

## **QRCode\_BarCode**

### **Agenda**

- Generation of QRCode and Barcode in a Project of ASP.NET MVC

### **Tools**

- Visual Studio 2013

### **Pre-Requisite**

- Understanding of ASP.NET MVC Basic Concepts

Version	Last updated	Comments	Modified By
V1.0	14-10-2018		Tehreem Kamran

## **Brief Description:**

### **Barcode:**

A **barcode** (also **bar code**) is an optical, machine-readable, representation of data; the data usually describes something about the object that carries the barcode. Traditional barcodes systematically represent data by varying the widths and spacings of parallel lines, and may be referred to as linear or one-dimensional (1D).



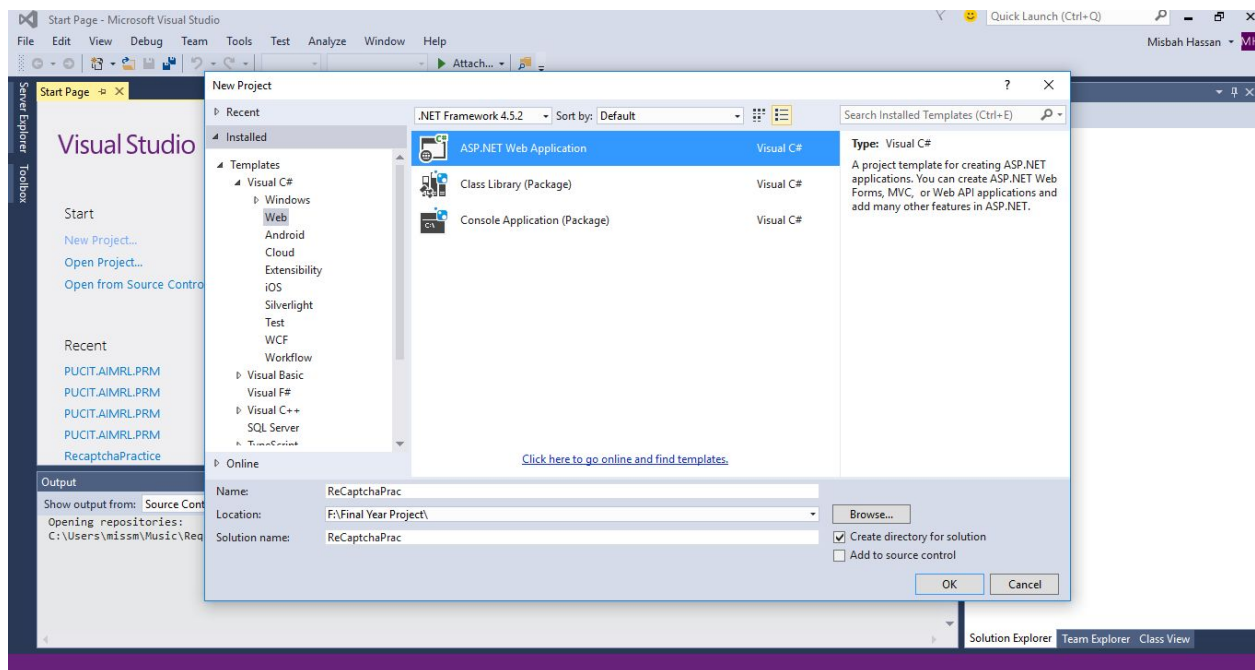
### **QRCode:**

**QR code** (abbreviated from **Quick Response Code**) is the trademark for a type of matrix barcode (or two-dimensional barcode) first designed in 1994 for the automotive industry in Japan



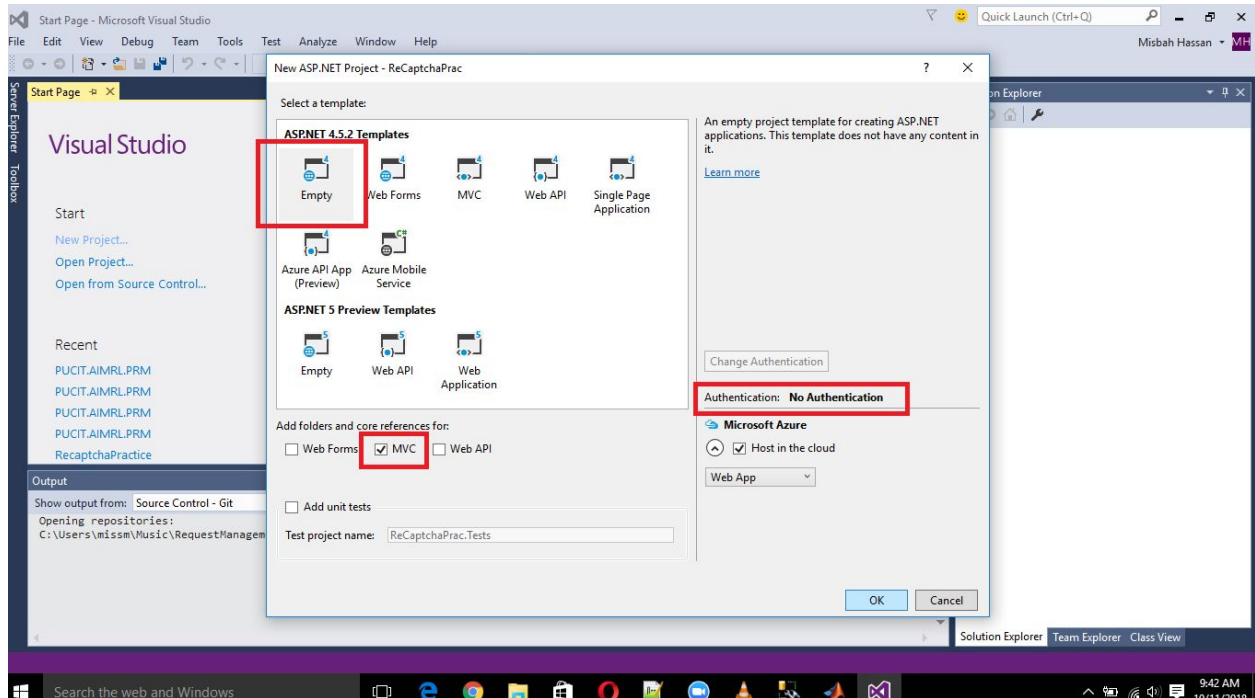
## Step by Step Walkthrough: (QRCode)

1. Create NEW Project (New > Project > ASP.NET Web Application (under web) > Entry Application Name > Click OK > Select Basic > Select view engine Razor > OK)

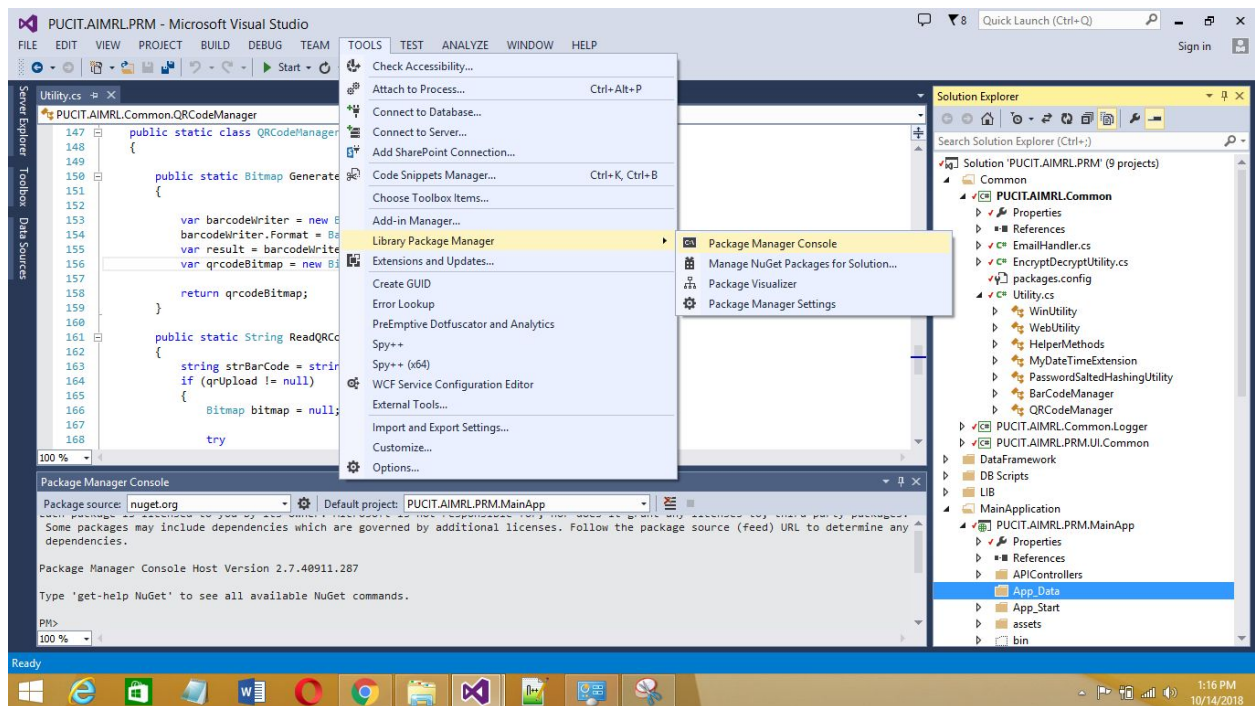


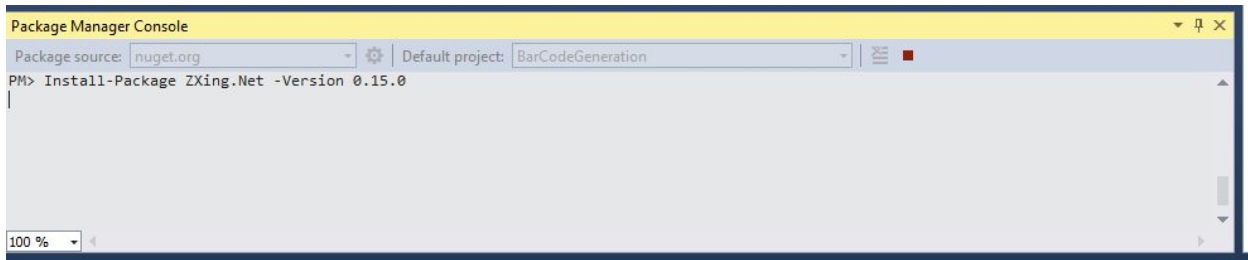
After Clicking OK You will see the screen below like this

Make Sure Project should be Empty, of MVC type and No authentication option selected.

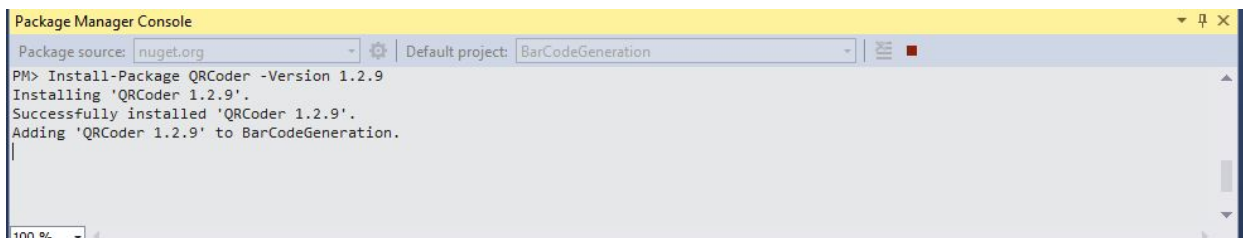


2. Go to <https://www.nuget.org/packages/ZXing.Net> and copy the zxing nuget latest version and go to Tools---library package manager---package manager console and copy he command and enter.



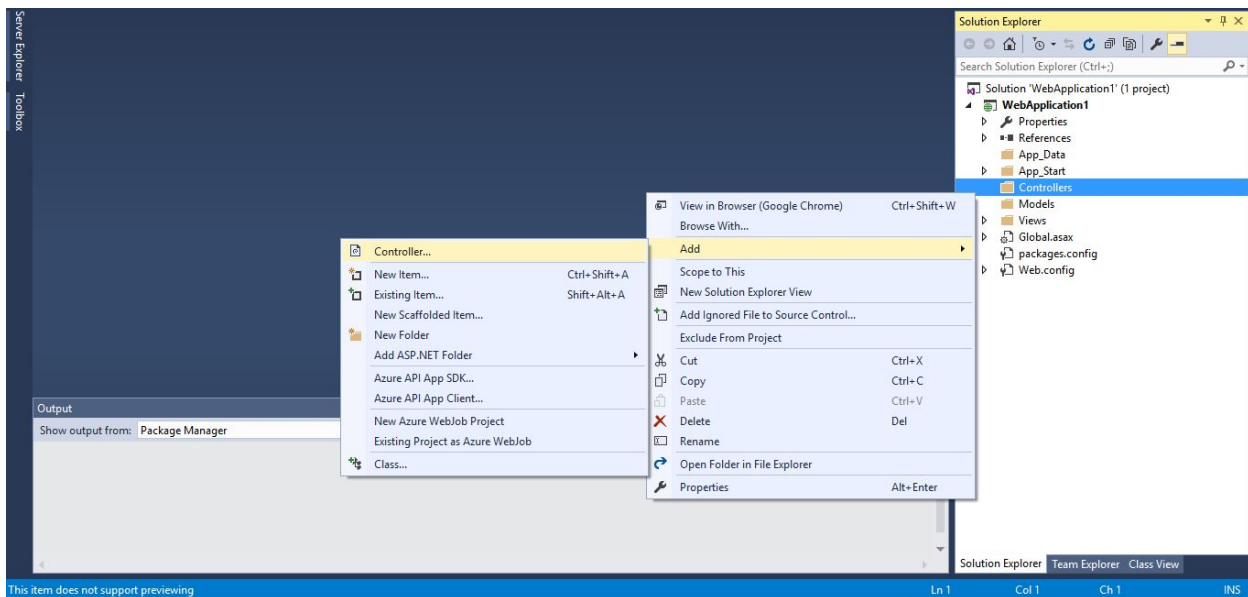


3. Similarly go to the link <https://www.nuget.org/packages?q=QRCode>  
Follow the 2nd step.

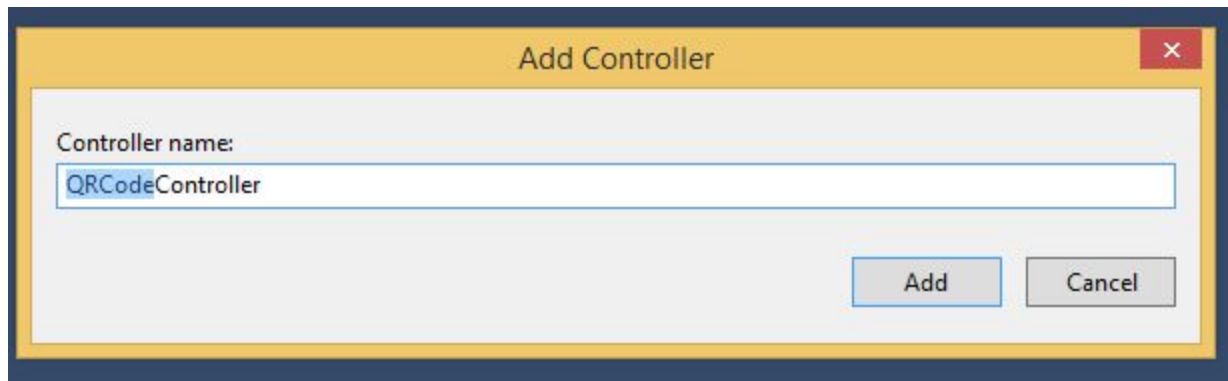


4- Create a Controller.

(Go to Solution Explorer > Right Click on Controllers folder form Solution Explorer > Add > Controller > Enter Controller name > Select Template "empty MVC Controller"> Add. )

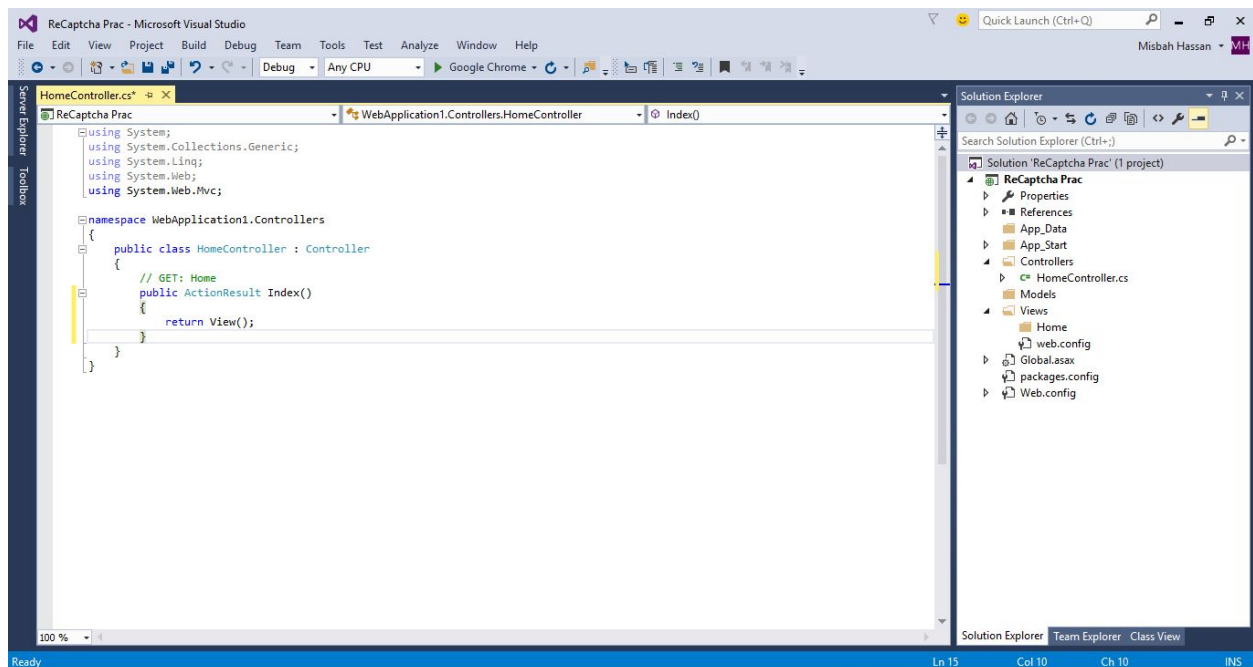


Put name for your Controller. (i.e QRCode)

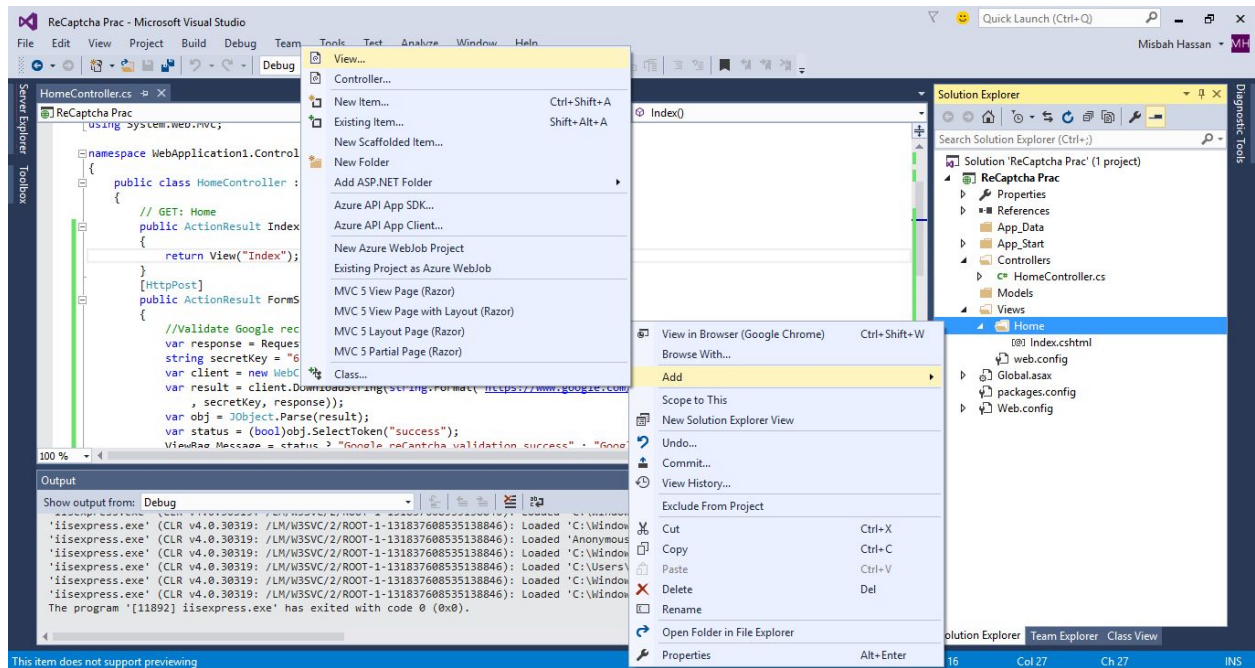


5- This screen will you with some default code

```
public ActionResult Index()
{
    return View();
}
```



## 6- Make a View with name of QRCode in QRCode Views.



Then give the same name as in controller you make a function which is returning a View

View name:  
QRCode

Template:  
Empty (without model)

Model class:

View options:  
☐ Create as a partial view  
☒ Reference script libraries  
☒ Use a layout page:  
 ...  
 (Leave empty if it is set in a Razor \_viewstart file)

Add Cancel

7- Add this html in View

```
<body>
@using (Html.BeginForm("GenerateQRCode", "QRCode", FormMethod.Post))
{
    <div class="row">
        <div class="col-md-3"></div>
        <div class="col-md-6">
            <h2>Generate QR Code</h2>
            <input type="text" name="QRcode" class="form-control col-4" id="textCode" />
            <br /><br />
            <input type="submit" class="btn btn-primary" id="btnGenerate" value="Generate" />
            <hr />

            @if (ViewBag.QRImage != null)
            {
                
            }
        }
    }
}
```



```

        </div>
    </div>

}

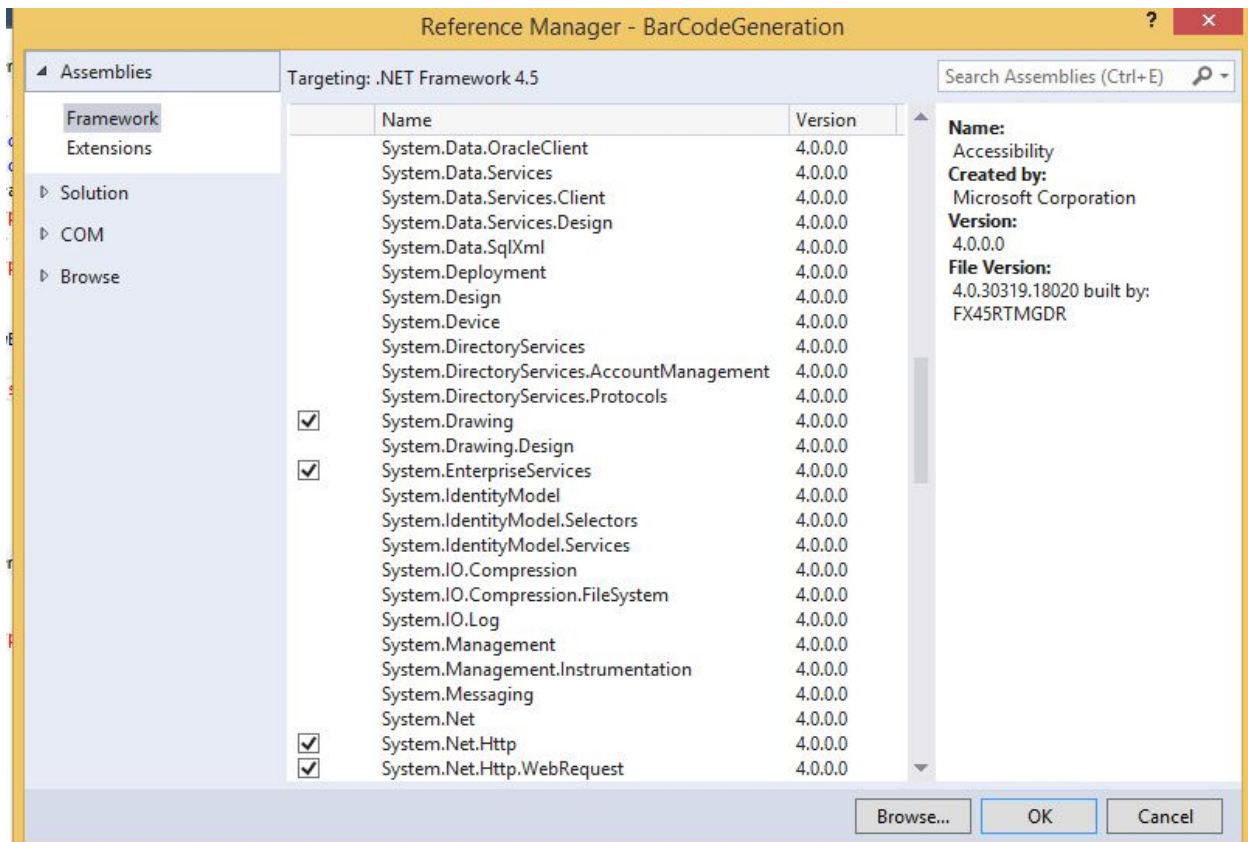
@using (Html.BeginForm("QRCodeRead", "QRCode", FormMethod.Post))
{

    <input type="submit" class="btn btn-primary" id="btnRead" value="Read" />
    <hr />

}
</body>

```

## 8- Add system.drawing reference.



9- now create a function in home controller with the name of generate QRCode and code this



**[HttpPost]**

```
public ActionResult GenerateQRCode(string qrcode)
{
    string QRCodeImage;
    byte[] QRCode;
    var barcodeWriter = new BarcodeWriter();
    barcodeWriter.Format = BarcodeFormat.QR_CODE;
    var result = barcodeWriter.Write(qrcode);
    var qrcodeBitmap = new Bitmap(result);
    using (MemoryStream Mmst = new MemoryStream())
    {
        qrcodeBitmap.Save(Mmst, ImageFormat.Png);
        QRCode = Mmst.GetBuffer();
        QRCodeImage = QRCode != null ? "data:image/jpg;base64," +
Convert.ToBase64String((byte[])QRCode) : "";
        ViewBag.QRImage = QRCodeImage;
    }

    return View("QRCode");
}
```

**10.** Now run the project.

Output will be

## Generate QR Code



11. Now create another action for qrcode read as following in home controller and make a folder with name UploadFiles for storing qrcode images.

[HttpPost]

```
public ActionResult QRCodeRead(HttpPostedFileBase qrUpload)
{
    String localSavePath = "~/UploadFiles/";
    string str = string.Empty;
    if (qrUpload != null)
    {
        String fileName = qrUpload.FileName;
        localSavePath += fileName;
        qrUpload.SaveAs(Server.MapPath(localSavePath));

        Bitmap bitmap = null;
        try
        {
            {
                bitmap = new Bitmap(qrUpload.InputStream);
            }

            catch (Exception ex)
            {
                {
                    ex.ToString();
                }
            }
            if (bitmap == null)
            {
                {
                    str = "Your file is not an image";
                }
            }
            else
```

```

        {
            ViewBag.QRImage = "http://localhost:" + Request.Url.Port + "/UploadFiles/" +
fileName;
            var barcodeReader = new BarcodeReader();

            var qrcode = barcodeReader.Decode(bitmap);
            ViewBag.QRCode = qrcode.Text;
        }

    }
    return View("QRCodeRead");
}

```

12. Make a view with name as QRCodeRead in Home view and paste the following code there

```

<body>
    @using (Html.BeginForm("GenerateQRCode", "QRCode", FormMethod.Post))
    {
        <div class="row">
            <div class="col-md-3"></div>
            <div class="col-md-6">
                <h2>Generate QR Code</h2>
                <input type="text" name="QRcode" class="form-control col-4" id="textCode" />
                <br /><br />
                <input type="submit" class="btn btn-primary" id="btnGenerate" value="Generate" />
                <hr />

                @if (ViewBag.QRImage != null)
                {
                    
                }
            </div>
        </div>

    }

    @using (Html.BeginForm("QRCodeRead", "QRCode", FormMethod.Post))
    {

        <input type="submit" class="btn btn-primary" id="btnRead" value="Read" />
        <hr />

    }
</body>

```


13. Run the project click on read button and upload a qrcode image file.

Choose File

No file chosen

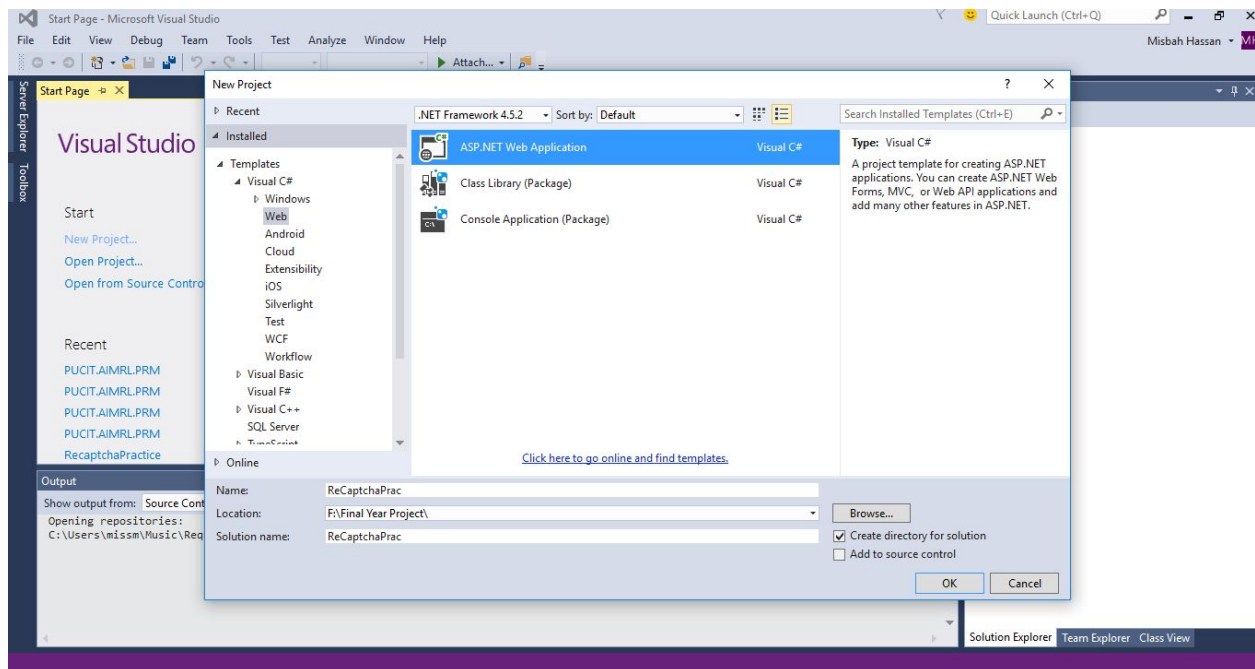
Upload

AIMRL



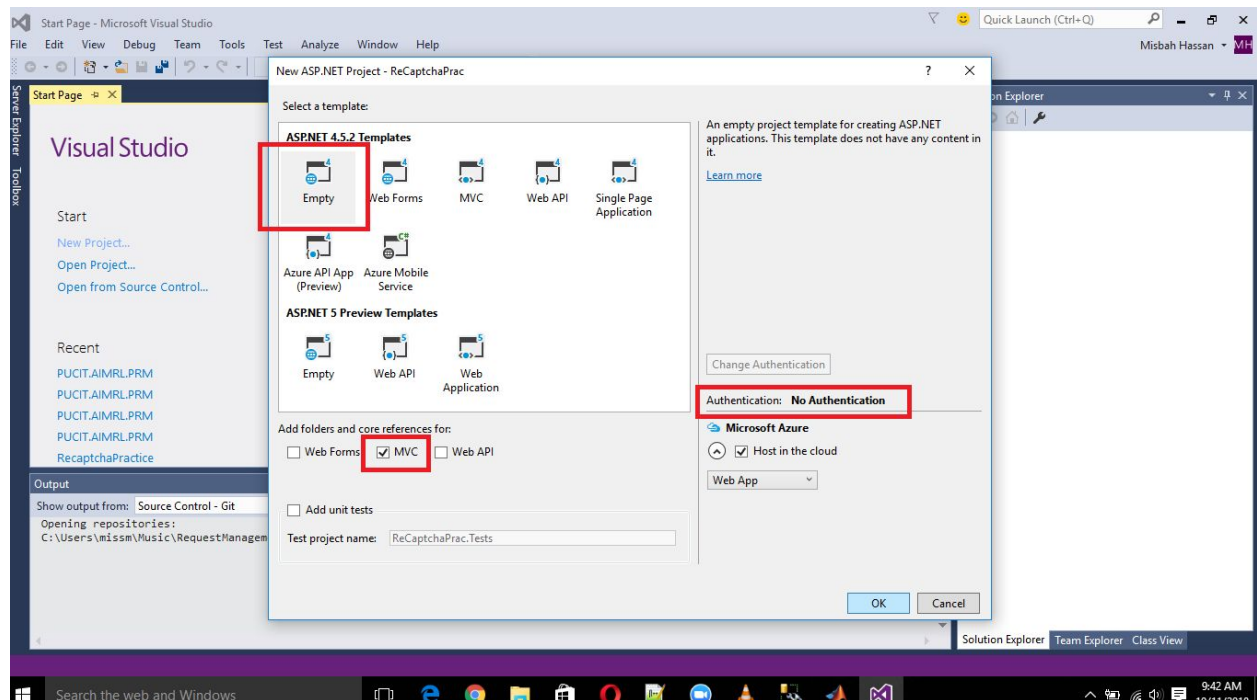
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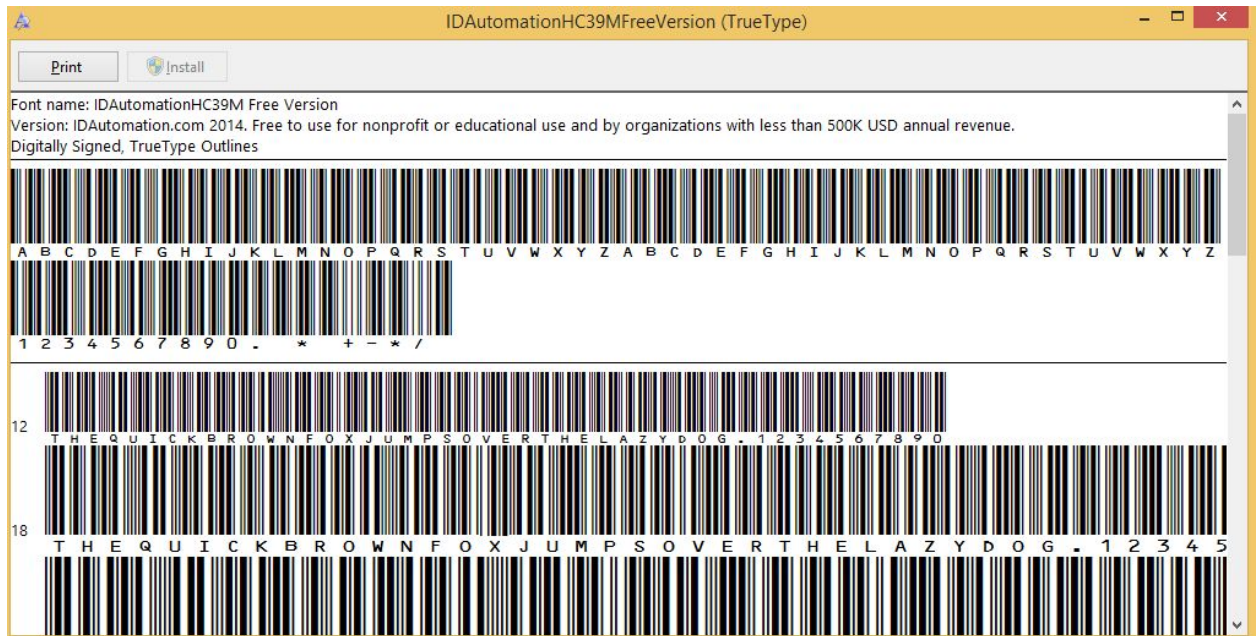


2. Go to

<http://bestdownloadtorrentarchive.online/music-audio/onbarcodebarcodebarcode-scannerdll-free-download.html> and download the Onbarcode.barcode.barcode scanner.dll .

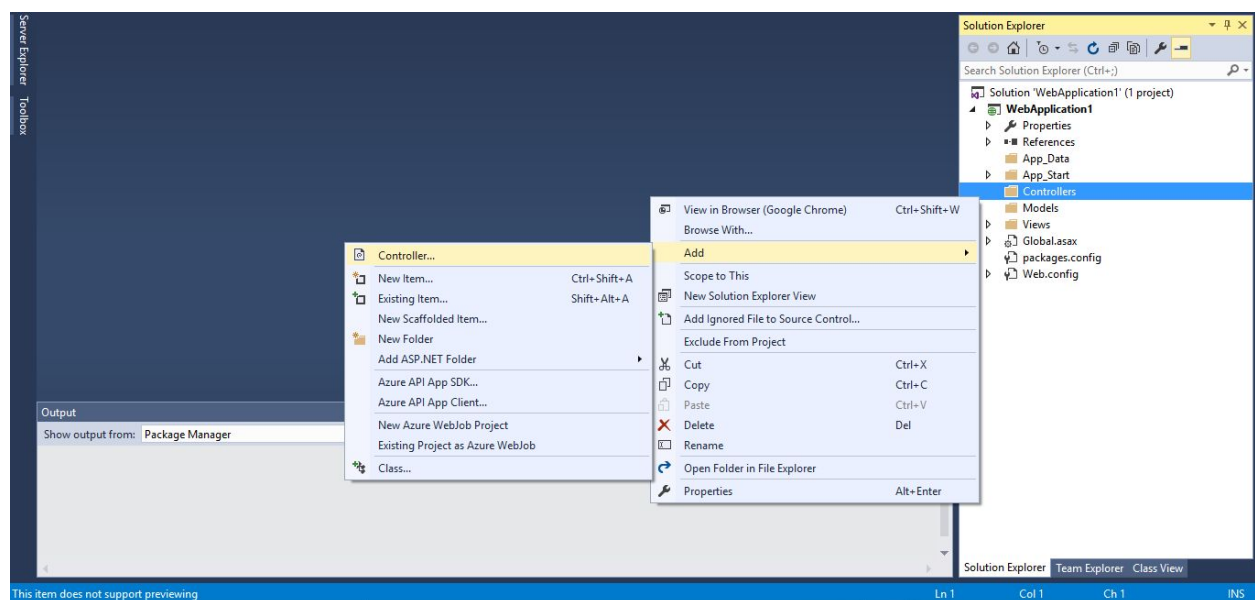
3.Go to the link

<https://www.1001freefonts.com/idaautomation.com-code-39-barcode-font-free-version.font> and download the idaautomation-code-39-barcode-fonts and then install it on your machine.

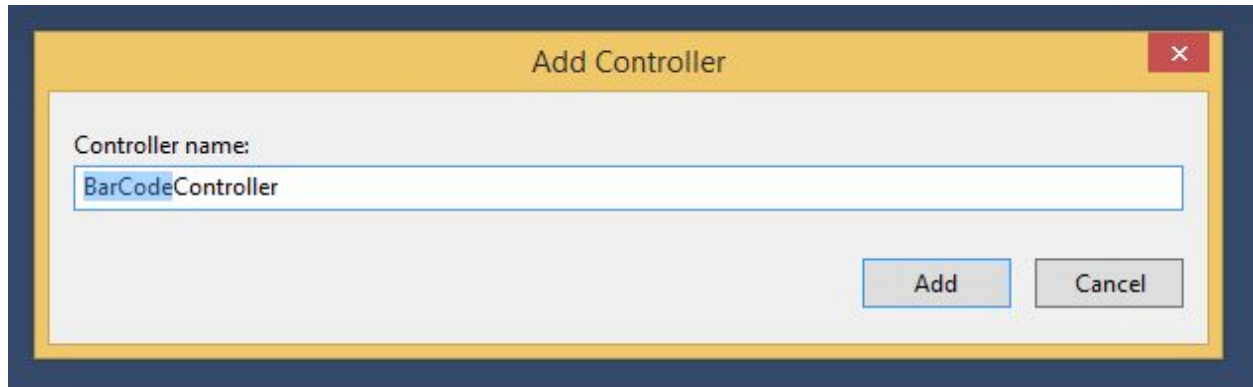


#### 4- Create a Controller.

(Go to Solution Explorer > Right Click on Controllers folder form Solution Explorer > Add > Controller > Enter Controller name > Select Template "empty MVC Controller"> Add. )

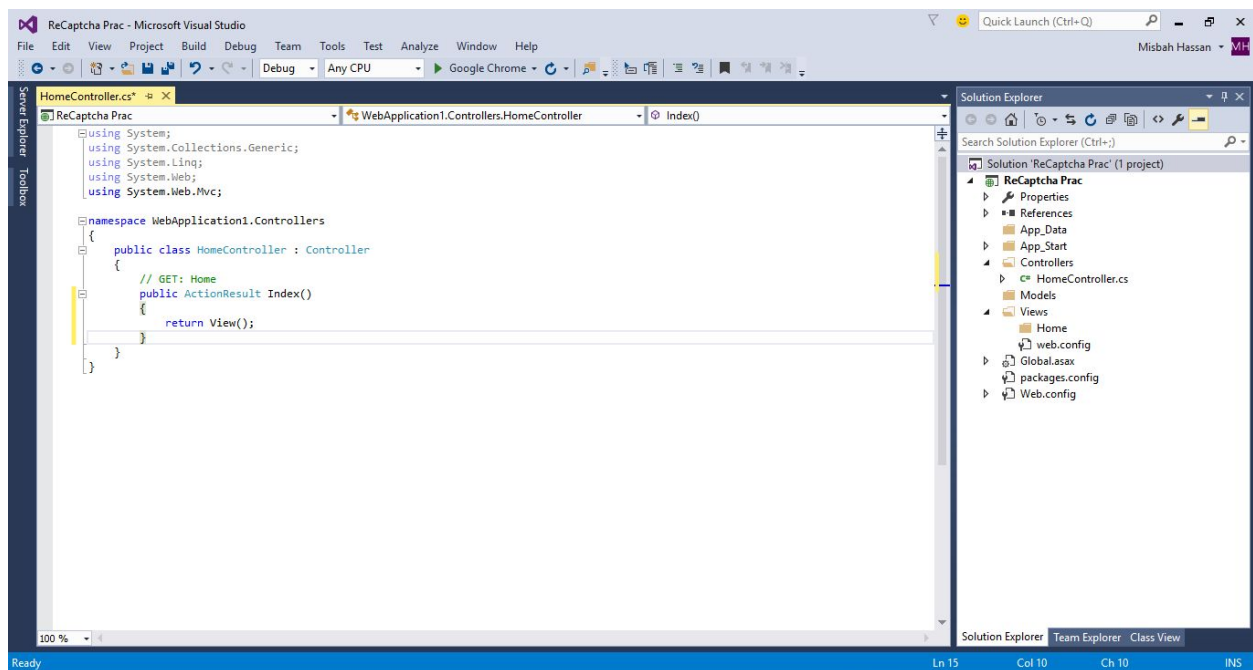


Put name for your Controller. (i.e BarCode)



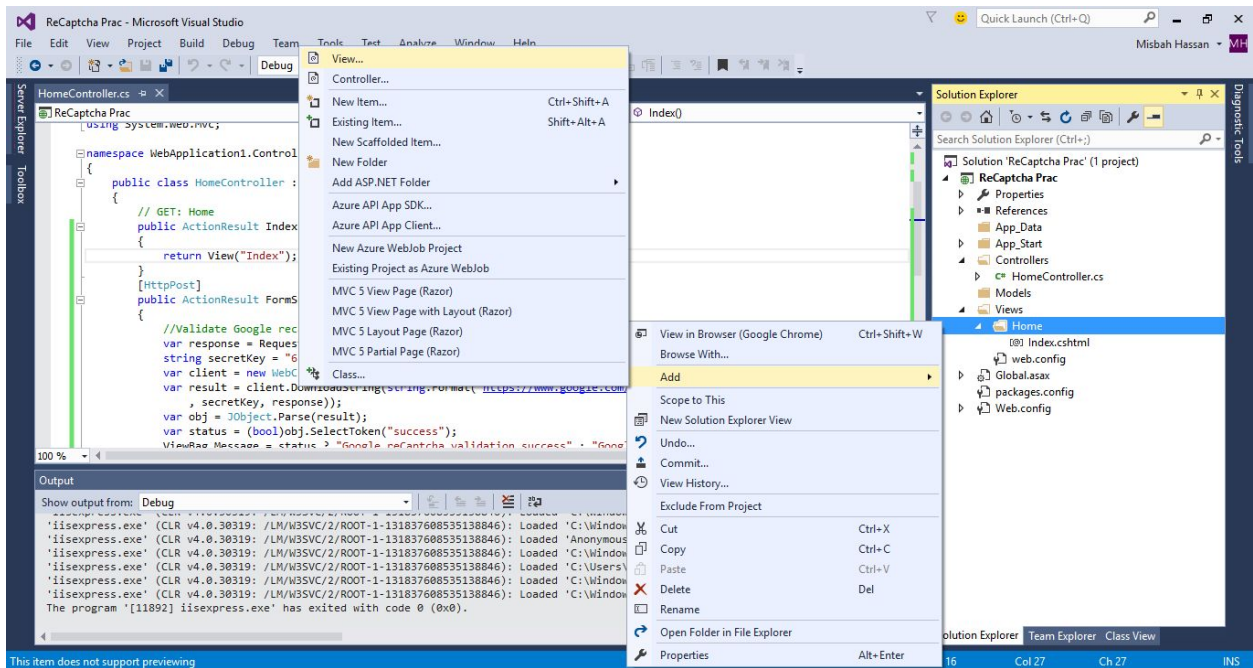
5- This screen will you with some default code

```
public ActionResult Index()
{
    return View();
}
```



6- Make a View with name of BarCode in BarCode Views.





Then give the same name as in controller you make a function which is returning a View

**Add View**

View name:

Template:

Model class:

View options:

☐ Create as a partial view

☒ Reference script libraries

☒ Use a layout page:

...

(Leave empty if it is set in a Razor \_viewstart file)

7- Add this html in View

```
<body>
@using (Html.BeginForm("GenerateBarCode", "BarCode", FormMethod.Post))
{
    <div class="row">
        <div class="col-md-3"></div>
        <div class="col-md-6">
            <h2>Generate Bar Code</h2>
            <input type="text" name="barcode" class="form-control col-4" id="textCode" />
            <br /><br />
            <input type="submit" class="btn btn-primary" id="btnGenerate" value="Generate" />
            <hr />

            @if (ViewBag.BarcodeImage != null)
            {
```

```

        
    }
</div>
</div>

}

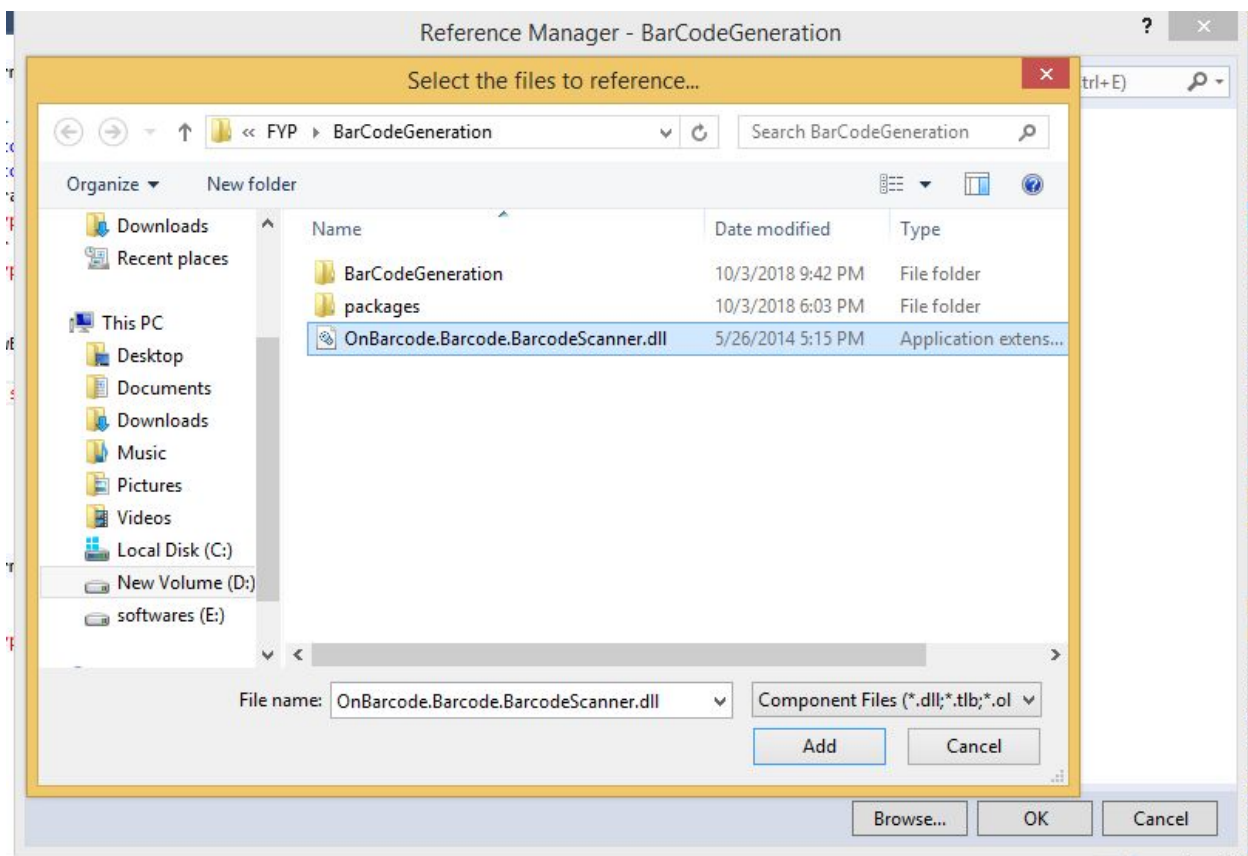
@using (Html.BeginForm("barCodeRead", "BarCode", FormMethod.Post))
{

    <input type="submit" class="btn btn-primary" id="btnRead" value="Read" />
    <hr />

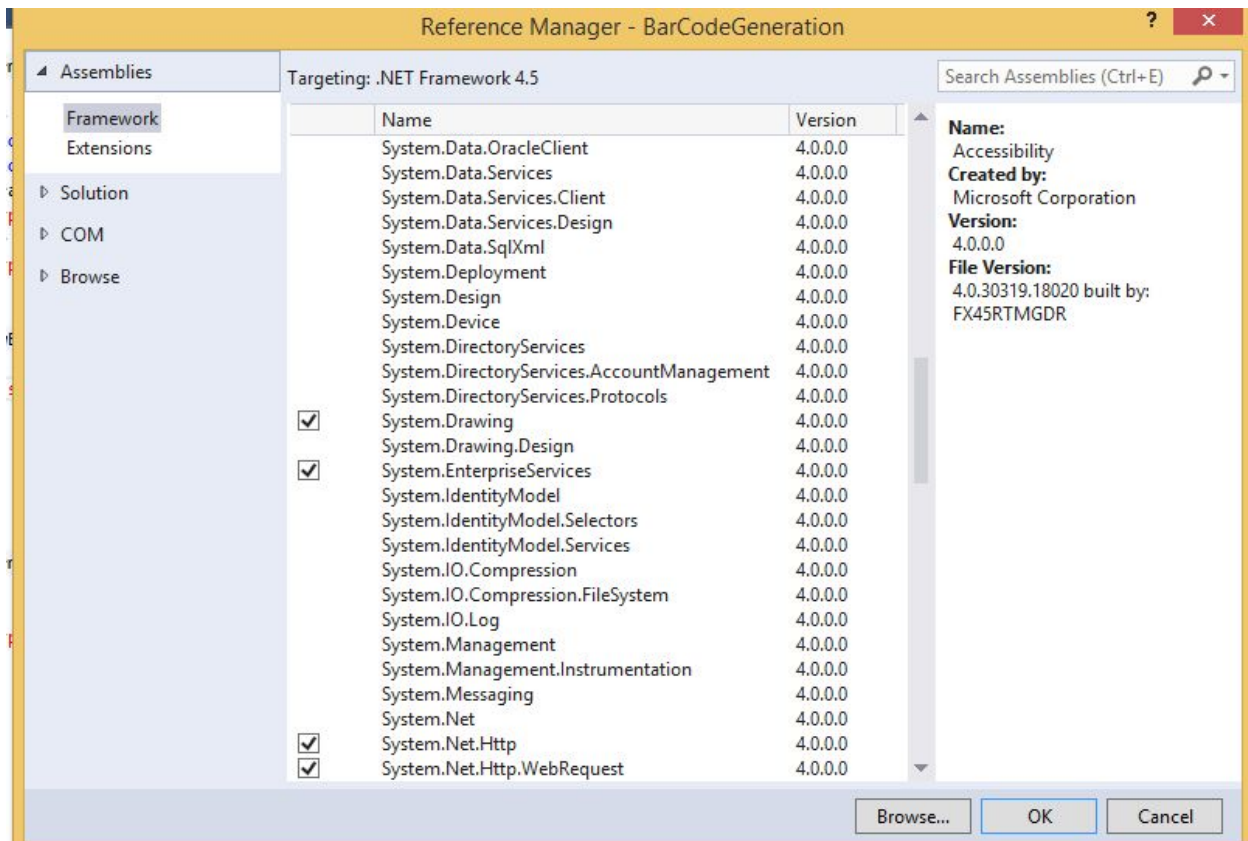
}
</body>

```

**8-** Add reference of Onbarcode.barcode.barcode scanner.dll Here I have added  
 Go to Solution Explorer > Right click on References > browse > Search for  
 Onbarcode.barcode.barcode scanner.dll > add



Then add system.drawing reference.



Now after Installation we can see it in references.

9- now create a function in home controller with the name of generate barcode and code this

[HttpPost]

```
public ActionResult GenerateBarCode(string barcode)
{
    byte[] BarCode;
    string BarCodeImage;
    Bitmap objBitmap = new Bitmap(barcode.Length * 100, 100);
    using (Graphics graphic = Graphics.FromImage(objBitmap))
    {
        Font newFont = new Font("IDAutomationHC39M Free Version", 18,
        FontStyle.Regular);
```

```

        PointF point = new PointF(2, 2);
        SolidBrush balck = new SolidBrush(Color.Black);
        SolidBrush white = new SolidBrush(Color.White);
        graphic.FillRectangle(white, 0, 0, objBitmap.Width, objBitmap.Height);
        graphic.DrawString("'" + barcode + "'", newFont, balck, point);
    }
    using (MemoryStream Mmst = new MemoryStream())
    {
        objBitmap.Save(Mmst, ImageFormat.Png);
        BarCode = Mmst.GetBuffer();
        BarCodeImage = BarCode != null ? "data:image/jpg;base64," +
Convert.ToBase64String((byte[])BarCode) : "";
        ViewBag.BarcodeImage=BarCodeImage;
    }
    return View("Index");
}

```

10. Now run the project.  
Output will be

## Generate Bar Code




\* A I M R L \*

11. Now create another action for barcode read as following in home controller and make a folder with name UploadFiles for storing barcode images.

[HttpPost]

```
public ActionResult BarCodeRead(HttpPostedFileBase barCodeUpload)
```

```

{
    String localSavePath = "~/UploadFiles/";
    string str = string.Empty;
    string strImage = string.Empty;
    string strBarCode = string.Empty;
    if (barCodeUpload != null)
    {
        String fileName = barCodeUpload.FileName;
        localSavePath += fileName;
        barCodeUpload.SaveAs(Server.MapPath(localSavePath));

        Bitmap bitmap = null;
        try
        {
            bitmap = new Bitmap(barCodeUpload.InputStream);
        }
        catch (Exception ex)
        {
            ex.ToString();
        }
        if (bitmap == null)
        {
            str = "Your file is not an image";
        }
        else
        {
            strImage = "http://localhost:" + Request.Url.Port + "/UploadFiles/" + fileName;
            strBarCode = ReadBarcodeFromFile(Server.MapPath(localSavePath));
        }
    }
    else
    {
        str = "Please upload the bar code Image.";
    }

    ViewBag.ErrorMessage = str;
    ViewBag.BarCode = strBarCode;
    ViewBag.BarImage = strImage;
    return View();
}

private String ReadBarcodeFromFile(string _Filepath)
{
    String[] barcodes = BarcodeScanner.Scan(_Filepath, BarcodeType.Code39);
    return barcodes[0];
}

```

12. Make a view with name as BarCodeRead in Home view and paste the following code there

```
<body>
  @using (Html.BeginForm("BarCodeRead", "BarCode", FormMethod.Post, new { @enctype =
"multipart/form-data" }))
{
  <div class="row">

    <div class="col-md-3"></div>
    <div class="col-md-3">
      <div align="center">
        <br />
        <input type="file" name="barCodeUpload" class="form-control" id="barCodeUpload"
/><br />
        <br />
        <input type="submit" class="btn btn-primary" id="UploadButton" value="Upload">
        <br />
        <br />
        <span class="btn alert-danger">@ViewBag.ErrorMessage</span>
        <br />
        <input type="text" class="form-control col-md-8" value="@ViewBag.BarCode" /><br />
        <br />
        
      </div>
    </div>
  </div>
}
</body>
```

13. Run the project click on read button and upload a barcode image file.  
The output will be



---

Choose File No file chosen

Upload

AIMRL

