SILVERLIGHT

PEERS

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Agenda

1.) Asp.Net silverlight

2) XMAL

3) Using XMAL to build silver light Appli

4) Microsoft Expression Blend

5) WPF

Silverlight :-

It is a cross browser, cross platform plug in for delivering the next generation of Microsoft.Net - based media experiences and rich interactive appli for the web.

Silverlight 1.x , 2.0 & 3.0 launched first in 97.

3.0 -> lot of functionalities are introduced.

It is framework based. The contents developed in 3.0 plugin cant be run in 2.0.

silverlight.js -> Identify the XAML -> canvas for building the UI.

CreateSilverlight.js -> creating silver light control. Hosting the content

From 2.0 it is code behind tech. instead of using Java script.

-> XAML is used now for UI & code file.

Exp on silverlight - max 6 to 8 months.

Same ctrls

Vector based o/p, consistent usage then use silverlight else go for Ajax.

Requirements:-

To Develop:-

→ Microsoft VS.Net 2008 service pack 1.

→ Silverlight 3 Tools for VS.Net 2008 SP1. (or) Microsoft Expression Blend 3.

To Execute:

→ Silverlight 3 plugin

XAML :- (extensible Application Markup lang):-

It is a lang. which is used for providing the user Interface for the next generation .Net Based appli.. currenty XAML is used for providing the UI for Silver light, WPF and WF4.

* XAML lang. is build using the predefined tags.
* Expression Blend can be used for generating the XAML code.
* The root element for silverlight 1.x is <canvas> & the root element from silver light 2.0 onward's is

<UserControl> & the root element for the WPF Opp is <Window>

XAML provides the following types of tags: 3.0

→ layouts

→ Brushes

→ Transformations

→ Animations

→ Data services

Layouts:- It is used for providing a canvas for drawing the controls on it.

NOTE:-

* The default layout for SL & WPF is Grid.

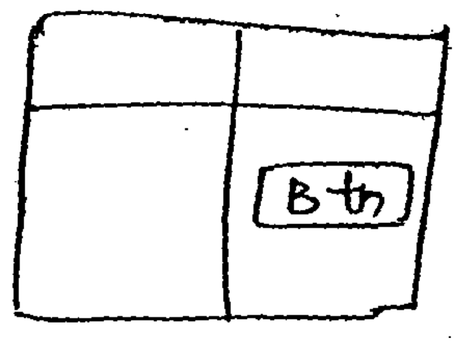
Grid layout:- It is used for designing the contents in tabular format.

Grid is a collection of RowDefinitions & Column Definitions.

Expression Blend → Projects → New Project → Silverlight

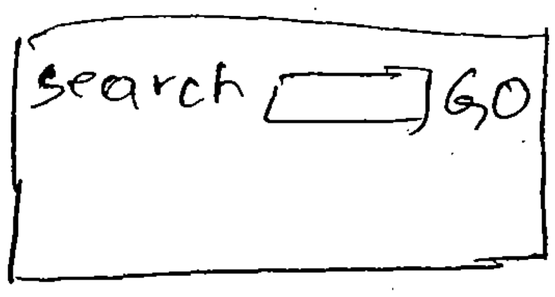
→ SL 3 Appli

Syntax:-



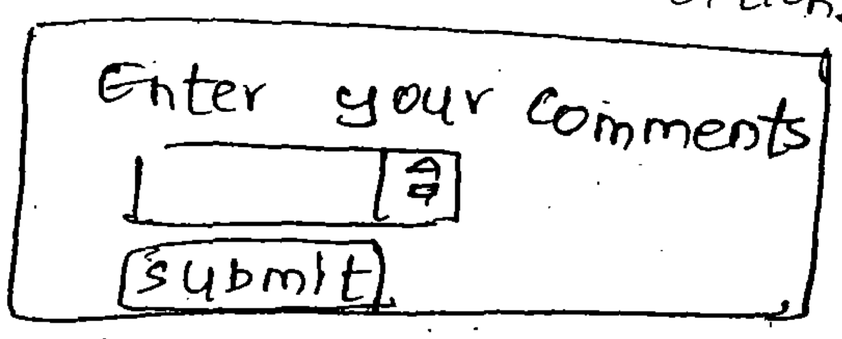
Stack Panel:- It is used to place the controls either in horizontal or vertical direction.

<StackPanel orientation="Horizontal">



</StackPanel>

<StackPanel orientation=Vertical



</StackPanel>

Canvas layout:- It is used to provide a design env. where any control can be drawn using free hand style.

NOTE:-

* The controls placed within the canvas are always relatively positioned.

Scroll Viewer Layout:- It is used to provide scroll bars for the content block if the content present within the layout exceeds the size of the layout.

Shapes: These are the basic elements that can be drawn on a layout.

XAML supports following shapes:-

→ Rectangle, Line, Ellipse, Image, TextBlock, TextBox, Media Element etc.,

Brushes :- These are used to fill the shapes.

Brushes supported by XAML :

→ SolidColorBrush :- It is used to fill the shape with a single color.

Ex :- <Ellipse Fill="Blue" ... />

or

<Ellipse ... >

<Ellipse.Fill>

<SolidColorBrush color="Blue"/>

</Ellipse.Fill>

</Ellipse>

* NOTE :- SolidColorbrush supports 144 named colors.

→ GradientBrush : It is used to fill the shape with multiple colors.

* Multiple colors will depend on the gradient stops. where every gradient stop represents one color.

* The offset value for the gradient stops should be between 0 to 1.

* XAML supports two types of Gradient Brushes

(i) Linear Gradient (ii) Radial Gradient

* Gradient colors can be enhanced with the support of gradient tool.

→ Image Brush :- It is used to fill the shape using an image.

windows → Project → Solution Explorer → Right click on Appli → Add existing item → select any image.

```
<TextBlock --->
<TextBlock.Foreground>
<ImageBrush ImageSource = "Autumn.jpg" />
</TextBlock.Foreground>
</TextBlock>
```

F5 → compiled → executed.

* once SL control is executed it prepares a .dll and .xap file which is used for hosting the SL content within any .Net based web appli.

Using a SL control from ASP.Net website :-

File → New → website → ASP.Net website → lang C# - OK

SL content is AJAX enabled, so place scriptManager.

scriptManager!

SL content

Right click on Appli → New folder → clientBin.

Add the .xap file to the client bin. folder.

For SL control go to property.

source : select the .xap file (Sllogo.xap) → (OK)

(iv) VideoBrush: It is used to fill the shape by a video. Available only in silverlight not WPF.

MediaElement : It is used to play the video or audio files within the SL appli

In blend → Toolbox → the arrow are known as Assets.

Select media element control. Add a video file to the proj.

Properties window:

Name the ctrl & browse for the video file under 'media' tab for the source file.

```
< Ellipse.Fill>
                                  name of the mediaelement
< VideoBrush SourceName = " MyVideoBrush " />
</Ellipse.Fill >
```

copy the video file along with content in Asp.Net solution Explorer (clientbin).

Using media player element in ASP.Net.

App-Data folder

↳ Add new DB → Sql Server DB → name = SLDatabase.mdf → [Add]

New table → Videolibrary

VideoId	int	Primary & Identity Key
VideoTitle	varchar(50)	
Description	varchar(200)	
VideoURL	varchar(200)	

[ScriptManager]

[GridView]

```
using System.Data;
using System.Data.SqlClient;
using System.Configuration;
using System.Web.UI.SilverlightControls;
```

→ above page load

```
    DataSet da;
    //Page_load
    String cs = ConfigurationManager.ConnectionStrings["SLDatabaseConnectionString1"].ConnectionString;
```

```
SqlConnection cn = new SqlConnection(cs);
SqlDataAdapter da = new SqlDataAdapter("Selec
* from Videolibrary", cn);
ds = new DataSet();
da.Fill(ds, "Video library");
gridview1.DataSource = ds.Tables["videolibrary"];
GridView1.DataBind();
```

Design -> GridviewTasks -> Edit columns -> ☐ Autogenerate fields -> TemplateField -> [Add] -> HeaderText = Video Preview

```
//GridView1_RowCreated
if(e.Row.RowType == DataControlRowType.DataRow)
{
MediaPlayer mp = new MediaPlayer();
```

```
mp.ID = "MP" + e.Row.RowIndex.ToString();
mp.MediaSource = ds.Tables["videolibrary"].
Rows[e.Row.RowIndex]["videourl"].ToString();
mp.width = 300;
mp.Height = 300;
e.Row.Cells[0].Controls.Add(mp);
}
```

Microsoft Expression Encoder:

It is a tool which is used for encoding the video & audio file

* MEEncoder depends on windows MediaII SDK

Import → Add a video.

windows → Check Enhance, metadata, output.

Video → De

Metadate tab → ~~Enhance~~ Title, Ratings, Author, Description, copyright

Markers → click on the two checkboxes.

click
+ symbol -> Give value as Firstscene
+ " -> Second scene
+ -> Third scene

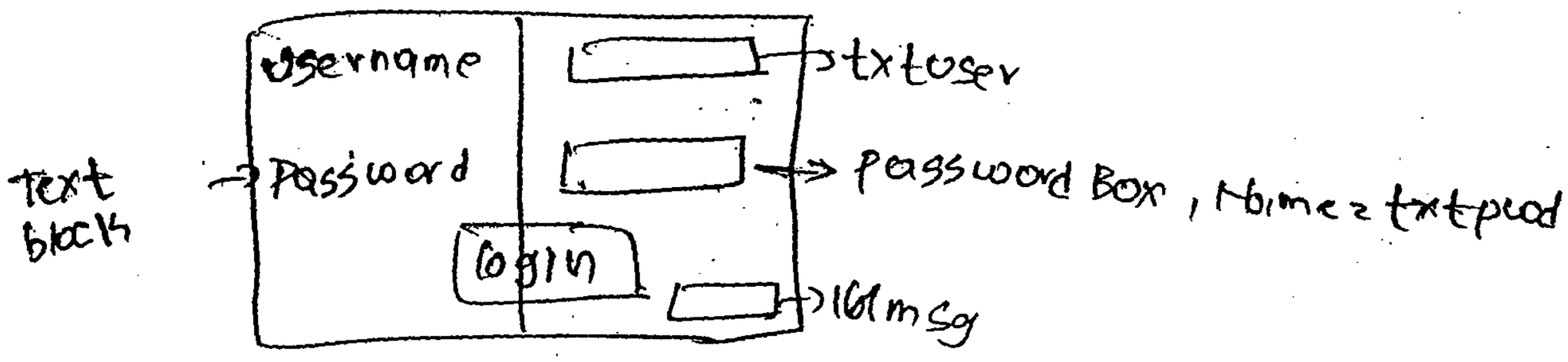
Output tab -> how the player looks like -> quick silver,
click Encode button at the bottom -> prepares
.xap, html, javascript code, images.

* The above files will be created in
C:\Documents and Settings\Administrator\My Documents\Expression\Expression Encoder\output\PTPL
12-26-2002 3.21.04 PM.

.Xap file contains the resources & XAML compiled.

Transformations:- It is used to perform the basic unit of animations

→ Take grid layout → Text block username



Rotate Transformation:- It is used to rotate a shape to a specific angle.

Goto corner -> click symbol then Rotate Transformation.

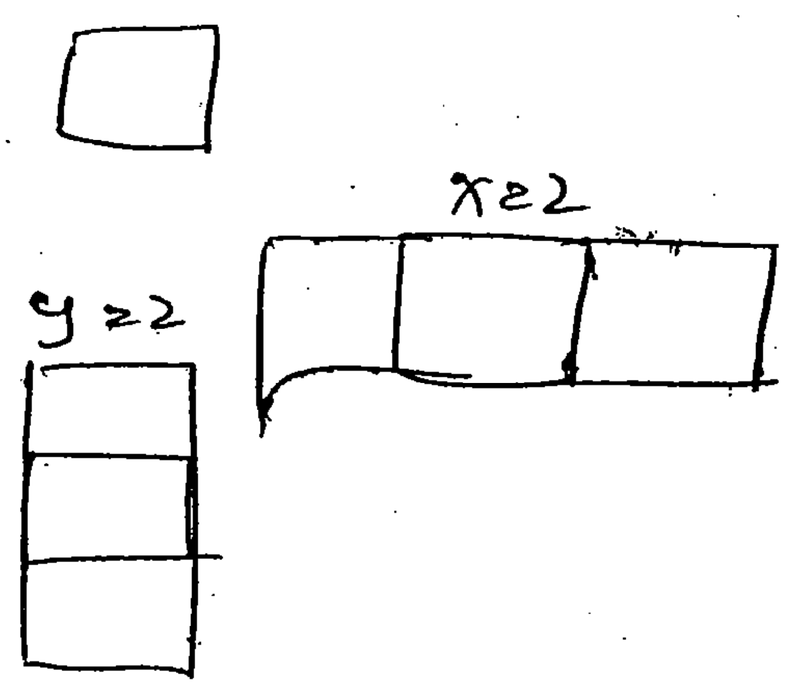
login -> properties -> Events ->

Click = login_click

```
// login (button_click)
string usr,pwd;
usr = txtUser.Text;
pwd = txtpwd.Passcword;
lblmsg.Text = "User name:" + usr + ", Password
is:" + pwd;
```

Scale Transformation:- It is used to increase or decrease the size of a shape.

Scale x=2 y=2



Skew Transformation:-

Right click on the shape → Group Into → Canvas

Go to skew transformation x-axis = 50

y = 50

Flip Transformation:-

Take a media element → source → Flip towards x or y axis.

12/27/09

Animations:-

SL supports the following types of Animation:

(i) DoubleAnimation: If the animation targets on a double datatype whose value is of type double then such type of animations are called as double animations.

* Animations are prepared based on the storyboards.
* A Story board should be defined with
  - → TargetName → Name of the target
  - → TargetProperty
  - → From
  - → To
  - → Duration

→ RepeatBehaviour

→ AutoReverse

File → New → Proj → VC# → Silverlight → SLAppli

under <UserControl>

<StackPanel x:Name="SPlayout">

<StackPanel.Resources>

<Storyboard x:Name="MyStoryBoard">

<DoubleAnimation storyboard.TargetName="MyAnimatedRectangle" storyboard.TargetProperty="Opacity" From="1" To="0" Duration="00:00:5" RepeatBehaviour="~~True~~" "ForEver" AutoReverse="True"/>

</Storyboard>

</StackPanel.Resources>

<Rectangle width="100" Height="100" Fill="Red"
x:Name="MyAnimatedRectangle"

</StackPanel>

In .cs File, within the const

MyStoryBoard.Begin();

→ Adding Easy Effects for the animations

```
within user control
    <Canvas x:Name = "Layout">
        <Canvas.Resources>
            <Storyboard x:Name = "MyStoryBoard">
                <DoubleAnimation Storyboard.TargetName = "Ball
Storyboard.TargetProperty = "(Canvas.Top)">
From = "10" To = "300" RepeatBehaviour = "ForEver">
<DoubleAnimation.EasingFunction>
<BounceEase Bounces = "2" Bounciness = "3"
Easing Mode = "EaseIn" />
</DoubleAnimation.EasingFunction>
</DoubleAnimation>
</Storyboard>
</Canvas.Resources>
<Ellipse x:Name = "Ball" Fill = "Blue" width = "50"
Height = "50".
</User control>
```

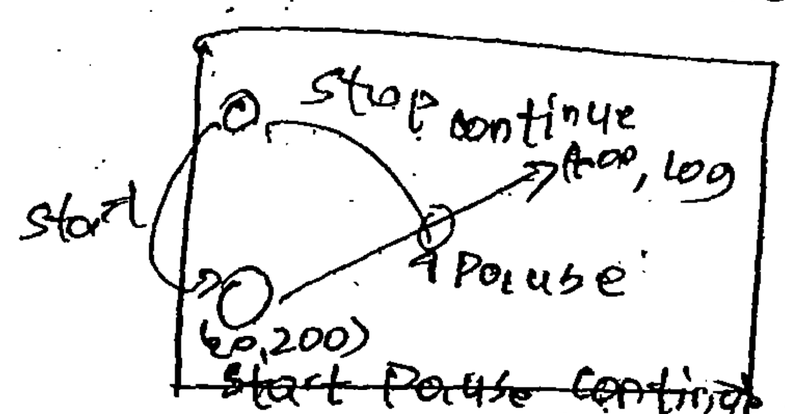
*Wherever an animation targets on the color property then color animation should be used.

* Storyboard for the color Animation! → used to set colors.

```
<ColorAnimation
Storyboard.TargetName = "mySolidColorBrush"
Storyboard.TargetProperty = "Color" From = "Red"
To = "Green" Duration = "0:0:10" />
</Storyboard>
</StackPanel.Resources>
< StackPanel.Background>
< SolidColorBrush x:Name = "mg solid ColorBrush"
~~width~~ Color = "Red" />
</StackPanel.Background>
```

* Point Animation :- whenever an animation targets on the point datatype of a shape then point animation should be used.

```
<Canvas>
  :
```




```
<PointAnimation Storyboard.TargetProperty = "Center"
Storyboard.TargetName = "myellipse" Duration = "0:0:5"
From = "20,200" To = "400,100" RepeatBehaviour
= "Forever" />
</Storyboard>
```

```
* mystoryboard.Begin()   // Begin (button_click)

    // Pause (button_click)
    mystoryboard.Pause();

    // continue (button_click)
    mystoryboard.Resume();

    // Stop (button_click)
    mystoryboard.Stop();
```

Point Animation using code:-

```
    <Storyboard x:Name="myStoryboard">
    <PointAnimation x:Name="myPointAnimation"
    Storyboard.TargetProperty="Center"
    Storyboard.TargetName="myAnimatedEllipseGeometry"
    Duration="0:0:2" />

    </Storyboard>
```

In .cs

```
canvas(mouseleftbuttondown)

double newx = e.GetPosition(null).x;
double newy = e.GetPosition(null).y;
Point mypoint = new Point();
mypoint.x = newx;
mypoint.y = newy;
```

myPointAnimation.To = myPoint;

myStoryboard.Begin();

Supporting Drag & Drop functionality in SL :-

<Rectangle

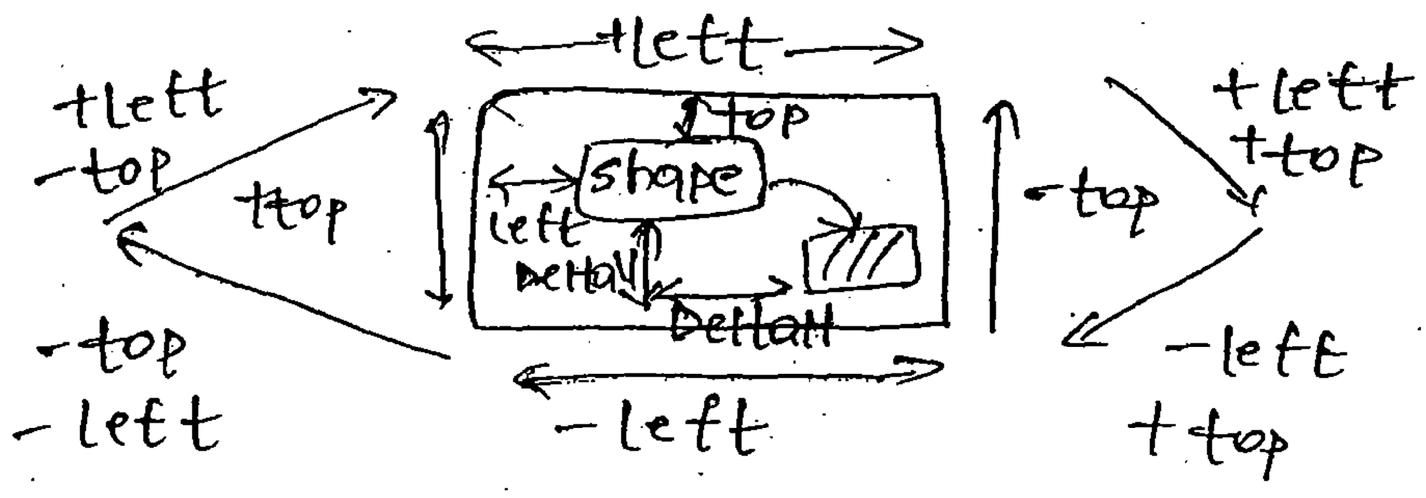
MouseLeftButtonDown = "Handle-MouseDown".

MouseMove = "Handle_MouseMove"

MouseLeftButtonUp = "Handle_MouseUp"

Canvas.Left = "30" Canvas.Top = "30", Fill = "Red"

Width = "50" Height = "50" />



bool isMouseCaptured;

double mouseVerticalPosition;

double mouseHorizontalPosition

// Global variables.

// Mouse Down

Rectangle item = Sender as Rectangle;

mouseVerticalPosition = Args.GetPosition(null).Y;

```
mousehorizontalPosition = args.GetPosition(null).x;
isMouseCaptured = true;
item.CaptureMouse();
}

// Mouse move

Rectangle item = sender as Rectangle;
if (isMouseCaptured)
{

    double deltaV = args.GetPosition(null).y -
mouseVerticalPosition;

double deltaH = args.GetPosition(null).x -
mousehorizontalPosition;

double newTop = deltaV + (double)item.GetValue(
Canvas.TopProperty);

double newLeft = deltaH + (double) item.GetValue(
Canvas.LeftProperty);

//set new position of object
item.SetValue(Canvas.TopProperty, newTop);
item.SetValue(Canvas.LeftProperty, newLeft);
```

```
//update position global var

mouseVerticalPosition = args.GetPosition(null).Y;

mouseHorizontalPosition = args.GetPosition(null).X;

    }

}

public

    //MouseUp

Rectangle item = sender as Rectangle;

isMouseCaptured = false;

item.ReleaseMouseCapture();

mouseVerticalPosition = -1;

mouseHoritontalPosition = -1;
```

Key Frame Animation:-

It is used to perform an animation based on the time line & key frames.

windows → object & Timelines → click on + symbol → New → Storyboard resource Name = myStoryboard → OK

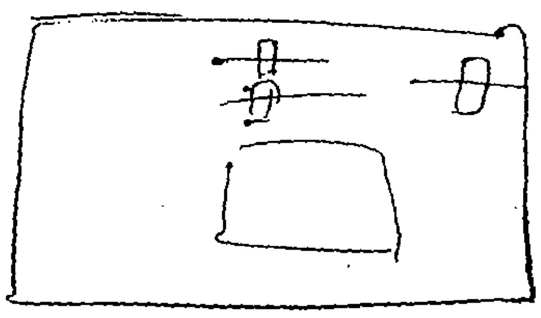
once completed come to Design mode.

Projects → XAML.cs file

```
myStoryBoard.Begin();
```

Projectoions in SL 3.0 :-

It is used to project the content based on x, y, z axis.



Assets → locations → Slider

Go to source code

< Image.Projection >

< Plane Projection x:Name = "Projection"

CenterofRotationX = "0.5"

CenterofRotationY = "0.5"

CenterofRotationZ = "0.5"

</ Plane Projection>

</ Image.Projection>

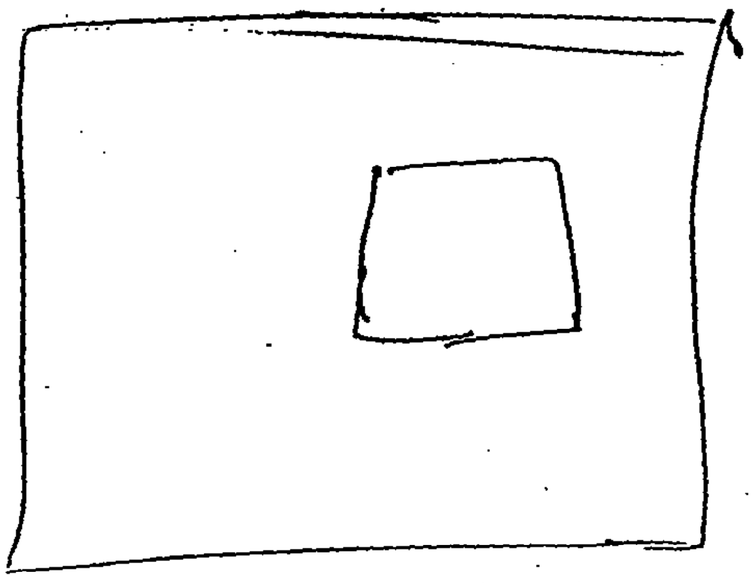
For all the sliders set the following properties

Maximum = 360 Minimum = -360

Value : Value = "{BindingElementName = Projection, Mode = TwoWay , Path = RotationX }"

Performing Flipping in SL :- 3.0

For User control



<UserControl.Resources>

< Style x:Key = "_imageStyler

TargetType = "Image" >

<Setter Property = "margin" value = "275, 0, 0, 0" />

= "width" = "275" />

= "Stretch" = "uniform" />

<Style>

<UserControl.Resources>

within grid.

<Grid x:Name = "layoutRoot">

<Image Style = "{StaticResource_imageStyle}" // for one image

source = "A.jpg"

MouseLeftButtonUp = "Flipimage" />

In .cs file:- story board, Animations & Projections.

private int _zindex = 10; //global var.

private void Flipimage(object sender, System.Windows.

Input.MouseButtonEventArgs e)

{

Image image = sender as Image;

// Image is on top of all other images

image.SetValue(Canvas.ZIndexProperty, _zIndex++);

// create storyboard.

storyboard flip = new Storyboard();

```
//create animation

DoubleAnimation animation = new DoubleAnimation()
{
  Duration = new TimeSpan(0,0,1) //object_initialize
};

// Add the animation to the storyboard
flip.Children.Add(animation);

// create a projection if doesnt have one
if (image.Projection == null)
{
//Set the center of rotation to -0.01, which will
put a little space between the images
  image.Projection = new PlaneProjection()
  {
    CenterOfRotationX = -0.01
  };
}
PlaneProjection projection = image.Projection as
                PlaneProjection;

//set the from & to properties based on the current flip
direction of the image
  if (projection.RotationY == 0)
  {
    animation.To = 180;
```

```
else
  {
   animation.From = 180;
   animation.To  = 0;
  }
// Tell the animation to animation the image's plane
Projection object
   Storyboard.SetTarget(animation, projection);

// Tell the animation to animation the Rotation Y Property
Storyboard.SetTargetProperty(animation, new PropertyPath
 (PlaneProjection.RotationYProperty));
   // Tell the animation to start
      flip.Begin();
```

Using DataContext objects with SL :-

class → Employee.

```
public class Employee
 {
   public int Empno {set;get;}
   Public string Ename {set;get;}
   public string Job {set;get;}
*→ public string PhotoURL {set;get;}
   Public Employee ()
   {
   }
```

String pu

```
public Employee (int eno , string ename , string job)
{
    this.Empno = eno;
    this.Ename = ename;
    this.Job = job;
} this.PhotoURL = purl;
                string
public override ToString()
{
    return Ename + "works as" + Job;
}
}
}
```

lblmsg

TextBlock

In source.
~~In~~ under TextBlock.

Text="{Binding}"

In XAML

```
Employee emp = new Employee (101, "sekhar",
"salesman");

lblmsg.DataContext = emp;
```

Take ComboBox ctrl

ComboBox

XAML code

```
using System.Collections.ObjectModel;
    public partial class . . .
    {
    public ObservableCollection<Employees>
```

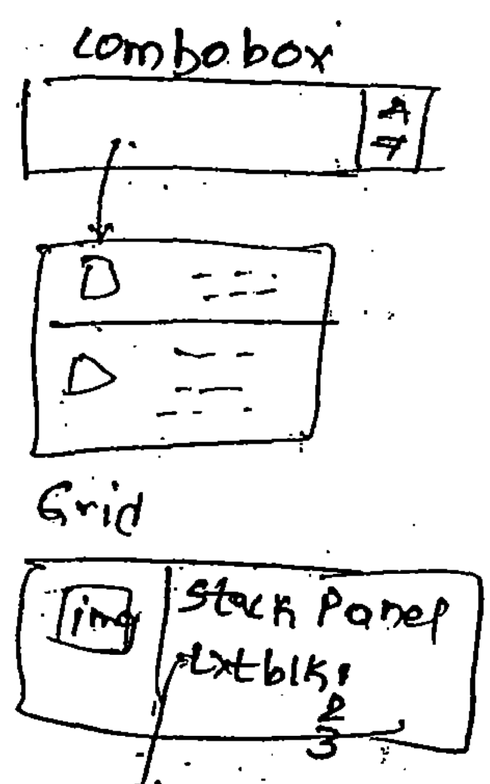
```
emps = new ObservableCollection<Employee>();

public MainPage()
{
  - - -

  emps.Add (new Employee (101, "Sekhar", "Salesman",
  "Sekhar.jpg"));
  emps.Add (new Employee (102, "Srinivas", "Trainer",
  "srinivas.jpeg"));
  cmbEmployees.DataContext = emps;
```

For Combobox.

```
    ItemsSource="{Binding}"
<comboBox.ItemTemplate>
<DataTemplate>* can take only one ctrl
copy & paste the Grid & StackPanel here.
<!DataTemplate>
  ⋮
  <!Grid.ColumnDefinitions>
<Image Margin="8" width="100" Height="100"
Source="{Binding Path=PhotoUrl}"/>
<TextBlock x:Name="tbl.Empno" Height="30" Margin="8,0"
TextWrapping="Wrap" Text="{Binding Path=Ename}"/>
                "{BindingPath=Job}"/>
```



Using Datagrids in SL:-

Datagrid ctrl locations → DG

```
Using System.Collections.Generic;

    list<Employee> emps;

    emps = new list<Employee>();

    emps.Add (new Employee() {Empno=101, Ename="sekhar",
    salary=1000, photoURL="sekhar.jpg"});
    - - - - - -

        DataGrid1.ItemsSource = emps;
```

Customizing Data grid control :- boolean → Datagrid check Box column

In XAML

Customization → DatagridTemplate column

To Display txtblock → Datagrid Text column

```
<data:DataGrid x:Name="DataGrid1" Margin="8"
AutoGenerateColumns="False">
    <data:DataGrid.Columns>
    <data:DataGridTextColumn Binding="{Binding Empno}"
Header="Employee Number"/>
    <data:DataGridTextColumn Binding="{Binding Ename}"
Header="Employee Name"/>
    <data:DataGridTextcolumn Binding="{Binding Salary}"
Header="Employee Salary"/>
    <data:DataGridTemplateColumn.CellTemplate>
        <Data template>
```

<Image Source = "{Binding Photourl}" width = "100"

Height = "100" />

</Data Template>

Different methods for defining the class for Data Access:

* whenever a class definition is defined using bindable [Bindable(false)] at the class level then only structure of that class will be visible, but data will not be binded to the control.

* whenever the class is defined using [Bindable(true, BindingDirection.OneWay)] then data will be binded to the control but it will not support any manipulations.

* In order to define a property as a Readonly property [Bindable(true, BindingDirection.OneWay)].

* In order to define read & write property : [Bindable(true, BindingDirection.TwoWay)].

* In order to provide validations for the columns

```
[
Class Employee
{
  [Display(Name = "Employee Number :")]
```

[Required (ErrorMessage = "Employee number cant be empty

public int Empno {set; get;}

[Display (Name = "Employee Name:")]

[String length (25, ErrorMessage = "Max size exceeded")]

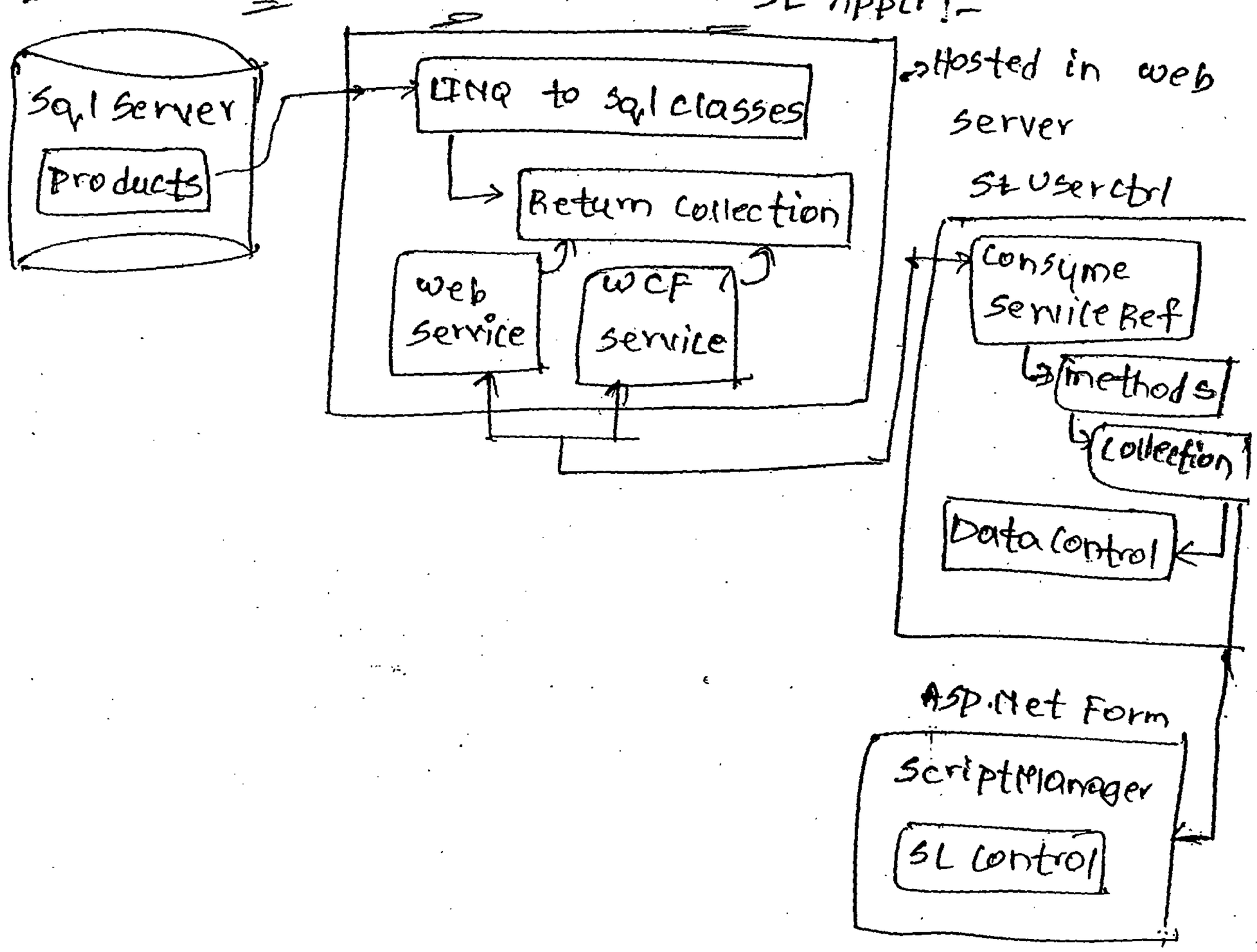
public string Ename {get; set;}

[Display (Name = "salary")]

[Range (1000, 50000)]

public int sal {get; set;}

Reading the data from the Database in SL Appli :-



File → website → WCF Service → http://localhost/WCF4SL → OK
(→ not file system)

website menu → Add new item → linq to Sql Classes → Name = Northwind DB. → Add dbml

ServerExplorer → Add Northwind DB.

Tables in linq data source → Category, Product.

Add new item → SL enabled WCF service → WCF4SL.svc (Service) → Add

```
using System.Collections.Generic;
[ServiceContract(Namespace="")]
[AspNetCompatibilityRequirements(RequirementsMode =
AspNetCompatibilityRequirementsMode.Allowed)]
public class WCFService4SL
{
    [OperationContract]
    public List<string> GetProductsByCategoryName(
string CategoryName)
    {
    NorthwindDBDataContext dc = new NorthwindDBDataContext();
var products = from pinfo in dc.Products where
pinfo.Category.CategoryName == CategoryName
select pinfo.ProductName;
    return products.ToList();
    }
}
```

Service located at http://test/wcf4SL/WCFService4SL.svc/wsdl

Prepare SL Appli

New proj → SL Appli → [OK] Project menu → Add Service Reference →

Address → location of wcf service → [Go] → [OK]

XAML:-

```
<StackPanel orientation="Horizontal">
<TextBlock x:Name="lbl1" Text="CategoryName" />
<TextBox x:Name="txtCategoryName"/>
<Button x:Name="bthSearch" Content="Search Products"
Click="bthSearch_Click" />
</StackPanel>
<StackPanel orientation="Vertical"> —O
```

NOTE:- Under usercontrol at the top - to define a datagrid

xmlns:data under .Net tab.

Project menu → Add Reference → System.Windows.Controls.Data

```
xmlns:data="clr-namespace:System.Windows.Controls;
assembly=System.Windows.Controls.Data"
```

O— `<data:DataGrid x:Name="DataGrid1" />`

In page.xaml.cs

```
//Search (button_click)
Products
ServiceReference1.WCFService4SL obj = new
ServiceReference1.WCFService4SL();
```

obj.GetProductsByCategoryName Completed += new EventHandler (GetResults);

obj.GetProductsByCategoryName Async(txtCategoryName.Text);

}

private void GetResults (object sender, GetProductsByCategoryNameEventArgs e)

{

DataGrid1.ItemSource = e.Results;

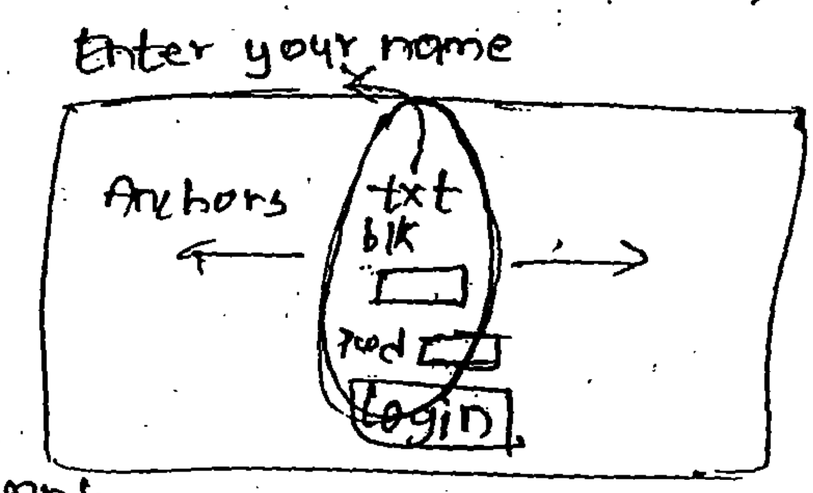
}

WPF:— Expression Edition (Windows Presentation Foundation).

New project → WPF

VS.Net

WPF Application → OK



Effects are supported from WPF 3.5 only.

under <Ellipse

- - - -

<Ellipse.Effect>

<DropShadowEffect BlurRadius = "4"

color = "Black" />

For window Property AllowTransparency - ☑ WindowStyle = None

In XAML: Title = - - - -

Background = "transparent" >

Click on Events tab of the property window

. Mouseleftbutton down → double click to enter .cs file

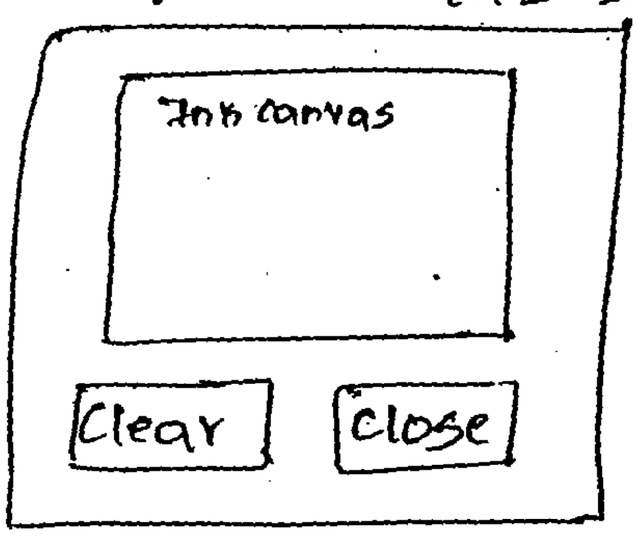
```
// Mouse left button down
this.DragMove();
```

```
// login (button_click)
String usr, pwd;
usr = textBox1.Text;
pwd = TextBox' passwordBox1.Password;
MessageBox.Show("User name: "+usr+"\n Password :"+
                                                pwd);
```

Working with InkCanvas in WPF:-

Proj → Right click on Toolbox → choose Items → WPF components tab →

→ select InkCanvas control → [OK]




```
// clear (button_click)
inkCanvas1.Strokes.Clear();
// close (button_click)
Application.Current.Shutdown(); // WPF.
```

To execute :- In solutionExplorer → App.xaml.

```
StartupUri = "window2.xaml" >
```

proj menu in win form

→ Add new item → Dataset → ~~Bab~~ Drag & Drop the DB table columns onto the form. we will have navigations taken care by Table adapter.

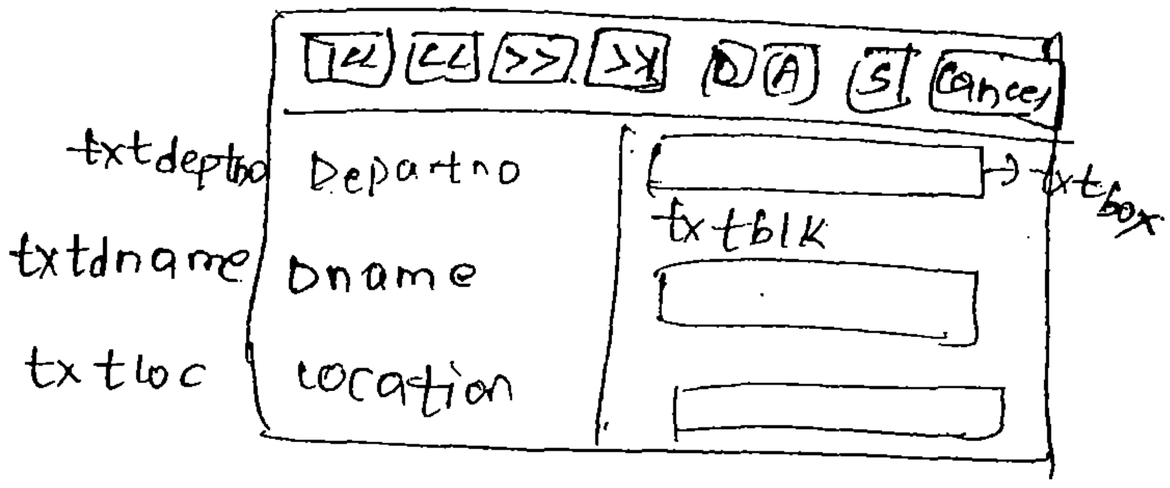
Interacting with Database in WPF :-

Proj menu → Add new Item →

Select dataset → name = Northwind DS.xsd

Click on server explorer link

select Dept table, Drag & Drop on the dataset -




```
using System.Data;
// windows decla
  NorthwindDS ds = new NorthWindDS();
NorthWindDSTTableAdapters.DeptTableAdapter dta =
new WpfApplication1.NorthWindDSTableAdapters.Dept
TableAdapter();
NorthWindDSTableAdapters.TableAdapterManager tam =
new WpfApplication1.NorthWindDSTableAdapters.TableAdapterManager();
  CollectionView view;

  public window3()
  {
    InitializeComponent();
  }

  // window_loaded
  dta.Fill(this.ds.Dept);
  this.DataContext = this.ds.Dept;
```

```
this.View = (CollectionView) CollectionViewSource.Get
DefaultView (this.ds.Dept))
this.tam.DeptTableAdapter = dta;

    //First (button_click)
{
this.View.MoveCurrentTOFirst();
    }

    //Prev (button_click)
if
(this.View.CurrentPosition>0)
    {
this.View.MoveCurrentTOPrevious();
    }

    //Next (button_click)
    if (this.View.CurrentPosition < this.View.Count-1)
    {
this.View.MoveCurrent ToNext();
    }

    // Last (button_click)
    {
this.View.MoveCurrentToLast();
    }

    // Add (button_click)
var row = this.ds.Dept.NewDeptRow();
        row.Deptno = -1;
this.ds.Dept.AddDeptRow (row);
```

```
this.View.MoveCurrentToLast();
    }

    //Save
    try
    {
    if (this.ds.HasChanges() == true)
      {
        if (this.tam.UpdateAll(this.ds) > 0)
        MessageBox.Show("Data Saved", "Confirm");
      }
    }
    catch (exception ex)
      {
        MessageBox.Show(ex.Message, "Error");
      }
    //cancel (button_click)
    if (ds.HasChanges() == true)
      {
      if (MessageBox.Show("Are sure to rollback", "Confirm",
MessageBoxButton.YesNo, MessageBoxImage.Question) ==
MessageBoxResult.Yes) this.ds.RejectChanges();
      }
```

```
// Delete(button-click)
if (this.view.CurrentPosition > -1)
{
  var rowView = (DataRowView) this.View.CurrentIt
var row = rowView.Row;
row.Delete();
MessageBox.Show("Record Deleted", "Confirm");
}
else
{
MessageBox.Show("No Record selected for delete"
"Error");
}
```

12/29/09

Themes, Stylesheets & Skins:-

Theme:- It is a collection of stylesheets and skin files which is used for providing the styles for the webforms present within the website.

NOTE:

* A website can maintain any no. of themes.
* The collection of all the themes used within a website should be maintained within App_Themes folder.

Stylesheets:- It is used to build the styles for the HTML elements & also it can be extended to provide the styles for the ASP.Net server controls.

Structure of a style sheet file:-

```
tagName
{
  //styles
  ---
  ---
}

.ClassName
{
  //styles
  ---
}
```

```
#idName
{
  //styles
  ---
  ---
}
```

New website -> ASP.Net Website -> Name - [OK]

Right click on Appli -> Add ASP.Net folder -> Theme ->

Name = MyTheme -> Right click -> Add new item -> Stylesheet

Name = StyleSheet.css -> [Add]

```
body
{
 background-color : #E6E6E6;
 color : #000066;
 font-family : Verdana;
 font-size : medium;
}
```

// Build style & set the properties as beside.

```
h1
{
 background-color : #FF0000;
 color : #FFFF00;
 font-family : Jokerman;
 ~~font-~~ 斜体
 text-decoration : underline
}
```

```
.bthClass
{
 background-color : #003366;
 color : #FFFFFF;
 border : medium solid #000066;
}
```

// Build style

```
#txtUser        //Build style.
  {
    background-color:#FFFFCC
    color:#000066;
    font-weight: bold;
  }
```

Add new item → webform → select hi tab.

Demo on Themes, Style sheet and Skin Files

Username [ ]

[Register] [Login]

*In order to apply a theme for the webform

(F4) Properties → Document Properties → Theme = My Theme

StyleSheetTheme = My Theme

*In order to apply the styles for the webserver controls

→ select the control → Property → CSSclass = bthClass.
Ex:-Register, login

* In order to apply the style based on ID

→ Select ctrl → Property → ID = txtUser
Ex:-textbox

Skin Files:- It is used to build the styles for the ASP.Net controls.

NOTE

* The extension for the skin file will be .Skin

& the skin file should always be maintained within a theme.

* A theme may contain a collection of stylesheets and skin files.

Right click on My theme → Add new item → Skin File.

Name = SkinFile.skin → [Add]

copy & paste the code for the controls here.

Remove Id & Text properties from the code after posting.

Skinfile.skin:

```
<asp:Button runat="server" BackColor="#6666 99"
BorderColor="Black" BorderStyle="solid" BorderWidth=
"2px" Font-Bold="True" ForeColor="white"/>

<asp:TextBox runat="server" BackColor="#FFFFCC"
ForeColor="#000066"> </asp:TextBox>
```

NOTE :-

* In order to apply the theme for the entire website then in web.config after <system.web>

```
<pages theme="MyTheme" StyleSheetTheme =
"MyTheme"/>
```

12-31-09

Master Pages:- It is used to create a template for the ASP.Net web site.

NOTE:-

* A website can have any no.of master pages.
* Master pages can be nested i.e one master page can be created based on other master page.
* The extension for the master page should be ".master".
* Master pages cannot be execated.
* The pages which are created using the master page is called as "Content Page".

logo Welcome to ASP 262 Batch Site

Home Services Feedback Contactus

Copyright © sekharonline (All Rights Reserved)

Advertise with us Problems with us

File → new website → C# → Name = masterpages262

website (menu) → Add new Item → Master Page (template)

Content Placeholder (default control) → Remove → yes

Table (5r, 1c)

To get image → Righ click Appli → Add existing item → select the image

1	Image lbl			
2 Hyperlink1	1	2	3	4
3				
4				
5	Hyperlink5	6		

→ Propery of Image ctrl
Image Url = select the image file copied to the Appli folder

Image Align → Abs Middle

→ Label :-
Text = welcome to asp 262 batch official site

→ Hyperlink 1
Text = Home
Navigateurl = Default.aspx

2
Text = Services
NavigateURL = Services.aspx

3
Text = Feedback
Navigateurl = Feedback.aspx

4
Text = Contact us
navi url = contact.aspx

→ In 3rd row place the ContentPlaceholder control

→ 4 row Align to center. write copy write → click on split

```
<td align = "center"> // for © symbol
Copyright &copy;
```

→ 5 row Align = center

HL 5
Text = Advertise with us
navi url = email: problems@asp262 batch.com

HL6
Text = Problems with us
Navi url = email: ajs@asp262 batch.com

click on source tab → scroll to top <title> underhead:

<title> ASP262Batch.com </title>

<body top margin = "0" leftmargin = "0" >

<table width = "100%" >

→ Prepare the content page.

website [menu] → Add new Item → web Form → Name = services.aspx

☑ Place code in seperate File ☑ select master page

→ [Add] → Displays the list of master pages →

masterpage.master → [OK]

<%@ Page Title = "ASP262Batch.com

Design:-

Services provided

Insert table → then type Services provided.

Bulleted list control :-

Items = Add → • Projects • Courses • workshops → [OK]

Bullet style = Custom Image, Bullet Image Url =

Feedback page

Add new item → webform → Name = Feedback.aspx.

<Title "ASP262Batch.com Feedback"

Design → take a table within another table.

Feedback Form

From

Subject

Enter your comments

Submit

Contact us:
website → contact.aspx.

<Title ASP262Batch.com - contactus >.

Design

ASP262Batch
HUDA COMPLEX
AMEERPET
HYDERABAD.

Delete Default.aspx as its not a content page.
(or)

Default.aspx Property → MasterPageFile = masterpage.master
ok

even then no content is present.
Go to source → After the page directive, remove it

<%

%>

- - - → Remove this

Click on content PlaceHolder tasks → Create custom content → we can drag & drop now.

make Default.aspx as start page.

→ If design of master page needs to be changed

change only the masterpage. master design & it will be reflected for all other pages.

To export a website as a template :-

File [menu] → Export Template → choose Template type

⊙Project Template → [Next] → Select Template option

Default Icon → Select Icon → Template Name =

ASP.Net 262Batch Website → Template Description = _____

→ [Finish] we get a zipfile this should be given to client.

VS.Net → New Website → My Templates → ASP.Net 262 Batch website.

1-1-2010

State Management :- It is used to maintain the state of the user within the page across the page present within the website. It is also used to maintain the state of all the users accessing the website.

ASP.net supports state management at 3 levels :

→ Page level Management

→ Session level Management

→ Application level Management

→ Page level management: It is used to maintain the state of the controls across the postbacks within the webform.

NOTE :-

* The state of the control is maintained implicitly for the ASP.Net server controls with the support of "ViewState".
* ViewState maintains the info. as HTML Hidden field with the name "_ViewState" and the value will be maintained in an encrypted format.
* To set the View state explicitly

```
ViewState["Key"] = value;
```

NOTE :-

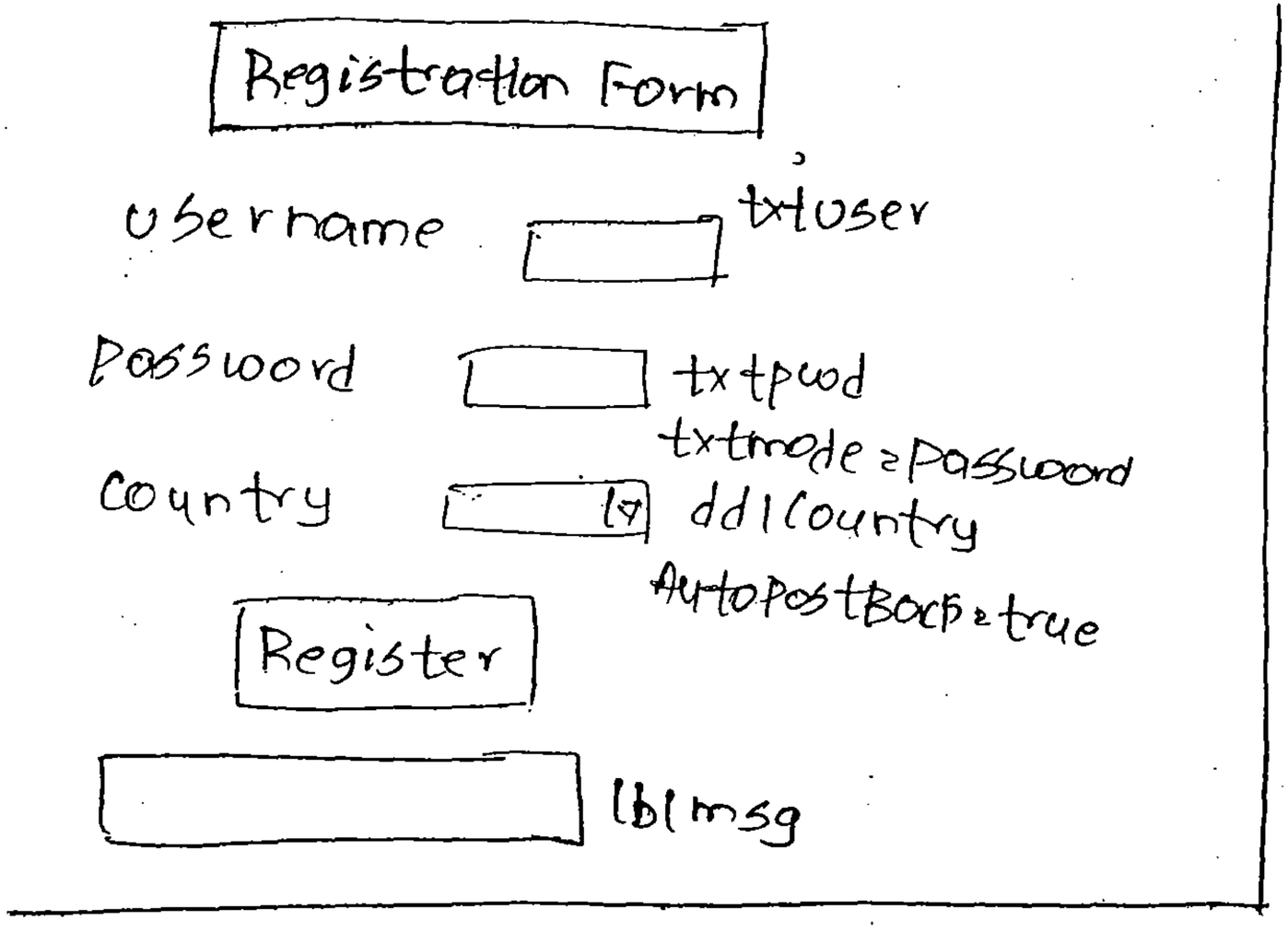
* The value assigned for the View state is considered as an object.
* To read the value from the ViewState as string:

```
variable = ViewState["Key"].ToString();
```

* To read the value from the View State as an object:

```
objectName = (objectType) ViewState["Key"];
```

* For password we have to maintain ViewState explicitly




```
//Register (button_click)
String usr, pwd, country;
usr = txtuser.Text;
pwd = txtpwd.Text;
country = ddlcountry.
SelectedItem.Text;
```

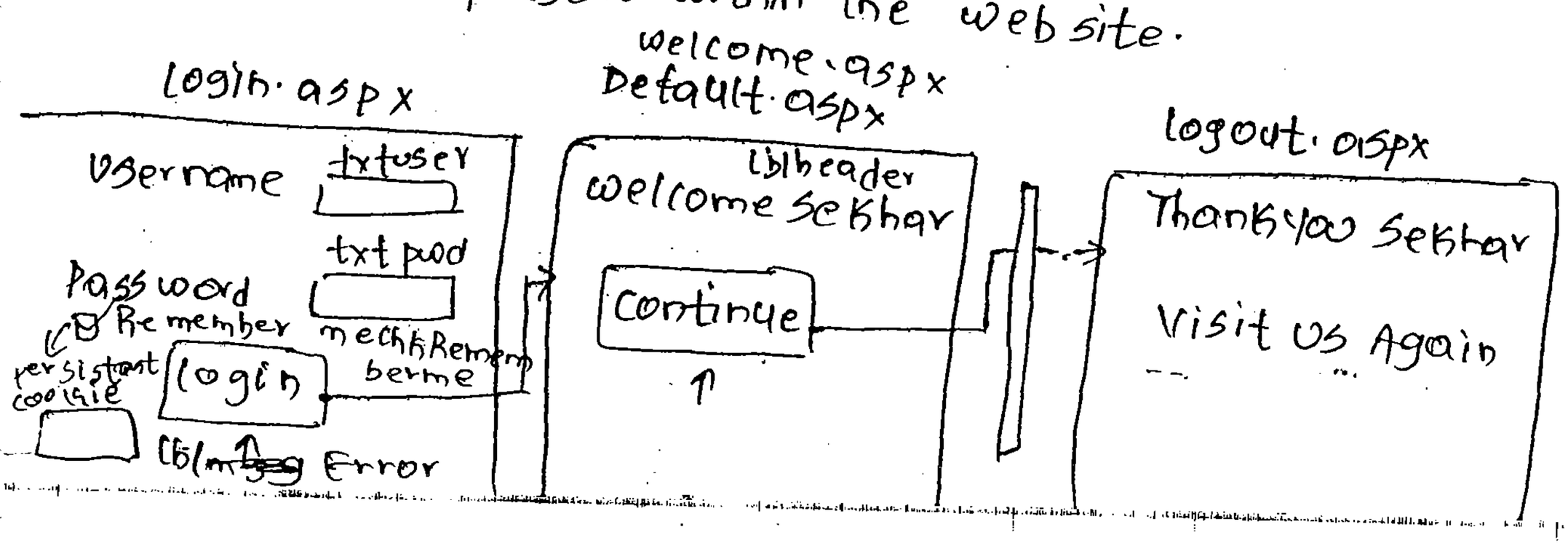
```
lblmsg.Text = "username:" + usr + "<br> Password:" +
pwd + "<br> country:" + country;

// Page_Load

ViewState["pwd"] = txtpwd.Text;
if (ViewState["pwd"] != null)
    txtpwd.Attributes.Add("Value", ViewState["pwd"].
    ToString());
```

→ Session level Management:-

It is used to maintain the state of the user across the webforms present within the website.



To maintain the info across the forms in website

[Session level state Management]

* ASP.Net uses cookies & sessions for managing session level state management.

Cookies :- It is used to maintain the server side info at the client system.

ASP.Net supports two types of cookies :-

(i.) In-Memory or Temp or Non-Persistant Cookies.

(ii.) permanent or Persistant cookies.

(i) In Memory cookie :-

whenever the cookie info is stored within the memory allocated for the web browser then it is said to be In-memory cookie.

(ii) Permanent cookie :-

whenever the cookie info is stored within a file at the client system then it is said to be Perm. cookie.

To set the cookie :

```
Response.Cookies["name"].Value = value;
```

or

```
HttpCookie cookieObj = new HttpCookie("name", value);
```

Response.cookies.Add (cookieobj);

or

Response.AppendCookie (cookieObj);

NOTE :-

* The value assigned for the cookie will always be considered as a string information.
* The default expiration period for the cookies will be 30 min.

TO set the expiration time for the cookie explicitly:-

Response.cookies ["name"].Expires = DateTime;

(or)

cookieObject.Expires = DateTime;

NOTE :-

* If a cookie is defined without expiration then it will be considered as an In-memory cookie & if the cookie is defined with expiration then it will be considered as Persistant cookie

TO read the value from the cookie :-

variable = Request.cookies ["name"].Value;

```
'table for login

  create table ASP262Users
  (
   usr varchar2(50) primary key,
   pwd varchar2(50)
  )

using system.Data;
using System.Data.OleDb;

//login (button_click)
  try
  {
    OleDbConnection cn = new OleDbConnection(
"provider = oracleDb.oracle; user id = scott; password = tiger");

  string sql = "select count(*) from asp262users
  where usr = '" + txtUser.text + "' and pwd '" +
      txtpwd.Text + "';

  OleDbCommand cmd = new OleDbCommand();
      cmd.Connection = cn;
      cmd.CommandType = Command type.Text;
    Cmd.CommandText = sql;
if (cn.State == Connection.State.Closed)
    Cn.open();
```

```
int cnt = int Parse(cmd.ExecuteScalar().ToString());
   cn.Close();
if (cnt >0)
  {
    Response.Cookies["usrname"].Value = txtUser.Text;
     if(chkRemember me.Checked == true)
    Response.Cookies["usrname"].Expires = DateTime.Now.
    AddDays(14); // persistant cookie
    Response.Redirect("welcome.aspx");
  }
else
    {
     lblError.Text = "Invalid username or password";
    }
  } // try block end
catch (Exception ex)
  {
    lblError.Text = "Error:" + ex.Message;
  }
```

For welcome.aspx

```
    //Page load
    string usr = Request.Cookies["usrname"].Value
                 //collecting the cookie value.
```

```
lblHeader.Text = "welcome <font color=red> " +
usr + " </font>";
```

NOTE:-

* whenever a persistant cookie is created then the info about the cookies will be maintained at the follow path:-

C:\Documents and Settings\Administrator\cookies

Username logged in the sys.

Limitations of Cookies:-

1. Cookie Info can store string values only.
2. Cookie Info is always stored at the client system & hence confidential data cannot be maintained.
3. web browsers are having a capability to block the cookies
4. If a browser has blocked the cookies then the websites which uses cookies will not function properly.

Sessions:-

It is used to maintain the state of the user across the web forms present within the website by storing the session info of the client at the web server.

To set the Session:-

```
Session["variable"] = value;
```

or

```
Session.Add("variable", value);
```

NOTE:-

* The value assigned for the session is always considered as an object.

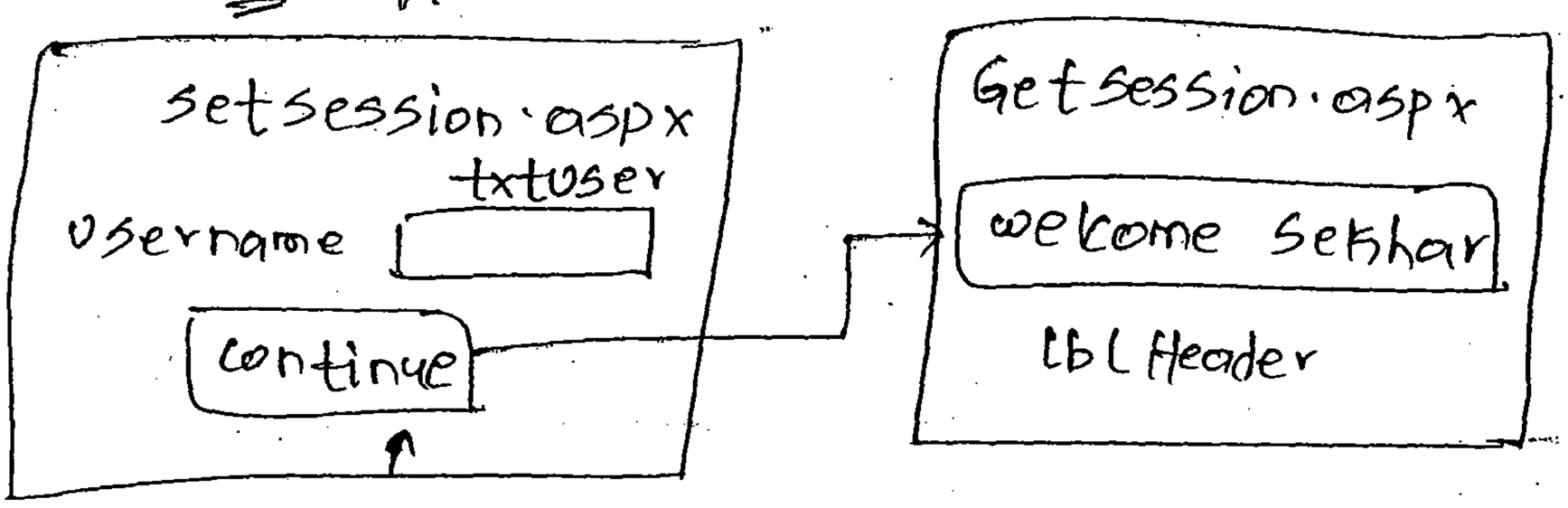
To read the value from the session as string:-

```
variable = Session["variable"].ToString();
```

To read the value from the session as object:-

```
objectName = (objectType) Session["variable"];
```

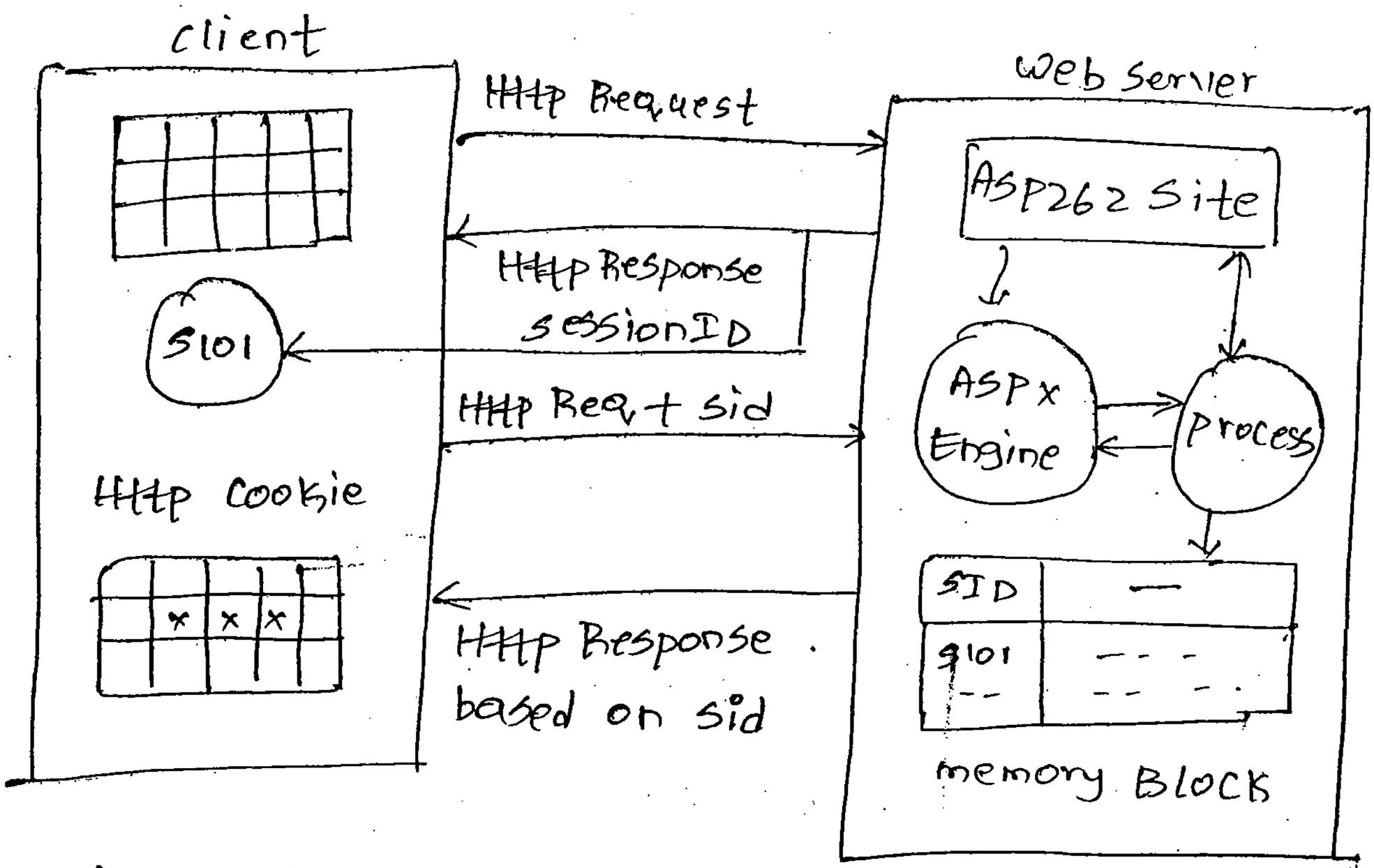
Design Req:-




```
// continue (button-click)
Session["usrname"] = txtUser.Text; //setting session
Response.Redirect("GetSession.aspx");
```

```
//Page_load (Getsession.aspx)
                    => getting session value.
String usr = Session["usrname"].ToString();
lblHeader.Text = "Welcome <fontcolor= red>" +
    usr + "</font>";
```

Process Model of Sessions :-



Observation:-

* By default the session information is maintained as an In process data within the memory block of the web server
* Session Ids are generated and will be maintained at the webserver & the ids are issued to the client where the client system maintains the id as a HHtp Cookie

* If the browser has blocked the cookies then the web which uses cookie based sessions will not function properly.

Cookieless session :-

If used then instead of maintaining the session id of the client as a Http cookie, the session id will be appended to all the requested url. The website will function effectively irrespective of web browser settings.

To set cookieless sessions :-

In web.config file : within <system.web>

<sessionState mode="InProc" cookieless="true"/>

NOTE :-

* The default expiration time for the session information is 20 min.

1/2/10

Profiles :- It is used to maintain the state of the user permanent by storing the value at the sql server database.

NOTE :- In order to set the profile it is mandatory that the profile should be configured within web.config file

* To config in web.config file:

<profiles>

<properties>

<add name = "--" defaultValue = "-"

allowanonymous = "true"] />

</properties>

</profiles>

NOTE:-

* If any property is defined using allowanonymous then it is mandatory to enable anonymous identity.

To set the profile:

Profile.PropertyName = value;

* The value assigned for the profile is always considered as a string information.

To read the value from the Profile:

variable = Profile.PropertyName;

New - website -> name = ASP262Batch

New item -> App-Theme -> name Professional -> Right click -> Add new item -> stylesheet -> Add

with stylesheet.cs -> build style

```
body
{
 background-color : #E7EFFE;
 font-family : Verdana;
 font-weight : bold ; 2
```

Right click on App_Themes -> Add ASP.Net folder -> Theme name = Funky -> Right click -> Add new item -> select a style sheet -> stylesheet.cs -> click on Add

```
{ body
  {
   background-color: # CCFF99;
   color: # FF0000;
   font-family: "Lucinstler script";
   font-weight: bold;
  }
```

In web.config after <system.web>

```
<system.web>
 <profile>
  <properties>
   <add name="FullName" defaultValue="Guest"
 allowanonymous="true"/>
   <add name="MyTheme" defaultValue="Professional"
 allowanonymous="true"/>
  </properties>
 </profiles>
 <anonymousIdentification enabled="true"/>
```

web.config

```
<pages Theme="Professional" StyleSheetTheme="Professional"
 <controls>
```

Default.aspx

~~tab~~ [lblHeader]

[Set Profile]

```
//Page_load (Default.aspx)
  string usr = Profile.FullName;
lblHeader.Text = "welcome" + usr;
// Set Profile (button_click)
Response.Redirect("SetProfile.aspx");
```

New Page → SetProfile.aspx

Enter FullName [ ] → txt fullname

Select Theme [ ] → ddlTheme, Items Add → Professional, Funky

[Update]

```
// Page_load (SetProfile.aspx)
  if (Page.IsPostBack == false)
{ txtFullName.Text = Profile.FullName;
ddlTheme.Items.FindByText(Profile.MyTheme).
  Selected = true;
}
// Update (button_click)
Profile.FullName = txtFullName.Text;
Profile.MyTheme = ddlTheme.SelectedItem.Text;
Response.Redirect("default.aspx");
```

search the ~~value~~ item

NOTE:-

* If any customization has been performed on the profile then the information will be maintained within

ASP.Net Profile table.

NOTE :-

* In order to set the theme programatically the following code should be written in all the webforms present within the website.

Above the .page_load in all the forms

```
public void Page_PreInit (object sender, EventArgs e)
{
pageTheme = Profile.MyTheme;
}
```

Adv. State Management :-

Enabling or Disabling the Sessions :

TO DO:

```
<%@ Page language = "C#" EnableSessionState = "true|false"%>
```

NOTE :-

* whenever the session state has been disabled in any webform then the session object should not be used within the webform.

MatchFinder.com Step 1

User Details

Name

Age

Sex ○Male ○Female

Country

Continue

MatchFinder.com Step 2.

Parthers Details

Age

Country

Preview

MatchFinder.com Preview

User Details

Name :

Age :

Country :

Parthers Details

Age :

Country :

Search

MatchFinder.com Search

Please wait our expert team is searching a suitable match

Results

MatchFinder.com Results

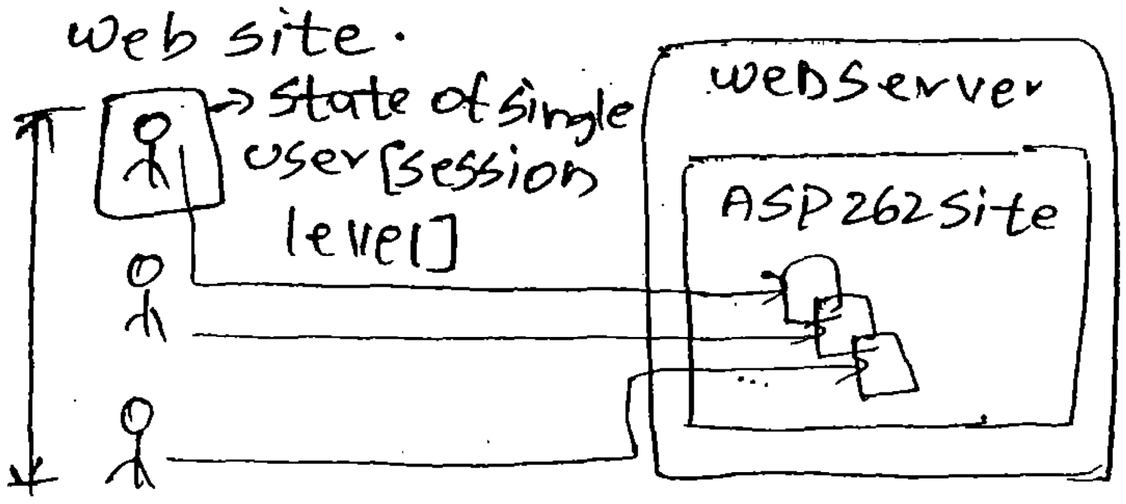
Congrats Mr. Sekhar. your Parthers name is Ms. Sekhar

Application level State Management :-

It is used to maintain the state of all the users accessing the web site.

To maintain the state of all the users accessing the website

Appli level



To set Application level State Management:

Application["Key"] = Value;

NOTE:-

* The Value assigned for the application object is considered as an object.
* The information assigned for application object will be shared among all the users accessing the website.
* The data assigned for the application object will not have any default expiration
* whenever the web server has been stopped or if the server has been restarted then the data assigned for the Appli. object will be cleared.
* Since the information of the Appli. object will be shared among all the users it is mandatory to lock & unlock the appli. object

To lock appli object:-

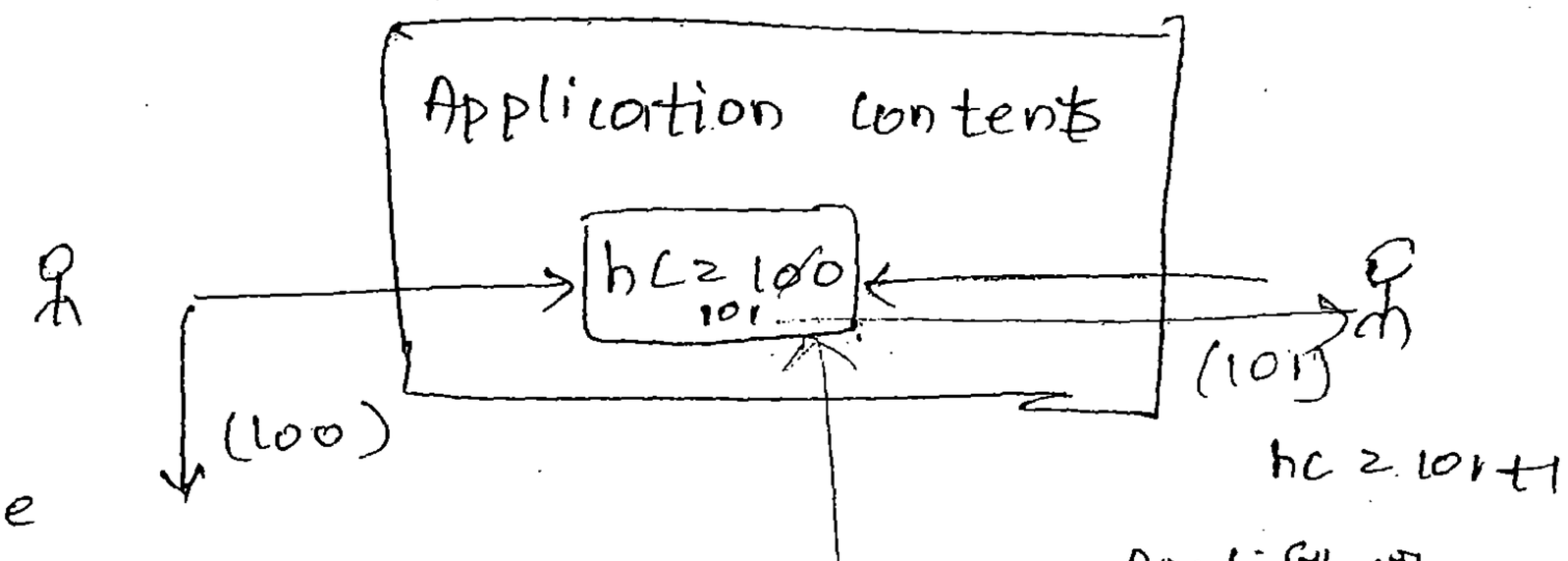
Application.Lock();

to unlock:

Application.Unlock();

NOTE:-

* the lock defined on the appli object will be removed implicitly once the entire page has been processed for the ~~block~~ client.




```
//code
Application.lock();
hc = int.Parse(Appli["hc"]) + 1;
Appl["hc"] = hc;
Application.Unlock();
Page visited by hc user
hc = 100+1
App["hc"] = 101
Page is visited by 101 users
```

Global Application Class (Global.asax):-

It is a collection of event handlers which will be executed implicitly whenever a relevant task has been performed.

Event handlers present within the Global.asax file are:

Application-Start: Executes the code only once when appl is started.

Application_BeginRequest: Executes the code for all the webforms before processing the Page-load code.

Session_Start() Executes the code whenever a new session starts.

Session_End: Executes the code whenever the session of the user is expired.

NOTE:

* In order to expire the session of the user explicitly "Session.Abandon()" should be used.

Application_End: Executes the code only once when the server is being stopped.

NOTE:-

* A website can have maximum of only one Global.asax file.

Right click on Appli → Add new item → Global Application Class → Name: Global.asax

```
void Application_Start (object sender, EventArgs e)
    {
        //Application_Start
        Application.Lock();
        Application["tusers"] = 0;
        Application["msgs"] = String.Empty;
        Application.UnLock();
    }
```

```
//Session_Start
int tusers;
Application.Lock();
tusers = int.Parse(Application["tusers"].ToString()
        +1 );
Application["tusers"] = tusers;
Application.UnLock();
```

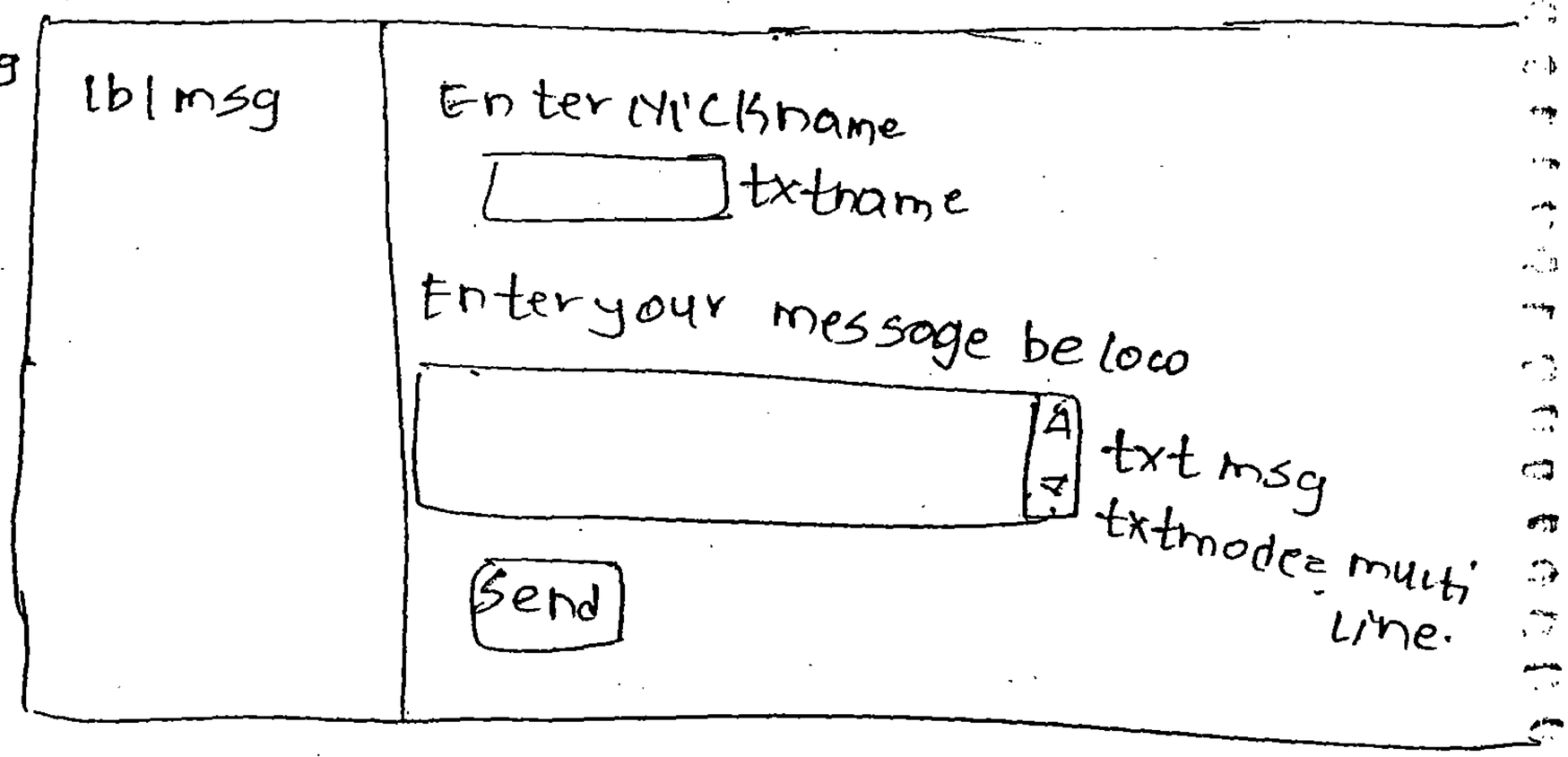
→ Add new → web form → Chat.aspx

ASP262Batch Online Chat Site → (b)

This site is visited by [lbtant]users

Chat Messages below

HTML → div tag




```
//Page_Load
String tusers, msgs;
Application.Lock();
tusers = Application["tusers"].ToString();
```

```
msgs = Application["msgs"].ToString();
Application.UnlockC();
lblcnt.Text = tusers; lblmsg.Text = msgs;
//send (button_click)

String msg, msgs;
msg = if (txtName.Text.length > 0)
      msg = "<font color=green>"+ txtName.Text+
      "</font>:"+ txtmsg.Text;
      else
      msg = "<font color=red>Guest</font>:"+
            txtmsg.Text;
      Application.lockC();
      msgs = Application["msgs"].ToString() +
"<br>" + msg;
Application["msgs"] = msgs;
Application.UnLock();
lblmsg.Text = msgs;
```

caching

observation:-

* To maintain the state of the control within the page "viewstate" should be used.

* If huge info. of the users in string format has

to be stored & if the data is not confedential or if the data has to be maintained for a longer period of time then 'cookies' should be used.

* If less data has to be stored, if the data is confidential or if the object has to be maintained across the web-forms for a short period of time then sessions should be used.

* If the user.info should be persistant irrespective of login & logout then profiles should be used.

* If the info about all the users accessing the site has to be maintained then 'Application' should be used.

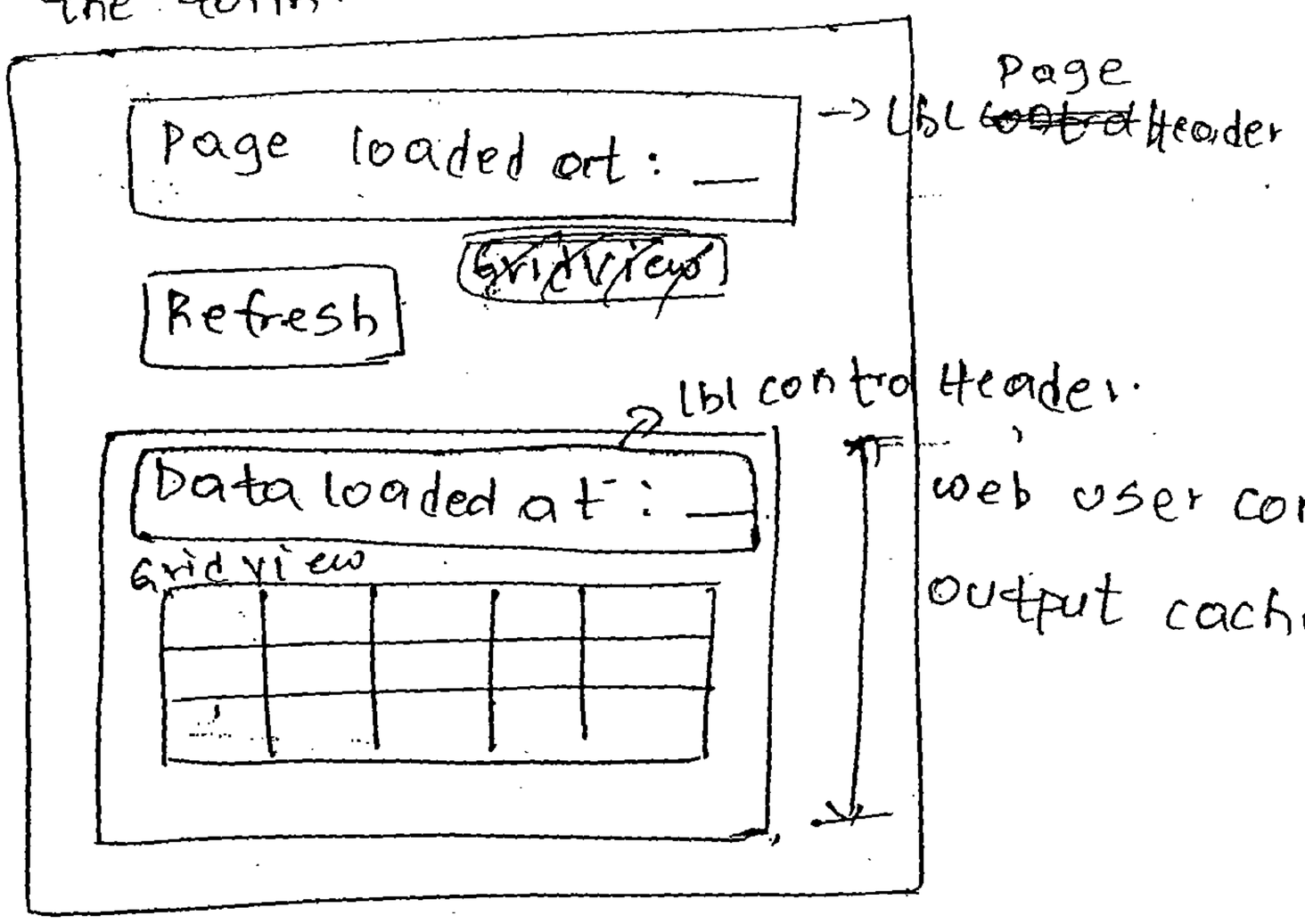
Caching:- It is used to store the result or the output of the webform for a temporary period of time such that for further requests the response will be given from the cached page instead of processing the request.

NOTE:-

* If the cache content is stored at the client system then it is said to be client side caching & if it is maintained at the server side then it is said to be server side caching.

* ASP.Net implicitly set the client side cache.

* Set the output cache for the user control.
* Design the web form as per the requirement.
* Use the webuser control as a server control within the form.



Add new item → web user control → Name = wuc.ascx

```
using System.Data;
using System.Data.OleDb;
//Page_load
    OleDbConnection ch = new OleDbConnection("
provider = OraOleDb.Oracle; User id = scott; Password = tiger"));
OleDbDataAdapter da = new OleDbDataAdapter("Select *
from emp", ch));
    Dataset ds = new Dataset();
    da.Fill(ds, "emp");
```

GridView1.DataSource = ds.Table["emp"];

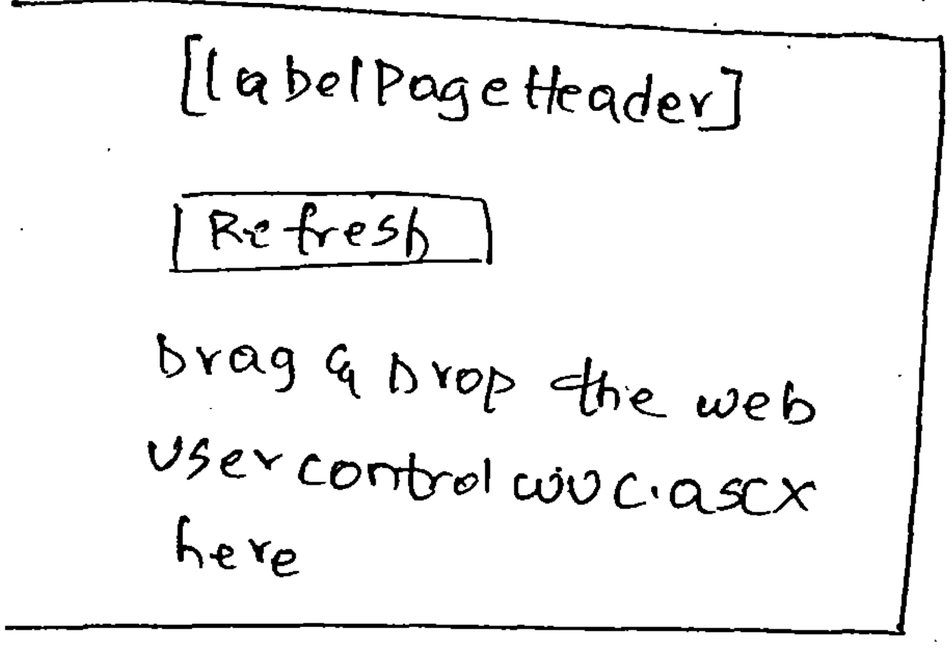
GridView1.DataBind();

Lbl ControlHeader.Text = "Data loaded at" + DateTime.Now.ToString();

In Source.cs After control Directive

<%@ OutputCache Duration = "600" VaryByParam = "none" %>

Add new webform → Table (3r, 1c) → within the webform Page load.



// Page_load (web form)

lbl Page Header.Text = "Page loaded at" + DateTime.Now.ToString();

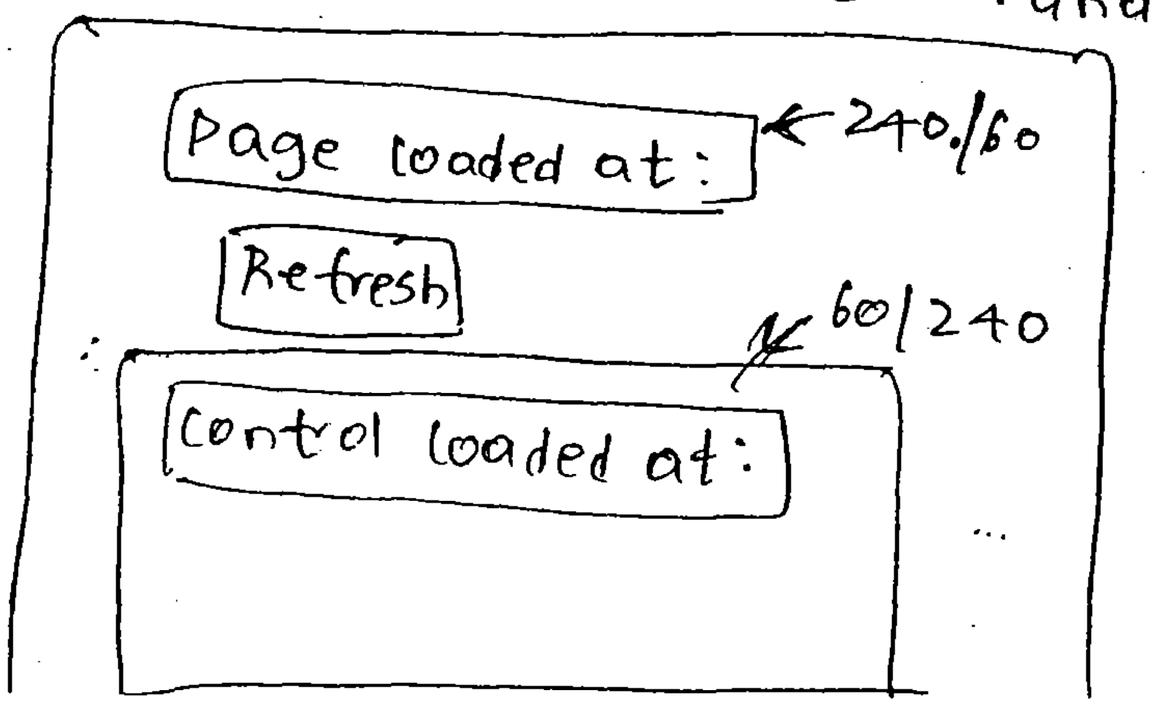
Note :-

* In order to use webuser control manually the following code should be ~~returned~~ written

<% @ Register src = "wuc.ascx" tagname = "wuc" tagprefix = "uc1" %>

- - -

<uc1:wuc ID = "wuc1" runat = "server" />



* In order to clear the client side cache then "Response.Expires = -1" should be used.

* ASP.Net supports the following server side cache :-

→ Page output cache

→ Page Fragmentation cache

→ Substitution Cache

→ Data cache.

→ output cache (Intro in ASP.Net 4.0)

Page output cache :-

It is used to maintain the entire output of the webform as a cache content such that for further requests the response will be given from the cache page.

To set:

<%@ OutputCache Duration = "seconds"

→ VaryByParam = "Control Name | Variable | none" %>
mandatory

New-website → ASP.net website → Table (2r, 1c)

[Label1] → lblHeader	//Page_load
[Refresh]	lblHeader.Text = "Page is loaded at" + DateTime.Now.ToString();

Add the following in the source.cs After Page Directive

<%@ OutputCache Duration="600" VaryByParam="none"%>

Vary By Param :-

If this attribute has been assigned either with a control name or a variable then for every unique value assigned for that attribute an individual cache page will be created & will be maintained at the web server such that relevant cache page will be provided as response.

Table (Br, 1C)

txtCountry

CountryName [ ]

[Refresh]

[ ] lblmsg

```
//Page.IsPostBack == false (only for 1st time page load)
//Page_Load
for -> everytime the page is loaded
if(Page.IsPostBack == true)
{
lblmsg.Text = "Page loaded in " +
txtCountry.Text + " : " + DateTime.
Now.ToString() )
}
```

In source-cs:-

<%@ OutputCache Duration="600" VaryByParam = "txtCountry" %>

(ii) Page Fragmentation Cache :-

It is used to maintain only some specific parts of the webform as cache content instead of the entire web form

To Do :

* Define a web user control with the data to be maintained as cache.