

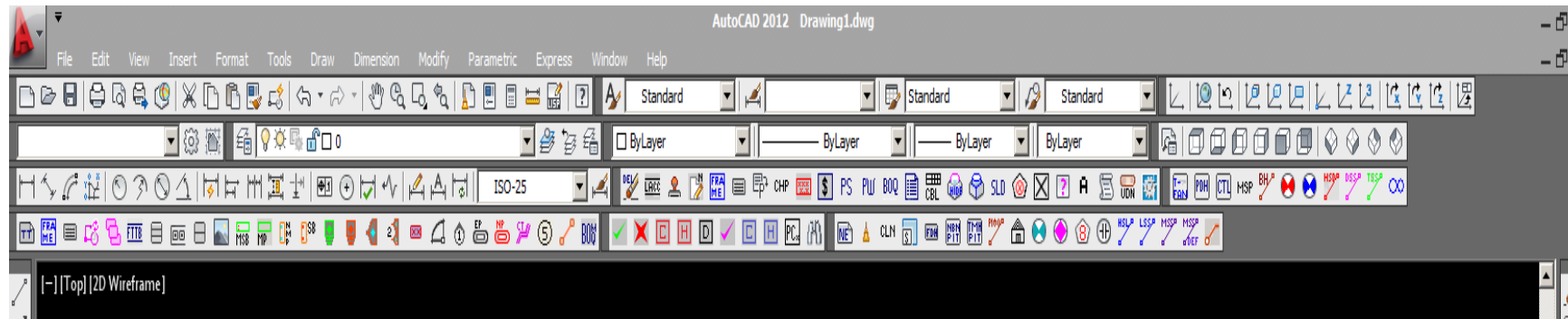
This Documents has three Section

1. Screen Shots of Older Version Toolbars and Newer version of Ribbons
  - a. VB Code Sample of iExtention to Autodesk Application showing User Access, cipher protection, populate resources to the local
    - i. Resources include CAD Templates, CAD Blocks, CAD Assemblies, BOM BOQ Excel Templates, png , bmp associated, clones if any.
    - ii. SQL SERVER Connection.
  - b. WIN API Sample showing user interface
  - c. project main screen shot showing project region and solution explorer
  - d. screen shot of SLD, BOM BOQ Automated output in DWG
2. Second Section Shows Sample file of a ASP Project
3. Third Section Shows ASP in Conjunction with C# for a remote survey or site measure update
  - a. this remote update access is thru iis to site personal to designer.
4. Some ipt, idw, iam attached with email (Since they are designed in very old version may NOT be compatible with Version
5. A You Tube Demo Link CAD Automation Can be Found at <https://www.youtube.com/watch?v=dKoS8lF0VAA>
6. three mp4 files of inventor animation is also attached in the email.

**PLEASE CONTACT ME ON 0425 706 852, if in need of further Information**

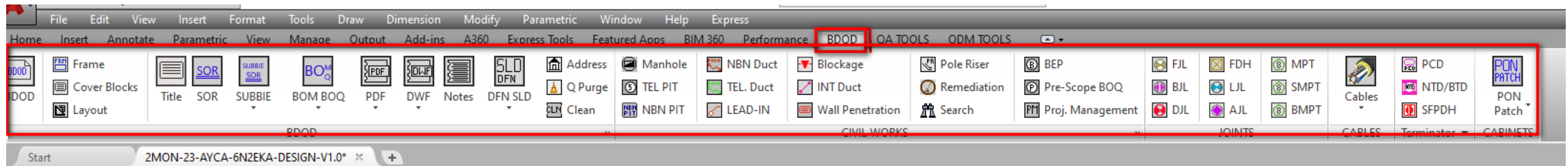
## OLDER VERSION OF CAD WITH TOOLBARS

The Same Structure Can Be used for \*.ipt (part), \*.iam(Assembly), \*.ipn(presentation) and (\*.idw or \*.dwg) formats as well



## Newer Version With Ribbons

Please NOTE BDOD, QA Tools and ODM TOOLS are menu with Ribbons Automated Exclusively for NBN Needs



## Code Sample For Initialization Shown Below

Implements Autodesk.AutoCAD.Runtime.IExtensionApplication

Public Shared docMan As DocumentCollection = Application.DocumentManager

Public Sub Initialize() Implements Autodesk.AutoCAD.Runtime.IExtensionApplication.Initialize

Try

Dim BALA\_AT\_HOME As String = "BALA"

If Not RMSI\_USERS.Contains(UCase(Environment.UserName)) AndAlso Not BDOD\_USERS.Contains(UCase(Environment.UserName)) AndAlso Not Environment.UserName =

BALA\_AT\_HOME Then

MsgBox("UNAUTHORISED ACCESS DETECTED" + vbCrLf + "CONTACT ADMINISTRATOR,", vbOKOnly + vbCritical, "AUTHORISATION FAILURE.")

End If

If Not Environment.UserName = BALA\_AT\_HOME Then

CheckCipherValue() ACCESS PROTECTION

Elseif Environment.UserName = BALA\_AT\_HOME Then

LogName = Split("BALAKRISHNA.YADAV", ".")

End If

Autodesk.AutoCAD.Internal.Utils.SetFocusToDwgView()

AddToolTips()

CreateBDODCADRibbon() CREATE RIBBON

AddHandler Autodesk.AutoCAD.Ribbon.RibbonServices.RibbonPaletteSetCreated, AddressOf RibbonServices\_RibbonPaletteSetCreated

UpdateBDODTempFolder() POPULATE DESIGN BLOCKS

PopulateADA() POPULATE NEEDED EXCEL DOCUMENTS

AddHandler docMan.DocumentActivated, AddressOf docMan\_DocumentActivated

```

AddHandler docMan.DocumentCreated, AddressOf docMan_DocumentActivated
GenerateNBNLayerStandards() CREATE LAYERS
GenerateSORComboCol() POPULATE DATA
GenerateSORDataCollection() POPULATE DATA
GenerateODMSORComboCol() POPULATE DATA
GenerateODMSORDataCollection() POPULATE DATA
GenerateNBN_Item_code() POPULATE DATA
GenerateODM_Item_code() POPULATE DATA
Generate_BNTD_WALL_MOUNTED_OPTIONAL() POPULATE DATA
Generate_BNTD_RACK_MOUNTED_AC_OPTIONAL() POPULATE DATA
Catch ex As System.Exception
    MsgBox(ex.Message)
End Try
End Sub

```

#### CORDINATES CALCULATION SAMPLE

```

Using DocLock As DocumentLock = acDoc.LockDocument
Using acTrans As Transaction = acDB.TransactionManager.StartTransaction
    Dim acBlkTbl As BlockTable = acTrans.GetObject(acDB.BlockTableId, OpenMode.ForRead)
    Dim acBlkTblRec As BlockTableRecord = acTrans.GetObject(acBlkTbl(BlockTableRecord.ModelSpace), OpenMode.ForWrite)
    Dim blkRef As BlockReference = acTrans.GetObject(SelectedObjID, OpenMode.ForRead)
    Dim blkRefInsPt As Point3d = blkRef.Position
    Dim AttCol As AttributeCollection = blkRef.AttributeCollection
    Dim AttRef As AttributeReference = acTrans.GetObject(AttCol(0), OpenMode.ForRead)
    Dim AttRefPosition As Point3d = AttRef.AlignmentPoint
    Dim acLinePlane As Plane = New Plane(AttRefPosition, Vector3d.ZAxis)
    Dim acVec3d As Vector3d = AttRefPosition - blkRefInsPt
    Dim REFobjRotation As Double = acVec3d.AngleOnPlane(acLinePlane)
    Dim acAngInDeg = REFobjRotation / Math.PI * 180
    'Dim StaticAnnoOffset As Double = 3.5
    Dim Add90DegToRadian As Double = 90 * (Math.PI / 180)
    Dim NextRefPoint As New Point3d
    NextRefPoint = New Point3d(blkRefInsPt.X - Math.Cos(REFobjRotation) * ObjOffset, blkRefInsPt.Y - Math.Sin(REFobjRotation) * ObjOffset, blkRefInsPt.Z)
    Select Case True
        Case acAngInDeg > 0 AndAlso acAngInDeg < 90
            AssignSideOffset(JointCount, ObjSideOffset)
            blkRotation = REFobjRotation - Add90DegToRadian
        Case acAngInDeg >= 90 AndAlso acAngInDeg < 180
            AssignSideOffset(JointCount, ObjSideOffset)
            blkRotation = REFobjRotation - Add90DegToRadian
        Case acAngInDeg >= 180 AndAlso acAngInDeg < 270
            ObjSideOffset = ObjSideOffset * -1
            AssignSideOffset(JointCount, ObjSideOffset)
            blkRotation = REFobjRotation + Add90DegToRadian
        Case acAngInDeg >= 270 AndAlso acAngInDeg < 360
            ObjSideOffset = ObjSideOffset * -1
            AssignSideOffset(JointCount, ObjSideOffset)
            blkRotation = REFobjRotation + Add90DegToRadian
    End Select

```

End Select

blkInsPt = New Point3d(NextRefPoint.X + Math.Cos(REFobjRotation + Add90DegToRadian) \* ObjSideOffset, NextRefPoint.Y + Math.Sin(REFobjRotation + Add90DegToRadian) \* ObjSideOffset, NextRefPoint.Z)

FJLAnnoOffset = New Point3d(blkInsPt.X + Math.Cos(REFobjRotation) \* StaticAnnoOffset, blkInsPt.Y + Math.Sin(REFobjRotation) \* StaticAnnoOffset, blkInsPt.Z)

acTrans.Commit()

End Using

End Using

Cad Title Block Update API

Project Information

Application Name:

Project Type:

Build Type:

Location / Address:

Suburb:

Sheet Name:

EXTERNAL FIBRE PATHWAYS

LOTS / EUP Count:

SIO:

Mobil:

State:

Post Code:

Zone:

IN CBD:

☐

FSA:

FSAM / SAM:

FDA / ADA:

Project ID:

Issue Date:

16-12-20

REFERENCE No:

MPS/FOD ID:

CAD Ref No:

Scale:

Design Option:

☐ New Description Entry

☐ Design Re-Submission

☐ Design QA

Design History

Rev No:

Date:

16-12-2020

Drafted By:

Desc:

Apprd By:

Approv. Date:

16-12-2020

⏪

⏩

⏴

⏵

BOM BOQ API Interface NOTE Vertical Button is USER UI

Application Name:RAMSAY HEALTH – ALBURY/WODONGA PRIVATE HOSPITAL

Address:1125 PEMBERTON ST, WEST ALBURY, NSW-2640

Project Type:GPON

Project ID:AYCA-6GZD40

ADA:2ALB-03-18

| Items        | Fibre Size / Ratio | New                      | Existing                 | Length | Qty |
|--------------|--------------------|--------------------------|--------------------------|--------|-----|
| PON PATCHING |                    | <input type="checkbox"/> | <input type="checkbox"/> | 5.5    |     |
| SMALL DJL    |                    | <input type="checkbox"/> | <input type="checkbox"/> | 1      |     |
| LARGE DJL    |                    | <input type="checkbox"/> | <input type="checkbox"/> | 1      |     |
| DSS-12F      | 12F                | <input type="checkbox"/> | <input type="checkbox"/> |        |     |
| DSS-72F      | 72F                | <input type="checkbox"/> | <input type="checkbox"/> |        |     |
| DSS-144F     | 144F               | <input type="checkbox"/> | <input type="checkbox"/> |        |     |
| DSS-288F     | 288F               | <input type="checkbox"/> | <input type="checkbox"/> |        |     |
| DSS-432F     | 432F               | <input type="checkbox"/> | <input type="checkbox"/> |        |     |
| DSS-576F     | 576F               | <input type="checkbox"/> | <input type="checkbox"/> |        |     |
| BMPT         |                    | <input type="checkbox"/> | <input type="checkbox"/> | 1      |     |
| FSD          | 12                 | <input type="checkbox"/> | <input type="checkbox"/> |        |     |
| FJL          | PLASTIC            | <input type="checkbox"/> | <input type="checkbox"/> | 1      |     |
| FJL SPLITTER | 1:8                | <input type="checkbox"/> | <input type="checkbox"/> | 1      |     |
| FSL          | 12F                | <input type="checkbox"/> | <input type="checkbox"/> |        |     |
| BJL          | PLASTIC            | <input type="checkbox"/> | <input type="checkbox"/> | 1      |     |
| SSS          |                    | <input type="checkbox"/> | <input type="checkbox"/> |        |     |
| SMP          | 1:4                | <input type="checkbox"/> | <input type="checkbox"/> | 1      |     |
| SDS          | 1                  | <input type="checkbox"/> | <input type="checkbox"/> |        |     |
| PCD          | PCD                | <input type="checkbox"/> | <input type="checkbox"/> | 1      |     |

CLICK TO ACCESS INSTRUCTIONS (RESET)

**PON PATCHING**

1. Select New Or Existing Checkbox,

- New Check, puts 1 In Qty,
- Existing Check, puts 0 In Qty,

2. Permitted Patch Cord Lengths are: 2.5, 3.0, 4.0, 4.5, 5.0, 5.5, 6.0, 6.5, 7.0, 8.0, 9.0, 11.0, 11.5, 12.5.

3. Default is set at: 5.5, any length other than specified throws error,

4. Quantity will be taken as Item Quantity And Not Length.

5. Quantity 0 will be discarded at BOM generation.

**SMALL DJL**

1. Select New Or Existing Checkbox,

- New Check, puts 1 In Qty,
- Existing Check, puts 0 In Qty,

2. Enter Required Number of Small DJL In Length Column

3. Quantity will be taken as product of Item Quantity And Length.

4. Quantity 0 will be discarded at BOM generation.

**LARGE DJL**

1. Select New Or Existing Checkbox,

- New Check, puts 1 In Qty,
- Existing Check, puts 0 In Qty,

2. Enter Required Number of Large DJL In Length Column

3. Quantity will be taken as product of Item Quantity And Length.

4. Quantity 0 will be discarded at BOM generation.

**DSS-12F**

1. Select New Or Existing Checkbox,

- New Check, puts 1 In Qty,
- Existing Check, puts 0 In Qty,

2. Enter Length in Length Column,

- Length entered Evaluated from Standard Length of,
- Less than 10m, between 10m to 50m, between 50m to 100m, between 100m to 200m, between 200m to 500m and above 500m ,

3. BOM Updated to 1 Qty of Standard Length Item Code

4. Quantity 0 will be discarded at BOM generation.

## Project Screen Shot

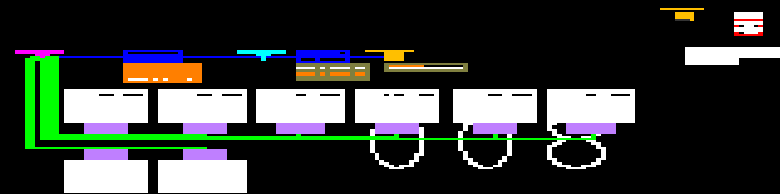
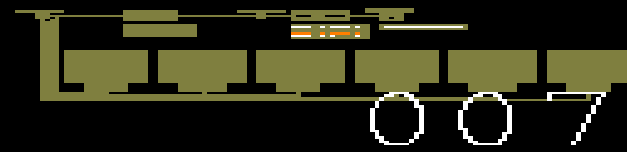
The screenshot shows a Visual Studio IDE with the following components:

- Top Tab Bar:** Displays several open files: `frmBDOD_BNTD_OP..._BOM.vb [Design]`, `frmBDOD_Blockage.vb [Design]`, `frmBDOD_Basement.vb [Design]`, `frmBDOD_Address.vb [Design]`, and `BDOD_CAD_Main.vb`.
- Left Panel (Solution Explorer):** Shows the project structure for `BDOD_CAD`. The `clsBDOD_CAD_Main` class is expanded, showing its `Imports` section, `Namespace` declarations, and a `Public Class` with various `Private` methods and properties. The `TOGGLEBLOCKVISIBILITY` method is highlighted.
- Right Panel (Solution Explorer):** Lists all files in the project. The file `frmODM_BOM_BOQ.vb` is selected and highlighted in blue.

**Code Snippet (clsBDOD\_CAD\_Main):**

```
1 Imports ...
35 'Imports System.Windows.Forms
36 <Assembly: CommandClass(GetType(nmsBDOD_CAD_Commands.clsBDOD_CAD_Main))>
37 Namespace nmsBDOD_CAD_Commands
38     1 reference
39     Public Class clsBDOD_CAD_Main
40         Private dctSOR_Attag_AttVal As New Dictionary(Of String, String)
41         Private BDOD_BEP_Attag_AttVal As New Dictionary(Of String, String)
42     End Class
43 End Namespace
44
45 BDOD_TEMPLATE
46 BDOD_FRAME
47 BDOD_ARRANGELAYOUT
48 BDOD_TITLEINFO
49 BDOD_INSERT_SOR
50 DELETE LAYOUT NOT IN USE
51 TOGGLEBLOCKVISIBILITY
52 SUBBIE_RESET
53 BDOD_BOM_BOQ
54 BDOD_BOMBOQ_ASSEMBLY
55 ODM_BOM_BOQ
56 ODM_BOM_BOQ_ASSEMBLY
57 NOT IN USE
58 BDOD_PUBLISH_PDF and BDOD_PUBLISH_PDF_NBN and BDOD_PUBLISH_PDF_SUBBIE and BDOD_PUBLISH_DWF and BDOD_PUBLISH_DWF_NBN and BDOD_PUBLISH_DWF_SUBBIE
59 BDOD_NOTES
60 BDOD_DFN_SLD
61 BDOD_LFN_SLD
62 BDOD_QPURGE
63 BDOD_CLEAN
64 BDOD_MANHOLE
65 BDOD_TELPIT
66 BDOD_NBNPIT
67 BDOD_BEP
68 BDOD_DCT
69 BDOD_BHDCT
70 BDOD_LEAD_IN
71 BDOD_BLOCKAGE
72 BDOD InternalDUCT
73 BDOD_WallPenetration
74 BDOD_PoleRiser
75 BDOD Remediation
76 BDOD_FDH
77 BDOD_LJL
78 BDOD_AJL
79 BDOD_FJL
80 BDOD_BJL
81 BDOD_DJL
82 BDOD_MPT, BDOD_SMPT, BDOD_BMPT
83 BDOD_DSS, BDOD_HSD, BDOD_FSD, BDOD_FSL, BDOD_HSL, BDOD_LSS, BDOD_MSS, BDOD_SSS, BDOD_SDS, BDOD_PIC
84 BDOD_CableTray
85 BDOD_PCD
86 BDOD_NTD
87 BDOD_SFPDH
88 BDOD_ICD
```

## CAD AUTO GENARTION SAMPLE



|             |             |             |             |             |             |
|-------------|-------------|-------------|-------------|-------------|-------------|
| 11-04-02-01 | 25-01-01-02 | 15-01-01-01 | 55-02-01-01 | 15-03-01-01 | 15-03-04-01 |
| 1           | 1           | 73          | 33          | 73          | 1           |

[illegible][illegible]

#### ASP.net SAMPLE

```
<%@ Page Title="" Language="C#" MasterPageFile="~/Masters/BDOD_Master.Master" AutoEventWireup="true" CodeBehind="SurveyDispatch.aspx.cs" Inherits="BDOD_SURVEY.Designer" %>
<asp:Content ID="BDOD_DESIGNER" ContentPlaceHolderID="BDOD_Title" runat="server">
</asp:Content>
<asp:Content ID="BDOD_ABOUT" ContentPlaceHolderID="BDOD_HEAD" runat="server">
</asp:Content>
<asp:Content ID="BDOD_DESIGNER_CONTENT" ContentPlaceHolderID="BDOD_CONTENT_BODY" runat="server" >
    <div class="bodyFont" style="background-color: rgb(222, 215, 215); margin-top:10px;">
        <asp:Label ID="lblProjectID" runat="server" AssociatedControlID="txtProjectID" Text="Project ID:" CssClass="DesignerLable" />
        <asp:TextBox ID="txtProjectID" runat="server" CssClass="DesignertextBox" />
        <asp:FileUpload ID="FileUploadControl" runat="server" AllowMultiple="true" Style="display: none" />
        <asp:Button runat="server" Text="Browse.." CssClass="btn-default" ID="btnFileBrowse" OnClientClick="return showBrowseDialog();" OnClick="btnFileBrowse_Click" />
        <script type="text/javascript" lang="javascript">
            function showBrowseDialog() {
                document.getElementById('<%=FileUploadControl.ClientID%>').click();
            }
        </script>
        <br />
        <div runat="server" style="background-color: rgb(222,215,215)">
            <div runat="server" style="text-align: right; display: inline-block; margin-left: 85px; margin-bottom: 10px; margin-top: 10px;">
                <asp:ListBox ID="ListBox1" runat="server" SelectionMode="Multiple" CssClass="ListBox"></asp:ListBox>
            </div>
            <div runat="server" style="display: inline-block; width: 490px; background-color: rgb(222, 215, 215); position: absolute; margin-left: -2px; margin-top: 2px;">
                <asp:BulletedList ID="Design_Upload_Instruction" BulletStyle="Numbered" runat="server" CssClass="RightFromListBox">
                    <asp:ListItem> Add Project ID in the Textbox</asp:ListItem>
                    <asp:ListItem> Click Browse Button to Select Files To Survey</asp:ListItem>
                    <asp:ListItem>Select The Files To Upload for Survey from the Popup Window</asp:ListItem>
                    <asp:ListItem>Select Files will Be Populated in the list box</asp:ListItem>
                    <asp:ListItem>Click Upload Files Button to Upload to the surveyors</asp:ListItem>
                </asp:BulletedList>
            </div>
        </div>
    </div>
</asp:Content>
```

#### C# Sample

```
namespace BDOD_SURVEY
{
    public partial class Designer : System.Web.UI.Page
    {
        int FileCount = 0;
        Project_Data projectdata = new Project_Data();
        static string SourcePath;
        static string DestinationFolder;
        static string DestinationPath;
        protected void Page_Load(object sender, EventArgs e)
        {
            foreach (ListItem lstitem in Design_Upload_Instruction.Items)
            { lstitem.Attributes.Add("style", "background-color: rgb(222, 215, 215); line-height:18px;"); }
            if (IsPostBack)
            {
                DestinationFolder = txtProjectID.Text.ToUpper();
                DestinationPath = projectdata.Designer_Survey_Dispatch;
            }
        }
        protected void btnFileBrowse_Click(object sender, EventArgs e)
        {
            foreach (HttpPostedFile postedFile in FileUploadControl.PostedFiles)
            {
                string fileName = Path.GetFileName(postedFile.FileName);
                ListBox1.Items.Add(fileName);
            }
        }
    }
}
```



```

        //lblResult.Text = string.Format("{0} files Ready to be Uploaded.", ListBox1.Items.Count.ToString());

        SourcePath = Path.GetDirectoryName(FileUploadControl.PostedFiles[0].FileName);
    }
protected void btnFileUpload_Click(object sender, EventArgs e)
{
    var DirectoryInfo = new DirectoryInfo(DestinationPath);
    if (!Directory.Exists(Path.Combine(DirectoryInfo.ToString(), DestinationFolder)))
    {
        DirectoryInfo.CreateSubdirectory(DestinationFolder);
    }
    foreach (object ReadRow in ListBox1.Items)
    {
        string ReadVal = ReadRow.ToString();
        string Source = Path.Combine(SourcePath, ReadVal);
        string Destination = Path.Combine(DestinationPath + DestinationFolder, ReadVal);
        if (!File.Exists(Destination))
        {
            File.Copy(Source, Destination);
        }
        FileCount += 1;
    }
    //lblResult.Text = string.Format("{0} files have been uploaded successfully.", FileCount);
}
protected void btnRemoveSelection_Click(object sender, EventArgs e)
{
    List<ListItem> itemsToRemove = new List<ListItem>();

    foreach (ListItem listItem in ListBox1.Items)
    {
        if (listItem.Selected)
            itemsToRemove.Add(listItem);
    }
    foreach (ListItem listItem in itemsToRemove)
    {
        ListBox1.Items.Remove(listItem);
    }
    //lblResult.Text = string.Format("{0} files Ready to be Uploaded.", ListBox1.Items.Count.ToString());
}
}
}

```