

Advance Programming Techniques (APT)

Lecture # 22

Ehtisham Rasheed

Department of Computer Science
University of Gurjat, Gujrat

UNIVERSITY OF GUJRAT



Introduction to Container Controls

- In Windows Forms, **container controls** are special controls that can hold other controls inside them
- They help organize the user interface and make layout management easier
- Common container controls include:
 - Panel
 - GroupBox
 - TabControl
 - FlowLayoutPanel
 - TableLayoutPanel

In this lecture, we'll focus on **GroupBox** and **Panel**

What is a GroupBox?

- A **GroupBox** is used to group related controls visually inside a bordered frame with a title (caption)
- All controls in a **GroupBox** move together when the **GroupBox** is moved
- **Key Features**
 - Has a **border** and **caption** (Text property)
 - Used for **logical grouping** of related controls, e.g. gender selection, address fields, etc
 - Commonly used with **RadioButtons**, **CheckBoxes**, or **TextBoxes** that belong to the same category
 - Does **not** support scrolling

What is a Panel?

- A **Panel** is a rectangular container that can hold other controls, often used for layout organization or dynamic UI content
- All controls in a **Panel** move together when the **Panel** is moved
- **Key Features**
 - Does **not** have a caption
 - Can be **scrollable** (if AutoScroll = true)
 - Useful for **grouping controls** logically or visually — especially in dynamic interfaces
 - Often used for **sections that appear/disappear** (e.g., settings area, navigation menu)
 - Common for **dynamic content loading** and **runtime control management**

GroupBox vs. Panel — Comparison Table

Feature	GroupBox	Panel
Caption	Has a caption (Text Property)	No caption
Border	Always visible	Optional (BorderStyle)
Purpose	Group related input controls logically	Layout organization or scrolling area
Scrolling	✗ Not supported	✓ Supported (AutoScroll = true)
Use Case	Gender selection, contact info grouping	Dashboard sections, scrollable areas