

16/8/24

Experiment 6 Design form with user control

Aim: To implement user controls in windows form

Theory:

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

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 Winforms 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 Code for the User Control:

- Switch to the code-behind of the user control (`MyUserControl.cs`).
- Add properties, method, and 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 any other control on the form, setting properties and handling events.

07:41:06

Procedure: Expt6A.cs

```
public partial class Oclock : UserControl
```

```
{  
    Timer tm;
```

```
    public Oclock() {
```

```
        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");  
    }
```

Expt6B.cs

~~test~~ state.cs

```
namespace BernUserControl
```

```
{
```

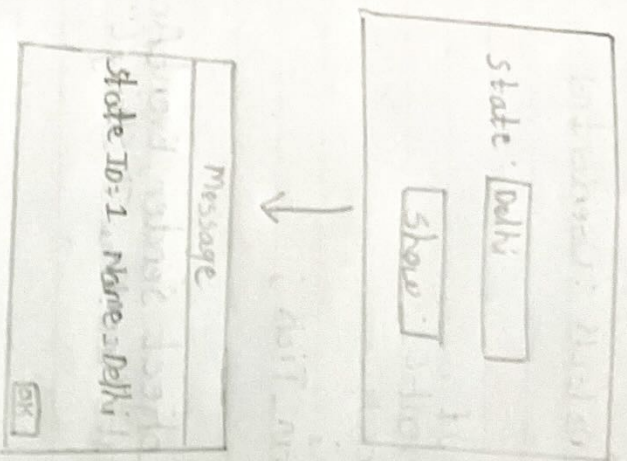
```
    public class states
```

```
{
```

```
        public int ID { get; set; }
```

```
        public string Name { get; set; }
```

```
    }
```

```

UcState.cs
public partial class UcState: UserControl
{
    public UcState()
    {
        InitializeComponent();
    }
    public States SelectedStates
    {
        get
        {
            return (states)cbostate.SelectedItem;
        }
    }
    private void UcState_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.ValueMember = "ID";
        cbostate.DisplayMember = "Name";
    }
}
  
```


form1.cs
public partial class form1 : form
{

public form1() {
InitializeComponent();
}

private void btnGetState(object sender, EventArgs e) {
MessageBox.Show(String.Format("state id = {0}, name =
{1}", vcState1.selectedState.ID, vcState1.selectedState.Name), "Message", MessageBoxButtons.OK)
}
}

Conclusion: We Implemented User control in
VB .net.