Part B: Ex No: 1- To implement a Text Editor with Cut, Copy, Paste, Close and Save

Aim:

Develop a menu based VB.Net application to implement a text editor with cut, copy, paste, save and close operations.

Pre-Learning Skills

- Understanding the menu based application
- Knowledge in basic tools in text editor

Procedure:

1. Open a New project.
2. Choose the **windows application** from the Templates.
3. Design the Form as follows
4. Change the Form Caption to the Title of the program
5. Drag and Drop required Controls from the tool box and change the name and text properties.
6. Add the menu Properties.
7. Write the following code in the click () event of the Menu option.
8. Save and Execute.

Source Code:

```
1: using System;
2: using System.Windows.Forms;
3:
4: namespace Ex_8
5: {
6:    public partial class Form1 : Form
7:    {
8:        public Form1()
9:        {
10:            InitializeComponent();
11:        }
12:        private void copyToolStripMenuItem_Click()
13:        {
14:            richTextBox1.Copy();
15:        }
16:        private void pasteToolStripMenuItem_Click()
17:        {
18:            richTextBox1.Paste();
19:        }
```

```
20:         private void cutToolStripMenuItem_Click()
21:         {
22:           richTextBox1.Cut();
23:         }
24:         private void clearToolStripMenuItem_Click()
25:         {
26:             richTextBox1.Clear();
27:         }
28:         private void closeToolStripMenuItem_Click()
29:         {
30:             this.Close();
31:         }
32:         private void newToolStripMenuItem_Click()
33:         {
34:             richTextBox1.Clear();
35:         }
36:         private void openToolStripMenuItem_Click()
37:         {
38:             openFileDialog1.ShowDialog();
39:             richTextBox1.LoadFile(openFileDialog1.FileName,
40:                         RichTextBoxStreamType.PlainText);
41:         }
42:         private void saveToolStripMenuItem_Click()
43:         {
44:             saveFileDialog1.ShowDialog();
45:             richTextBox1.SaveFile(saveFileDialog1.FileName,
46:                        RichTextBoxStreamType.PlainText);
47:         }
48:         private void fontToolStripMenuItem_Click()
49:         {
50:             fontDialog1.ShowDialog();
51:             richTextBox1.Font = fontDialog1.Font;
52:         }
53:         private void colorToolStripMenuItem_Click()
54:         {
55:             colorDialog1.ShowDialog();
56:             richTextBox1.ForeColor = colorDialog1.Color;
57:         }
58:     }
59: }
```

Output: (Print your screen for output)

Result :

The menu based application was designed with menustrip and dialog control and the program was successfully executed and then the output was verified.

Viva Questions

1. **How to assign FONT to label during runtime?**

   Label.font.name="Times New Roman";

   Label.font.size=20

2. **What are common dialog controls?**

The common dialog boxes control, which is a custom control, allows your project to use the dialog boxes that are provided as a part of the Windows environment.

3. **Name some showprinter method in Printer object?**

```
cdlPrinter.ShowPrinter
Printer.Copies = cdlPrinter.Copies
Printer.Orientation = cdlPrinter.Orientation
Printer.EndDoc
```

4. Which dialog control allows the user to zoom in on a document?

   a.) PrintDialog

   b.) PrintPreview

   c.) PageSetupDialog

   d.) Both a and b.

Skill Practice;

- List the Dialog Boxes used in Windows Forms of VB.NET.

Dialogbox Control Name	Properties	Method Used

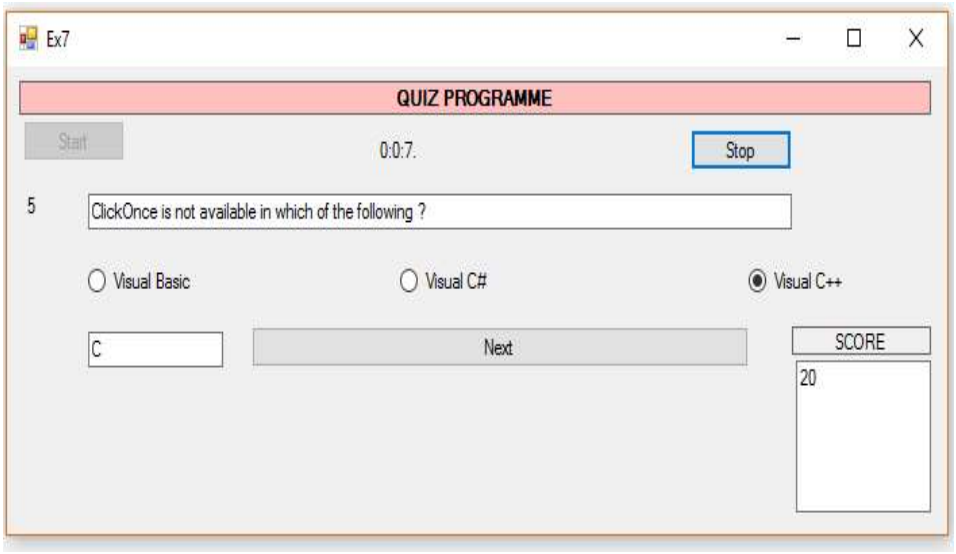
Part B - Ex No: 2 - To perform a quiz of 5 questions using timer control

Aim:

To develop a VB.Net application to perform timer based quiz of 5 questions.

Procedure:

1. Open a New project.
2. Choose the **windows application** from the Templates.
3. Design the Form as follows



4. Change the Form Caption to the Title of the program
5. Drag and Drop required Controls from the tool box and change the name and text properties.
6. Place a button to start the quiz program.
7. To view next question place a button NEXT
8. Place a Timer Control and write coding on the Tick_Event() for timing.
9. Write the following code in the click () event of all the buttons.
10. Save and Execute (press F5).

Source Code:

```
1: using System;
2: using System.Windows.Forms;
3:
4: namespace Ex_9
5: {
6:     public partial class Form1 : Form
7:     {
8:         public Form1()
9:         {
10:             InitializeComponent();
11:         }
12:         int score = 0;
13:         int i = -1;
14:         int a = 0;
15:         DateTime startTime;
16:         string[] questions = new string[]
17:             {
18:                 "The type float can be safely converted
                     to___?",
19:                 "Default Property for a textbox
                     control_____?",
20:                 "What is the operator used to create object?",
21:                 "_______loop repeats group of statement for
                     each element of an array?",
22:                 "A _________variable is one that is declared
                     inside a method?"
23:
24:             };
25:         string[] answers = new string[]
26:         {
27:                "double", "long", "decimal", "ufloat",
28:                "Multiline", "Password Char", "Enable", "Text",
29:                "++", "+", "New", "object",
30:                "while loop", "do while loop", "foreach loop",
31:                 "All the Above",
32:                  "global","local","external","static"
33:         };
34:         string[] quizAnswers = new string[] { "double",
                "Text", "New", "foreach loop", "local" };
35:         string getSelectedAnswer()
36:         {
37:             if (rdb_A.Checked)
38:                 return rdb_A.Text.ToString();
39:             if (rdb_B.Checked)
40:                 return rdb_B.Text.ToString();
41:             if (rdb_C.Checked)
42:                 return rdb_C.Text.ToString();
43:             if (rdb_D.Checked)
44:                 return rdb_D.Text.ToString();
45:             return "";
        }
```

```
46:         public void check_answer()
47:         {
48:             if (getSelectedAnswer().Equals(quizAnswers[i]))
49:             {
50:                 MessageBox.Show("Correct");
51:                 score++;
52:                 txt_score.Text = Convert.ToString(score);
53:                 btn_next_question.Enabled = false;
54:                 btn_next_question.Visible = false;
55:                btn_start.Visible = true;
56:                 btn_start.Enabled = true;
57:                // btn_start.Text = "Next";
58:             }
59:             else
60:             {
61:                 MessageBox.Show("Incorrect");
62:                 // score--;
63:                 txt_score.Text = Convert.ToString(score);
64:                 btn_next_question.Enabled = false;
65:                 btn_next_question.Visible = false;
66:                 btn_start.Visible = true;
67:                 btn_start.Enabled = true;
68:               //  btn_start.Text = "Next";
69:             }
70:         }
71:         public void load_question()
72:         {
73:             startTime = DateTime.Now;
74:             i++;
75:             if (i < questions.Length)
76:             {
77:                 //txtScore.Text = score;
78:                 txt_question_no.Text = (i + 1).ToString();
79:                 txt_question.Text = questions[i];
80:
81:                 rdb_A.Text = answers[a];
82:                 a++;
83:                 rdb_B.Text = answers[a];
84:                 a++;
85:                 rdb_C.Text = answers[a];
86:                 a++;
87:                 rdb_D.Text = answers[a];
88:                 a++;
89:
90:                 rdb_A.Checked = false;
91:                 rdb_B.Checked = false;
92:                 rdb_C.Checked = false;
93:                 rdb_D.Checked = false;
94:
95:                 btn_start.Enabled = false;
96:                // btn_next_question.Visible = true;
97:                // btn_next_question.Enabled = true;
98:                 timer1.Start();
99:             }
100:        }
```

```
101:        private void btn_next_question_Click()
102:         {
103:             check_answer();
104:         }
105:         private void timer1_Tick(object sender, EventArgs e)
106:         {
107:             TimeSpan span = DateTime.Now.Subtract(startTime);
108:             txt_time.Text = span.Hours.ToString() + ":" +
109:             span.Minutes.ToString() + ":" +
                  span.Seconds.ToString() + ".";
110:             //& span.Milliseconds
111:             //if (span.Minutes == 1)     // sets for 1 minute
112:             if (span.Seconds == 5)  // sets for 5 milliseconds
113:             {
114:                 timer1.Stop();
115:                 check_answer();
116:                 load_question();
117:             }
118:         }
119:         private void btn_start_Click()
120:
121:         {
122:             startTime = DateTime.Now;
123:             load_question();
124:         }
125:     }
126: }
```

Output: (Print your screen for output)

Result:

The windows application is created and designed for a Quiz event with 5 questions. The program code was executed with timer control and the scores were calculated and displayed.

Viva Questions and Answers:

1. **Difference between Panel and Group Box classes?**

   Panel and Group box both can used as container for other controls like radio buttons and check box.

   The difference in panel and group box is Panel

   - In case of panel captions cannot be displayed
   - Can have scroll bars. Group box
   - Captions can be displayed.
   - Cannot have a scroll bar

2. What is the difference between "continue" and "break" statement in C#?

Using break statement, you can 'jump out of a loop' whereas by using continue statement, you can 'jump over one iteration' and then resume your loop execution.

3. What is Timer Control?

Timer Control allows us to set Interval property in milliseconds like (1 second equal to 1000 milliseconds). For example, if we want to set an interval of one minute we set the value at the Interval property as 60000, which means 60×1000.

The Timer Control runs only when its Enabled property is set True, by default Enabled property is always False.

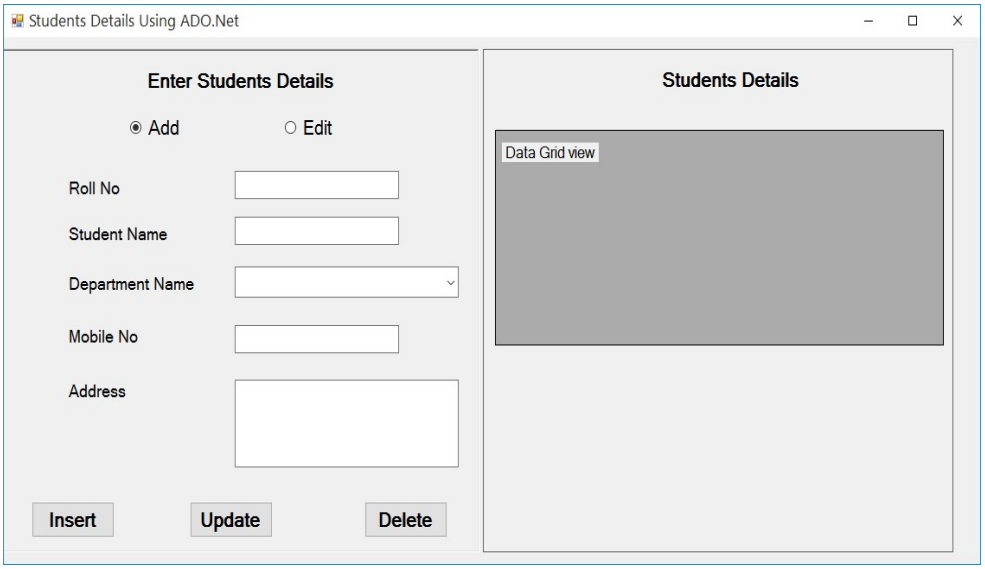
Part B - Ex No: 3 - To insert, update, delete operation using ADO.Net

Aim:

To develop a database application using ADO.NET to insert, modify, update and delete operations.

Procedure:

1. Open a New project.
2. Choose the **windows application** from the Templates.
3. Design the Form as follows



- Change the Form Caption to the Title of the program
- Drag and Drop required Controls from the tool box and change the name and text properties.

4. Write the following code in the click () event of all the buttons.
   1. Open the ADO.Net Connection
   2. Execute Query
   3. Close the Connection
5. Save and Execute (press F5).

Source Code:

```
1: Using System;
2: using System.Data;
3: using System.Data.SqlClient;
4: using System.Windows.Forms;
5:
6: namespace Ex_10
7: {
8:     public partial class Form1 : Form
9:     {
10:         public Form1()
11:         {
12:             InitializeComponent();
13:         }
14:         //CONNECTION OBJECT
15:         SqlConnection con = new SqlConnection();
16:         // COMMAND OBJECT
17:         SqlCommand cmd = new SqlCommand();
18:         string sql;
19:         private void rdb_Edit_CheckedChanged()
20:         {
21:             cmb_Rno.Visible = true;
22:             txt_rno.Visible = false;
23:             btn_save.Text = "Update";
24:             clear();
25:             LoadData();
26:         }
27:         private void rdb_add_CheckedChanged()
28:         {
29:             cmb_Rno.Visible = false;
30:             txt_rno.Visible = true;
31:             btn_save.Text = "Save";
32:             clear();
33:         }
34:         private void rdb_delete_CheckedChanged()
35:         {
36:             cmb_Rno.Visible = true;
37:             txt_rno.Visible = false;
38:             btn_save.Text = "Delete";
39:             clear();
40:             LoadData();
41:         }
42:         private void rdb_select_CheckedChanged()
43:         {
44:             cmb_Rno.Visible = false;
45:             txt_rno.Visible = true;
46:             rdb_add.Checked = false;
47:             btn_save.Text = "Add";
48:            BindData();
49:        }
50:         private void btn_save_Click()
51:         {
52:             int x;
53:             connect();
54:             switch (btn_save.Text)
```

```
55:             {
56:                 case "Save":
57:                     sql = "insert into
                        student_master(student_rno,student_name,dep
                        t_name,address,mobile_no)values(@rno,@stuna
                        me,@dept,@address,@mobileno)";
58:                     cmd = new SqlCommand(sql, con);
59:                     cmd.Parameters.Add("@rno",
                        SqlDbType.Int).Value = txt_rno.Text;
                         cmd.Parameters.Add("@stuname",
                        SqlDbType.VarChar).Value =
                        txt_stuname.Text;
60:                     cmd.Parameters.Add("@dept",
61:                     SqlDbType.VarChar).Value =
                        cmb_deptname.SelectedItem.ToString();
62:                     cmd.Parameters.Add("@address",
                        SqlDbType.VarChar).Value =
                        txt_address.Text;
63:                     cmd.Parameters.Add("@mobileno",
                        SqlDbType.VarChar).Value = txt_mobile.Text;
64:                     x = cmd.ExecuteNonQuery();
65:                     if (x == 1)
66:                      MessageBox.Show("Students Data Inserted");
67:                     else
68:                      MessageBox.Show("Students Data Not
                         Inserted");
69:                      con.Close();
70:                      clear();
71:                      break;
72:                 case "Update":
73:                     sql = "update student_master set
                        student_name=@stuname,dept_name=@dept,addre
                        ss=@address,mobile_no=@mobileno where
                        student_rno=@rno";
74:                     cmd = new SqlCommand(sql, con);
75:                     cmd.Parameters.Add("@rno",
                        SqlDbType.VarChar).Value =
                                    cmb_Rno.SelectedItem.ToString();
76:                     cmd.Parameters.Add("@stuname",
                        SqlDbType.VarChar).Value =
                                    txt_stuname.Text;
77:                     cmd.Parameters.Add("@dept",
                        SqlDbType.VarChar).Value =
                              cmb_deptname.SelectedItem.ToString();
78:                     cmd.Parameters.Add("@address",
                        SqlDbType.VarChar).Value =
                        txt_address.Text;
79:                     cmd.Parameters.Add("@mobileno",
                        SqlDbType.VarChar).Value = txt_mobile.Text;
80:                     x = cmd.ExecuteNonQuery();
81:                     if (x == 1)
82:                         MessageBox.Show("Students Data
                            Update");
83:                     else
84:                         MessageBox.Show("Students Data Not
                            Updated");
```

```
85:                         con.Close();
86:                         clear();
87:                         break;
88:                     case "Delete":
89:                         sql = "delete from student_master where
                            student_rno=@rno";
90:                         cmd = new SqlCommand(sql, con);
91:                         cmd.Parameters.Add("@rno",
                            SqlDbType.VarChar).Value =
                            cmb_Rno.SelectedItem.ToString();
92:
93:                        x = cmd.ExecuteNonQuery();
94:                        if (x == 1)
95:                            MessageBox.Show("Selected Student Data
                              Deleted");
96:                         else
                            MessageBox.Show("Selected Student Data Not
                            Deleted");
97:                         con.Close();
98:                         clear();
99:                         LoadData();
100:                        break;
101:
102:            }
103:            BindData();
104:        }
105:        public void connect()
106:        {
107:            openFileDialog1.ShowDialog();
108:            con.ConnectionString = @"Data
                Source=(LocalDB)\MSSQLLocalDB;AttachDbFilename=" +
                openFileDialog1.FileName + @";Integrated
                Security=True;Integrated Security=True";
109:            con.Open();
110:        }
111:        public void clear()
112:        {
113:            txt_rno.Clear();
114:            txt_stuname.Clear();
115:            txt_address.Clear();
116:            txt_mobile.Clear();
117:            cmb_Rno.Text = "";
118:            cmb_deptname.Text = "";
119:        }
120:        public void BindData()
121:        {
122:            // Call connect function
123:            connect();
124:            cmd.Connection = con;
125:            cmd.CommandText = "select * from student_master ";
126:            DataSet ds = new DataSet();
127:            SqlDataAdapter ada = new SqlDataAdapter();
128:            ada.SelectCommand = cmd;
129:            ada.Fill(ds, "student_master");
130:            dataGridView1.DataSource = ds;
131:            dataGridView1.DataMember = "student_master";
```

```
132:           con.Close();
133:         }
134:         public void LoadData()
135:         {
136:             connect();
137:             cmd.Connection = con;
138:             cmd.CommandText = "select * from student_master ";
139:             cmb_Rno.Items.Clear();
140:             //EXECUTION OF ADO
141:             SqlDataReader dr = null;
142:             dr = cmd.ExecuteReader();
143:             while (dr.Read())
144:             {
145:                 cmb_Rno.Items.Add((dr.GetInt32(0)));
146:             }
147:             con.Close();
148:         }
149:         private void Form1_Load(object sender, EventArgs e)
150:         {
151:             BindData();
152:         }
153:         private void cmb_Rno_SelectedIndexChanged()
154:         {
155:             connect();
156:             cmd.Connection = con;
157:             cmd.CommandText = "select * from student_master
                 where student_rno = '" +
                 cmb_Rno.SelectedItem.ToString() + "'";
158:             SqlDataReader dr = null;
159:             dr = cmd.ExecuteReader();
160:             while (dr.Read())
161:             {
162:                 txt_stuname.Text = dr.GetString(1);
163:                 cmb_deptname.Text = dr.GetString(2);
164:                 txt_address.Text = dr.GetString(3);
165:                 txt_mobile.Text = dr.GetString(4);
166:             }
167:             con.Close();
168:         }
169:     }
170: }
```

Output: (Print your screen for output)

Result :

The ADO.Net windows application was designed and executed the CRUD operations using back end SQL Server 2008 and the result were verified by displaying data in datagridview in front end.

Viva Questions and Answers:

1. What are the namespaces used in ADO.Net to connect to a database?

- The System.Data namespace.
- The System.Data.OleDb namespace – A data provider used to access database such as Access, Oracle, or SQL.
- The System.Data.SQLClient namespace – Used to access SQL as the data provider.

Skill Practice:

❖ Observe and fill out the format

Control Name Used	Control Property Name	Control Property Value
Methods Used		

Part B - Ex No: 4 - Data grid to Add, Edit and Modify Records

Aim:

To develop a VB.Net application using Datagrid to add, edit and modify records.

Procedure:

1. Add Datagrid from toolbox to your windows form
2. Select Data Source property from the Properties window
3. Then click Add Project data Source
4. Select Database in the Data source configuration wizard and click next
5. Click New Connection
6. Browse for the Data source name in the Add connection Wizard
7. Press Test Connection for success connection
8. Click Next and Data set object window will be opened
9. Select the dataset Table to display and click Finish.
10. Save the windows application and Execute.

Source Code:

```
1: using System;
2: using System.Data;
3: using System.Data.SqlClient;
4: using System.Windows.Forms;
5:
6: namespace Ex_11
7: {
8:     public partial class Form1 : Form
9:     {
10:         public Form1()
11:         {
12:             InitializeComponent();
13:         }
14:         //CONNECTION OBJECT
15:         SqlConnection con = new SqlConnection();
16:         // COMMAND OBJECT
17:         SqlCommand cmd = new SqlCommand();
18:         SqlDataAdapter ada;
19:         DataSet ds = new DataSet();
20:         private void Form1_Load(object sender, EventArgs e)
21:         {
22:             BindData();
23:         }
```

```
24:          public void connect()
25:          {
26:              openFileDialog1.ShowDialog();
27:              con.ConnectionString = @"Data
                 Source=(LocalDB)\MSSQLLocalDB;AttachDbFilename=" +
                 openFileDialog1.FileName + @";Integrated
                 Security=True;Integrated Security=True";
28:              con.Open();
29:         }
30:          public void BindData()
31:          {
32:              // Call connect function
33:              connect();
34:              ada = new SqlDataAdapter("select * from
                  student_master", con);
35:              SqlCommandBuilder cmdb = new
                   SqlCommandBuilder(ada);
36:              ada.Fill(ds, "student_master");
37:              dataGridView1.DataSource = ds;
38:              dataGridView1.DataMember = "student_master";
39:              con.Close();
40:          }
41:          private void btn_save_Click()
42:          {
43:              int x;
44:              x = ada.Update(ds, "student_master");
45:              if (x == 1)
46:                  MessageBox.Show("RECORD UPDATED");
47:              else
48:                  MessageBox.Show("RECORD NOT UPDATED");
49:          }
50:      }
51: }
```

Output: (Print your screen for output)

Result:

The above ADO.Net Program was created with datagridview control to add and edit student's records and the program was successfully executed and the results were verified.

Skill Practice:

- Observe and fill out the format

Control Name Used	Control Property Name	Control Property Value
Methods Used		

Viva Questions and Answers:

1. **What is DataGrid?**

   DataGrid is Web server control a powerful tool for displaying information from a data source. We can display editable data in a professional-looking grid by setting only a few properties. The grid has a sophisticated object model that provides you with great flexibility in how you display the data.

2. **Difference between Datagrid and data reader?**

   A datagrid is a simple server control to which data from a data source can be binded. Where as a data reader is a forward only stream of data from the data source that holds reference to one record at any given time

3. **What is the purpose of using DataGrid control?**

   - The DataGrid control is used to display the fields of the table. It is basically associated with the data source that is present in the column of a table.
   - DataGrid provides the access to the rows that allows the control to be taken to the record in the data source.
   - DataGrid control provides various features like editing, selection, deleting, paging and sorting.

Part B – Ex. No: 5 - Web Application with validation controls to validate web data from database

Aim:

Design a Web application with Required Field Validator and RangeValidator Controls to input data through a web form to a database and validate the data.

Procedure:

1. Open Visual Studio –> Create a new empty Web application.
2. Create a new web page and design web form with three textbox control along with button control.
3. Drag and drop RangeValidator control from Toolbox.
4. Set ControlToValidate and Text property of RangeValidator control
5. Set MaximumValue and MinimumValue Property.
6. Set Type property for Data type of values for comparison.
7. Drag and drop RequiredFieldValidator control from Toolbox.
8. Set ControlToValidate and Text property of RequiredFieldValidator control
9. Set the property of ControlToValidate = ID of the control (textbox) to validate.
10. Add scriptmanager from toolbox
11. Enable the validation mode in the web.config file. Add key and value in the appsetting like as below

```
<appSettings>
  <add key="ValidationSettings:UnobtrusiveValidationMode" value="None" />
</appSettings>
```

Note: If you set an unobtrusiveValidation mode to none(default), the asp.net application will use the pre 4.5 behavior for client side validation. If you set the key value to web forms, the application will use the HTML5 attributes for client side validation.

Source Code:(Web Design Page)

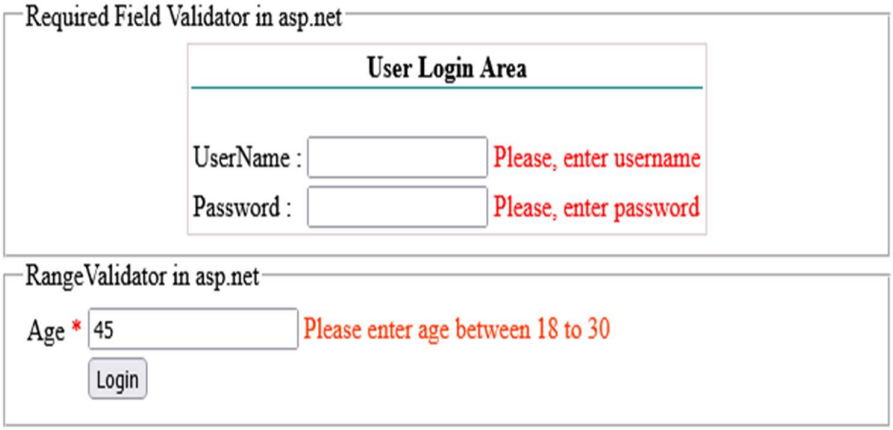
```
<%@ Page Language="C#" AutoEventWireup="true"
CodeBehind="login_validation.aspx.cs"
Inherits="Ex_12.login_validation" %>

<!DOCTYPE html>

<html xmlns="http://www.w3.org/1999/xhtml">
<head runat="server">
    <title></title>
    <style type="text/css">
        .auto-style1 {
            width: 334px;
        }
        .auto-style2 {
            width: 350px;
        }
    </style>
</head>
<body>
    <form id="form1" runat="server">
    <div>
    <fieldset style="width:600px;">
          <legend>Required Field Validator in asp.net</legend>
              <table align="center"  style="border: 1px solid
#dbcece">
                <tr>
                    <td colspan="3" style="text-align: center;
font-
                  weight: 700; border-bottom-style: solid;border-
                  bottom-width: thin; border-bottom-
                  color:#008080;">User Login Area</td>
                </tr>
                <tr>
                    <td > </td>
                    <td > </td>
                    <td> </td>
                </tr>
                <tr>
                    <td >UserName :</td>
                    <td >
                        <asp:TextBox ID="txtusername"
runat="server"
                  Width="120px"></asp:TextBox>
                    </td>
                    <td>
                        <asp:RequiredFieldValidator
                  ID="RequiredFieldValidator3" runat="server"
                  ControlToValidate="txtusername"
                  ErrorMessage="Please, enter username"
                  ForeColor="Red"></asp:RequiredFieldValidator>
                    </td>
                </tr>
                <tr>
                    <td >Password :</td>
```

```
                    <td >
                        <asp:TextBox ID="txtpassword"
runat="server"
                  TextMode="Password" Width="120px">
                   </asp:TextBox>
                    </td>
                    <td>
                        <asp:RequiredFieldValidator
                  ID="RequiredFieldValidator4"
                  runat="server" ControlToValidate="txtpassword"
                  ErrorMessage="Please, enter password"

ForeColor="Red"></asp:RequiredFieldValidator>
                    </td>
                </tr>

            </table>
                 </fieldset>
    </div>
        <div>
       <fieldset style="width:600px;">
        <legend>RangeValidator in asp.net</legend>
          <table align="center"  style="border: 1px solid #dbcece"
class="auto-style2">
            <tr>
                <td>Age <span style="color:red;">*</span></td>
                <td class="auto-style1">
                    <asp:TextBox ID="txtAge"
runat="server"></asp:TextBox>
                    <br />
                    <asp:RangeValidator ID="rgvAge" runat="server"
ErrorMessage="Please enter age between 18 to 30"
ForeColor="#FF3300" MaximumValue="30" MinimumValue="18"
SetFocusOnError="True" Type="Integer" ControlToValidate="txtAge">
              </asp:RangeValidator>
                </td>
                <td> </td>
             </tr>
         <tr>
                <td> </td>
                <td class="auto-style1">
                   <asp:Button ID="btnlogin" runat="server"
                  OnClick="btnlogin_Click" Text="Register" />
                </td>
                <td> </td>
            </tr>
        </table>
    </fieldset>
    </div>
        <asp:ScriptManager ID="ScriptManager1" runat="server">
        </asp:ScriptManager>
    </form>
</body>
</html>
```

Source Code:

```
1. using System;
2. using System.Web;
3. using System.Web.UI;
4. using System.Web.UI.WebControls;
5. using System.Data;
6. using System.Data.SqlClient;
7. namespace Ex_12_A
8. {
9.     public partial class User_register : System.Web.UI.Page
10.     {
11.         protected void btnlogin_Click(object sender, EventArgs e)
12.         {
13.             SqlConnection con = new SqlConnection("Data
                Source=(LocalDB)\\MSSQLLocalDB;AttachDbFilename=E:\\labcode cbt\\CBT
                _Lab_N\\Ex_12_A\\App_Data\\ex_12A_db.mdf;Integrated Security=True");
14.             SqlCommand cmd = new SqlCommand("INSERT INTO
                user_register(User_Name,Password,Age) VALUES(@name,@pass,@age)");
15.             int x;
16.             cmd.Connection = con;
17.             cmd.Parameters.AddWithValue("@name", txtusername.Text);
18.             cmd.Parameters.AddWithValue("@pass", txtpassword.Text);
19.             cmd.Parameters.AddWithValue("@age", txtAge.Text);
20.             con.Open();
21.             x = cmd.ExecuteNonQuery();
22.             if (x == 1)
23.                 Response.Write("<script>alert('Registered Successful...');
                                    </script>");
24.             else
25.                 Response.Write("<script>alert('Not Registered...');</script>");
26.             con.Close();
27.           }
28.     }
29. }
```

Sample Output:



Result :

The web application program was designed with validation control and validated for required values and range of values in client side by submitting the web page.

Viva Questions and Answers:

1. **What are the different validation controls available in ASP.Net?**

   RequiredFieldValidator: Verifies whether a control contains data

   CompareValidator: Verifies whether an entered item matches an entry in another control

   RangeValidator: Verifies whether an entered item is between two values

   RegularExpressionValidator: Verifies whether an entered item matches a specified format

   CustomValidator: Verifies the validity of an entered item using a client-side script or a server-side code, or both

   ValidationSummary: Displays validation errors in a central location or display a general validation error description.

2. **Where do the ASP.NET validation controls validate data, on the Client or on the Web Server?**

   ASP.NET validation controls validate data on the client as well as web server. If we need to validate data on client side itself, we have to set a property to controls to execute at the client side.

3. **What is the appSettings Section in the *web.config* file?**

   The *web.config* file sets the configuration for a Web project. The *appSettings* block in configuration file sets the user-defined values for the whole application.

   For example, in the following code snippet, the specified *ConnectionString* section is used throughout the project for database connection:

   <configuration>

   <appSettings>

   <add key="ConnectionString" value="server=indiabixserver; pwd=dbpassword; database=indiabix" />

   </appSettings>

Skill Practice:

- Observe the web application page and fill out the format

Control Name Used	Control Property Name	Control Property Value
Methods Used		

Part B: Ex No: 6 - To Read an XML document containing subjects and marks scored into a dataset

Aim:

To create a window application to read an XML document containing subject, mark scored, year of passing into a Dataset

Procedure:

1. Create XML Document with subjects, Marks Scored and Year of Passing.
2. Open a Window Application
3. Design the Form as follows
   - Drag and Drop the following controls from the tool box and change the name and text properties.
   - 1. Button 2. DataGridView
4. Write the following code in the click () event of the buttons.
5. Save and Execute (press F5).

Source Code:

```
1: using System;
2: using System.Windows.Forms;
3: using System.Xml;
4: using System.Data;
5:
6: namespace Ex_13
7: {
8:     public partial class Form1 : Form
9:     {
10:         public Form1()
11:         {
12:             InitializeComponent();
13:         }
14:         private void rdb_select_CheckedChanged()
15:         {
16:             DataSet DS = new DataSet();
17:
18:         DS.ReadXml("E:\\labcode_cbt\\CBT_Lab_N\\Ex_13
            \\student_mark_details.xml");
19:            dataGridView1.DataSource = DS;
20:            dataGridView1.DataMember = "Sem";
21:        }
22:     }
23: }
```

XML (student_mark_details.xml) :

```
<?xml version="1.0" encoding="utf-8" ?>
<StuDetails>
<Sem>
        <sub1>C Programming</sub1>
        <Mark1>100</Mark1>
        <sub2>BEEE</sub2>
        <Mark2>90</Mark2>
        <sub3>Operating Systems</sub3>
        <Mark3>80</Mark3>
        <Year_of_passing>2016</Year_of_passing>
</Sem>
  <Sem>
        <sub1>JAVA Programming</sub1>
        <Mark1>100</Mark1>
        <sub2>Data Structures and Algorithm</sub2>
        <Mark2>90</Mark2>
        <sub3>Computer Architecture</sub3>
        <Mark3>80</Mark3>
        <Year_of_passing>2016</Year_of_passing>
  </Sem>
  <Sem>
    <sub1>.NET Programming</sub1>
    <Mark1>100</Mark1>
    <sub2>Web Programming</sub2>
    <Mark2>90</Mark2>
    <sub3>RDBMS</sub3>
    <Mark3>80</Mark3>
    <Year_of_passing>2017</Year_of_passing>
  </Sem>
  </StuDetails>
```

Output: (Print your screen for output)

Result:

The windows application was created with datagridview to read xml document containing students mark details and executed to view in the datagridview control.

Viva Questions:

1. **What is XSLT?**
   XSLT is Extensible Stylesheet Language Transformations that is a part of XML, which is a mechanism to transform an XML document into another XML or HTML document.
2. **What is an attribute?**
   An attribute provides more or additional information about an element than otherwise.
   Example: <Student name=”raja”> </Student>
3. **What is XML Element?**
   An XML document contains XML Elements, and it starts from an element’s start tag to end tag. It can contain:
   - Other elements within main element
   - An Attribute
   - Text
4. **What is XQuery?**
   XQuery was designed to query XML data which is nothing but SQL for database tables. XQuery is used to fetch the data from the XML file.
5. **What is XML Encoding?**
   XML documents may contain Non-ASCII characters like French and Norwegian characters. XML Encoding is used to avoid errors and XML files have to be saved as Unicode.

Skill Practice:

- Create a xml file for employee HR- Payroll salary calculation

Part B: Ex No: 7 - To Read Students Record from Database using ADO.Net and Store in XML Document

Aim:

To Develop a Window application to read students records from Database using ADO.NET and generate XML document containing students records

Procedure:

1. Create a Database and a table to store Students Records.
2. Open a Window Application
3. Design the Form to insert Students Details
   - Drag and Drop the following controls from the tool box and change the name and text properties.

     1. Button 2. DataGridView 3. Label Box 4.DropDownbox 5. TextBox
4. Write the following code in the click () event of the buttons.
5. Save and Execute (press F5).

Source Code:

```
1: using System;
2: using System.Data;
3: using System.Data.SqlClient;
4: using System.Windows.Forms;
5:
6: namespace Ex_14
7: {
8:     public partial class Form1 : Form
9:     {
10:         public Form1()
11:         {
12:             InitializeComponent();
13:         }
14:         //CONNECTION OBJECT
15:         SqlConnection con = new SqlConnection();
16:         // COMMAND OBJECT
17:         SqlCommand cmd = new SqlCommand();
18:         DataSet ds = new DataSet();
```

```
19:          private void rdb_select_CheckedChanged()
20:          {
21:             openFileDialog1.ShowDialog();
22:             con.ConnectionString = @"Data
                Source=(LocalDB)\MSSQLLocalDB;AttachDbFilename=" +
                openFileDialog1.FileName + @";Integrated
                Security=True;Integrated Security=True";
23:             con.Open();
24:             cmd.Connection = con;
25:             cmd.CommandText = "select * from student_master ";
26:             SqlDataAdapter ada = new SqlDataAdapter();
27:             ada.SelectCommand = cmd;
28:             ada.Fill(ds, "student_master");
29:             dataGridView1.DataSource = ds;
30:             dataGridView1.DataMember = "student_master";
31:          }
32:          private void btn_save_Click(object sender, EventArgs e)
33:          {
34:           ds.WriteXml("E:\\labcode_cbt\\CBT_Lab_N
             \\Ex 14\\student details.xml",
             XmlWriteMode.WriteSchema);
35:             con.Close();
36:             MessageBox.Show("Sucessfully Written students data
                   from database to XML...");
37:          }
38:
39:        private void btnInsert_Click(object sender, EventArgs e)
40:        {
41:                int x;
42:                        SqlConnection con = new SqlConnection();
43:                        // Define database connection string
44:                _____________________________________________________
45:                _____________________________________________________
46:                _____________________________________________________
47:                _____________________________________________________
48:                con.Open();
49:                 SqlCommand cmd = new SqlCommand();
50:                cmd.Connection = con;
51:                // Define the sql commenad to Insert students records
52:                _____________________________________________________
53:                x = cmd.ExecuteNonQuery();
54:                if (x == 1)
55:                        MessageBox.Show("Students Details Saved");
56:                else
57:                        MessageBox.Show("Not Saved");
58:           }
59:
60:    }
61: }
```

Output: (Print the following outputs)

```
1. ADO.NET Execution
2. XML File Written data from database
```

Result:

The application was created with ADO.Net to store student's records and the data were written to the xml document in the specified directory.

Viva Questions and Answers:

1. **Why Is Xml Such An Important Development?**

   It removes two constraints which were holding back Web developments:

   1. Dependence on a single, inflexible document type (HTML) which was being much abused for tasks it was never designed for;

   2. The complexity of full SGML, whose syntax allows many powerful but hard-to-program options. XML allows the flexible development of user-defined document types.

2. **What Is SGML?**

   SGML is the Standard Generalized Markup Language (ISO 8879:1986), the international standard for defining descriptions of the structure of different types of electronic document.

3. **How Do I Use Graphics In Xml?**

   NOTATION and ENTITY