

Experiment 6:
Design form with user control

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Aim:

To implement user controls in windows forms.

Theory:

A user control is a collection of windows common controls encapsulated in a container. This kind of control is referred to as a composite control. The contained controls are called constituent user controls. User controls derive from the user control class.

User controls are designed like forms, with a visual designer. You create, arrange and modify the constituent controls through the visual designer. The control events and logic are written exactly the same way as when you're designing a form. The user control is placed on a form just like any other. User controls are usable by the project in which they're created, or in other projects that have reference to the user control's library.

Steps to create user control:

- 1) Create a new user control:
 - * Open your windows coin forms project in visual studio.
 - * In solution explorer, right-click on the project or a folder within the project
 - * select ADD > User control
- 2) Design the user control:
 - * After creating the user control, it will open in the designer view.
 - * You can drag and drop controls from the toolbox onto your user control just like you would with a form.
- 3) Write a code for the user control:
 - * Switch to the code-behind of the user control (myuser control.cs)
 - * Add properties, methods & event handlers as needed.
- 4) Use the user control in a form:
 - * Build the project to compile the user control.
 - * In the toolbox, locate the new control.
 - * Drag and drop the user control onto the form.
 - * You can now treat it like other controls on form, setting properties & handling events.

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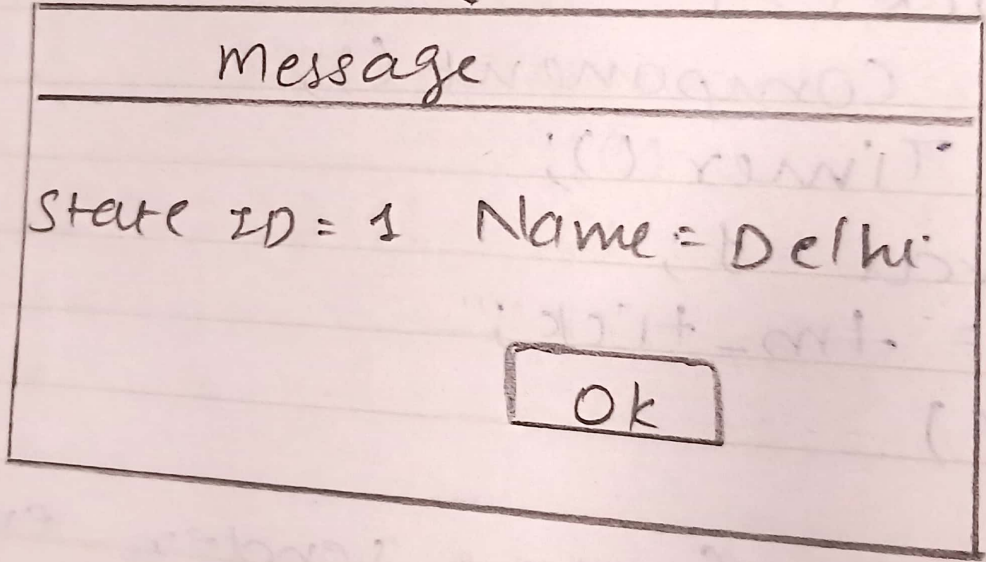
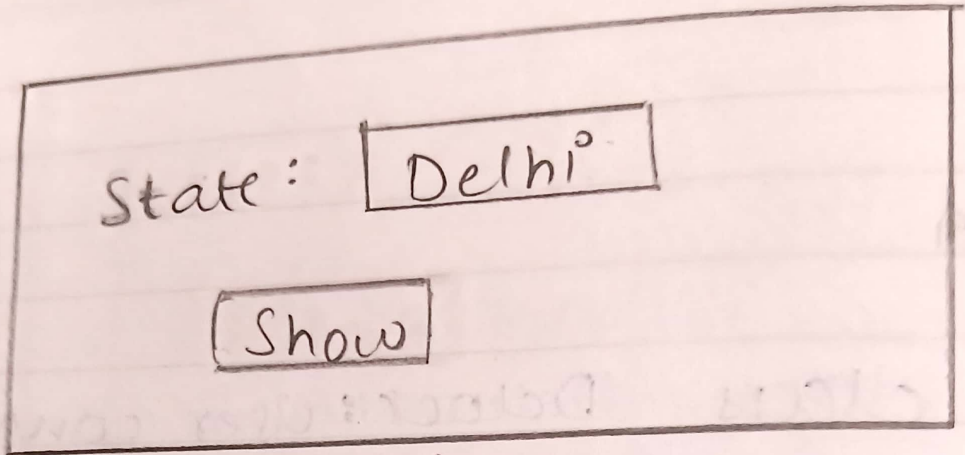
Procedure:

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Experiment 6A

```
public partial class Dclock : UserControl
{
    Timer tm;
    public Dclock() {
        InitializeComponent();
        tm = new Timer();
        tm.Interval = 1;
        tm.Tick += tm_Tick;
        tm.Start();
    }

    void tm_Tick(object sender, EventArgs e) {
        label1.Text = DateTime.Now.
            ToString("HH:MM:SS");
    }
}
```



Experiment 6B

state.cs

```

namespace DemoUserControl
{
    public class States {
        public int ID { get; set; }
        public string name { get; set; }
    }
}

```

vc.state.cs

```

public partial class vcstate : UserControl
{
    public vcstate () {
        InitializeComponent ();
    }
    public States SelectedStates {
        get {
            return (States) cboState.SelectedItem;
        }
    }
}

```

```

private void vcstate_Load (object sender,
                          EventArgs e) {
    List<States> list = new List<States> ();
    list.Add (new States () { ID = 1, Name = "Delhi" });
    list.Add (new States () { ID = 2, Name = "Bihar" });
    list.Add (new States () { ID = 4, Name = "Punjab" });
    cboState.DataSource = list;
    cboState.DisplayMember = "Name";
}
}

```