, Registration ID, Semester, Blood Group, and Gender. The user can even upload and display a profile photograph. Through the application of event-driven programming, the experiment attempts to enhance the user experience with various graphical user interface (GUI) components such as text boxes, buttons, radio buttons, and picture boxes.

Objective:

- To develop a Windows Forms Application to store student profile data.
- To understand and implement event-driven programming in C#.
- To demonstrate file handling to allow users to browse and display an image.
- To navigate between forms with the flow of user-input data.
- To enhance UI design and user experience using Windows Forms controls.

Theory: A Windows Forms application provides a structured way to develop GUI-based applications in C# by utilizing System.Windows.Forms. It provides the ability to interact with a program by utilizing text boxes, buttons, radio buttons, and other controls. The program follows the event-driven programming model, where user interactions (e.g., button clicks) call corresponding event handlers, thus presenting a dynamic and interactive interface.

In this lab, the Student Profile Application consists of two forms:

1. Form1 (Data Entry Form) - Accepts student details through input fields and provides options to reset fields, upload an image, and submit details.
2. Form2 (Profile Display Form) - Accepts and displays the student's details along with their profile image.

Key concepts implemented in this experiment:

• Event Handling: Button click events are managed by methods like button1_Click() and button3_Click() to act on the user input.

• File Handling: OpenFileDialog is used to allow the user to select an image, which is displayed in a PictureBox.
• Data Passing Between Forms: Form1 sends student data to Form2 via a constructor, demonstrating communication between forms.
• User Interface Management: Proper use of controls like TextBox, RadioButton, and PictureBox for creating an interactive application.

Required Tools and Software:
• Visual Studio – Integrated Development Environment (IDE) for writing, compiling, and debugging C# Windows Forms applications.
•.NET Framework – Required for the run-time of Windows Forms applications.
• Windows Forms (WinForms) Library – Provides GUI controls such as text boxes, buttons, and picture boxes.
• MS Word, Snipping Tool & Photo Viewer – For documenting and reporting the experiment.

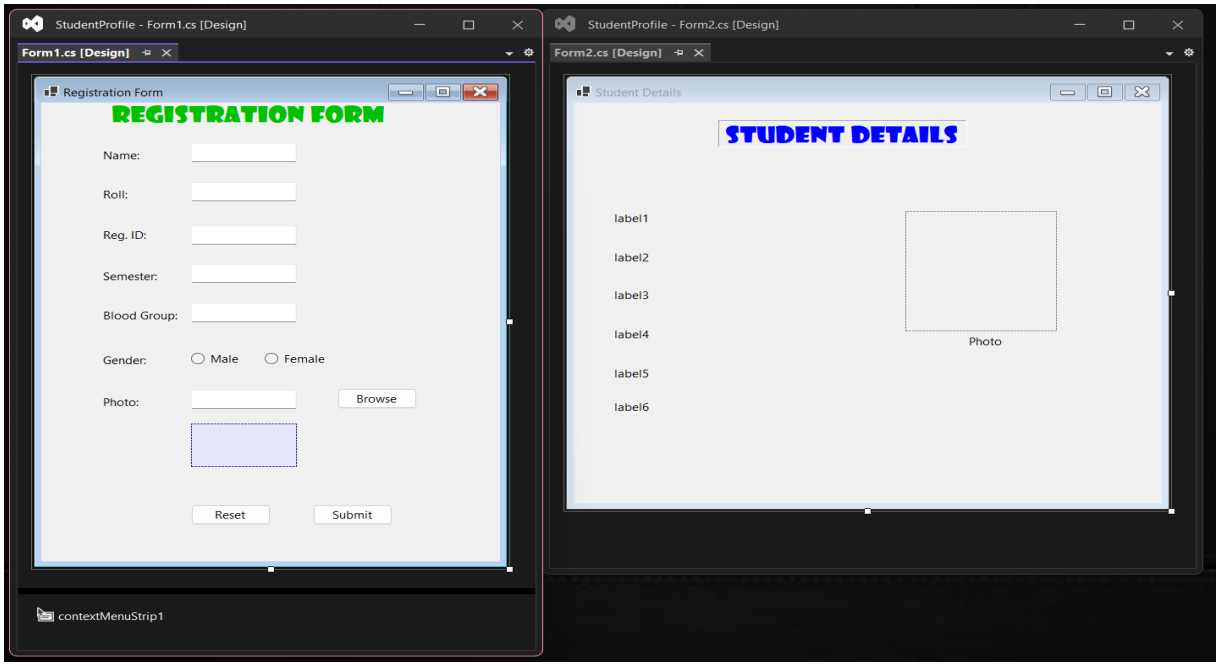
Execution:
Designing the Windows Forms Application
• Decide on required input fields and actions.
• Sketch the UI design with labels and controls.
• Complete the design before implementing.

Developing the Application in Visual Studio
• Develop a Windows Forms App in Visual Studio.
• Design Form1 (input form) and Form2 (display form).
• Add functionalities: data input, image upload, and form navigation.
• Debug and error test.

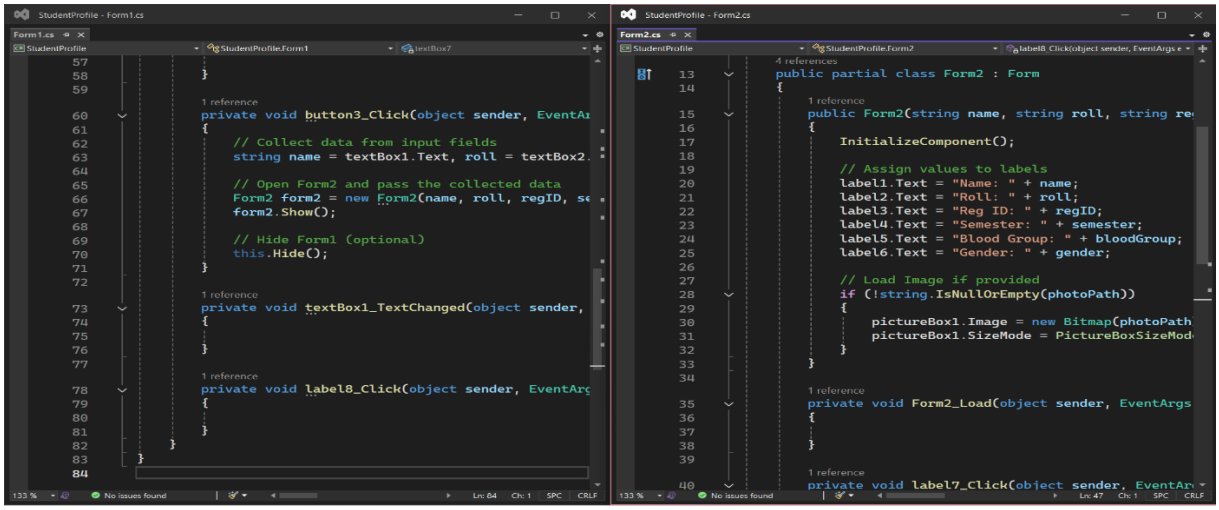
Documenting the Report in MS Word
• Arrange sections
• Include screenshots and applicable code snippets.
• Proofread, format, and ready for submission.

Output:
Screenshots are attached herewith -

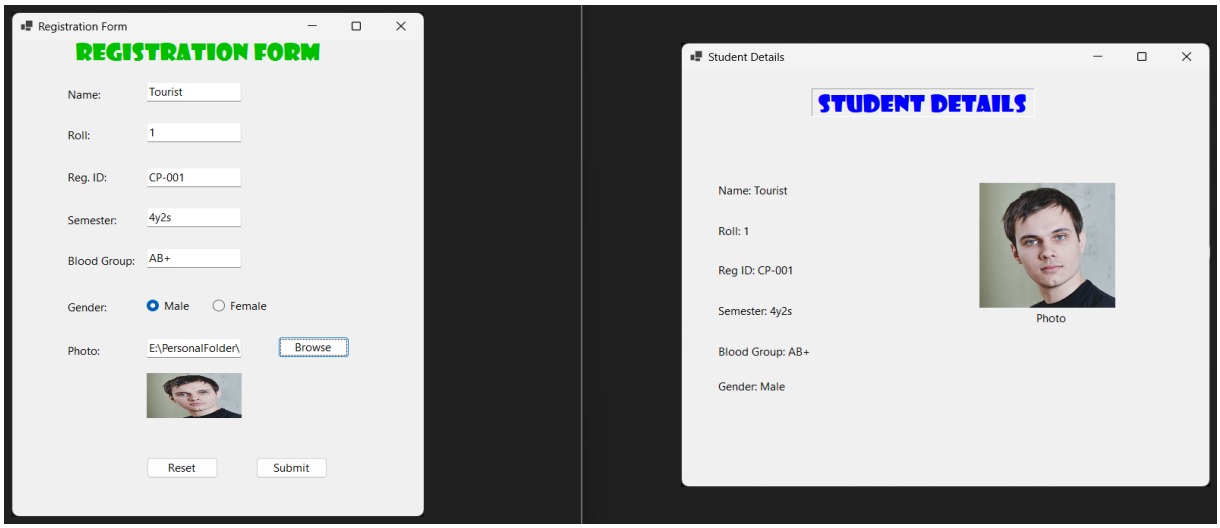
- Design View



- Code View

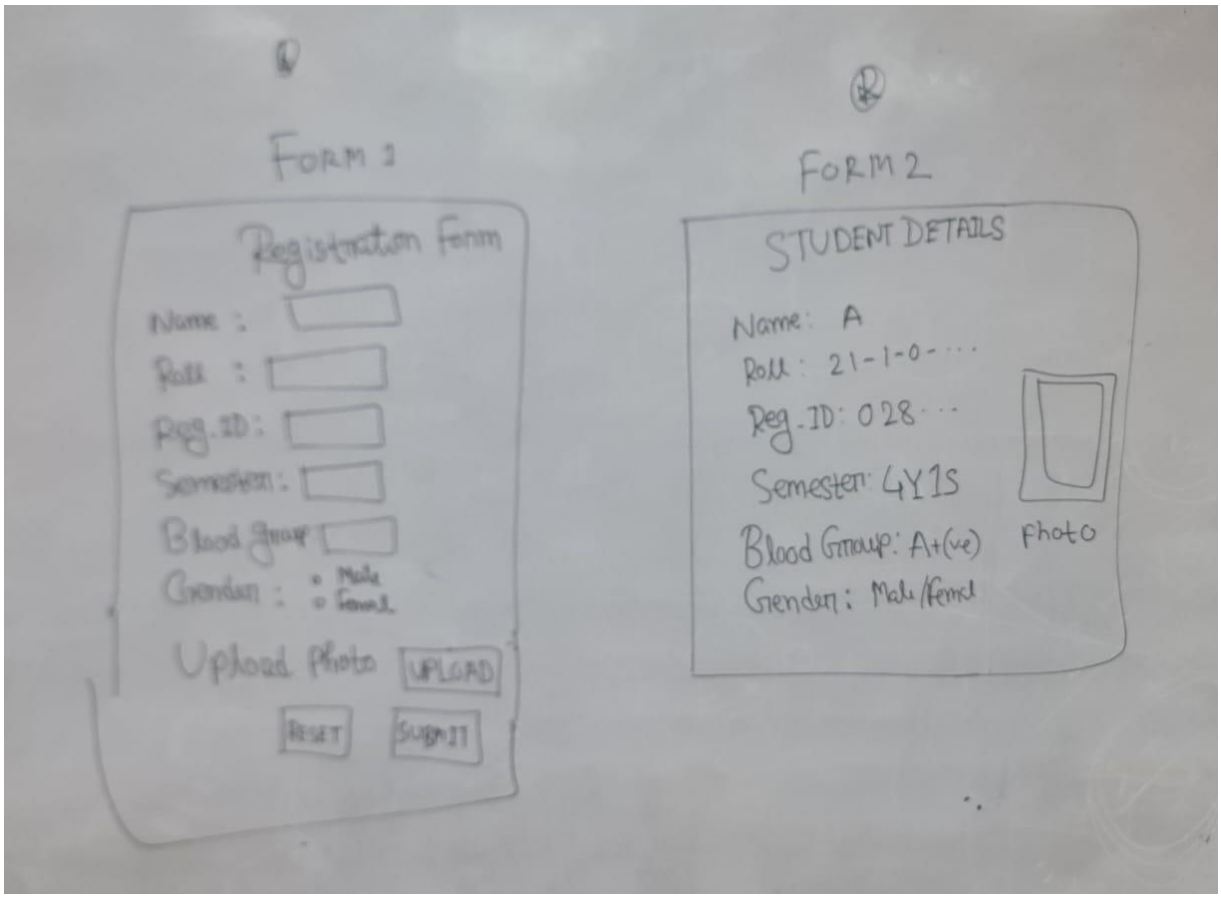


- Runtime View (Collage)



Appendix:

- In Lab Instructed Sketch



- Google Classroom Instruction

Assignment 1: OOP Lab-II Simple form Applications

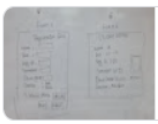
Samrat Kumar Dey • Mar 18

15 points — Due Tomorrow

You are required to develop a as per the given specifications. After completing the development, submit your assignment by providing the GitHub repository link.

1. Complete the given form application following the requirements provided in the lab session.
2. Push your complete project to a GitHub repository under your own account.
3. Ensure your repository contains
(i) The complete source code of your application.
(ii) A properly structured folder with necessary files.
(ii) A README.md file with a brief description of your project.

4. Ensure your repository is public, or if it is private, invite me as a collaborator ([Insert Instructor's GitHub Username]).
5. Submit your GitHub repository link via the Classroom submission portal.



WhatsApp Image 2025-03-1...
Image

- Sample Image Used in the System

- GitHub Repository Link
  https://github.com/Mojahidul21/Object-Oriented-Programming-II-Lab-CSE31P8-/tree/main/Assignment%201%20OOP%20Lab-II%20Simple%20form%20Applications

References:

Books

- Windows Forms Programming in C# by Chris Sells
- Pro C# 9 with.NET 5: Foundational Principles and Practices in Programming by Andrew Troelsen, Philip Japikse

Websites

- https://learn.microsoft.com/en-us/visualstudio/ide/create-csharp-winform-visual-studio?view=vs-2022
- https://www.geeksforgeeks.org/introduction-to-c-sharp-windows-forms-applications/

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