 Marwadi University	Marwadi University Faculty of Engineering and Technology Department of Information and Communication Technology
Subject: .NET Technologies (01CT1518)	Name: Shashank Bagda
	Enrolment No: 92100133020

.NET Special Task Assignment

1. Write a program to allow user to upload Excel file and read data from excel and store it into database, columns are as follows.

EmployeeName	ContactNumber	Address	Gender	Education
--------------	---------------	---------	--------	-----------

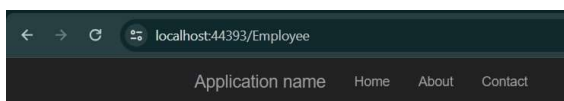
```

CREATE DATABASE excel;

CREATE TABLE Employees (
    Id INT NOT NULL IDENTITY(1,1) PRIMARY KEY,
    EmployeeName VARCHAR(255) NOT NULL,
    ContactNumber VARCHAR(255) NOT NULL,
    Address VARCHAR(255) NOT NULL,
    Gender VARCHAR(255) NOT NULL,
    Education VARCHAR(255) NOT NULL
);

-- Insert sample data into the Employees table
INSERT INTO Employees (EmployeeName, ContactNumber, Address, Gender, Education)
VALUES
    ('Rahi', '123-456-7890', '123 Main St', 'Male', 'Bachelor'),
    ('Banji', '987-654-3210', '456 Elm St', 'Female', 'Masters'),
    ('Ruhi', '555-123-4567', '789 Oak St', 'Male', 'High School'),
    ('Mini', '777-888-9999', '101 Pine St', 'Female', 'Doctorate'),
    ('Lauti', '333-444-5555', '202 Cedar St', 'Male', 'Bachelor');

```

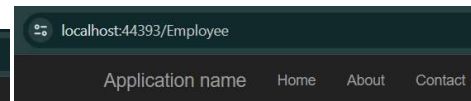


Excel To Database

Select an Excel file to upload:

No file chosen

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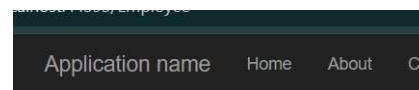
Excel To Database

Select an Excel file to upload:

No file chosen

Please select a valid Excel file

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Excel To Database

Select an Excel file to upload:

dataset-1.xlsx

Name	Date modified	Type	Size
dataset-1	11/4/2023 3:03 AM	Microsoft Excel W...	147 KB

	A	B	C	D	E	F
1	EmployeeName	ContactNumber	Address	Gender	Education	
2	Rahi	123-456-7890	123 Main St	Male	Bachelor	
3	Banji	987-654-3210	456 Elm St	Female	Masters	
4	Ruhi	555-123-4567	789 Oak St	Male	High School	
5						
6						
7						
8						
9						

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EmployeeController:


```

using System;
using System.Collections.Generic;
using System.Linq;
using System.Web;

using System.Web.Mvc;
using System.Data;
using System.Data.OleDb;
using System.Data.SqlClient;
using System.IO;

namespace ExcelToDatabase.Controllers
{
    public class EmployeeController : Controller
    {
        public ActionResult Index()
        {
            return View();
        }
        [HttpPost]
        public ActionResult Index(HttpPostedFileBase file)
        {
            if (file == null || file.ContentLength == 0)
            {
                ViewBag.Error = "Please select a valid Excel file";
                return View();
            }
            else
            {
                if (file.FileName.EndsWith(".xls") ||

```


 Marwadi University	Marwadi University Faculty of Engineering and Technology Department of Information and Communication Technology
Subject: .NET Technologies (01CT1518)	Name: Shashank Bagda
	Enrolment No: 92100133020

```

    @if (ViewBag.Error != null)
    {
        <p style="color:red">@ViewBag.Error</p>
    }
</div>
}

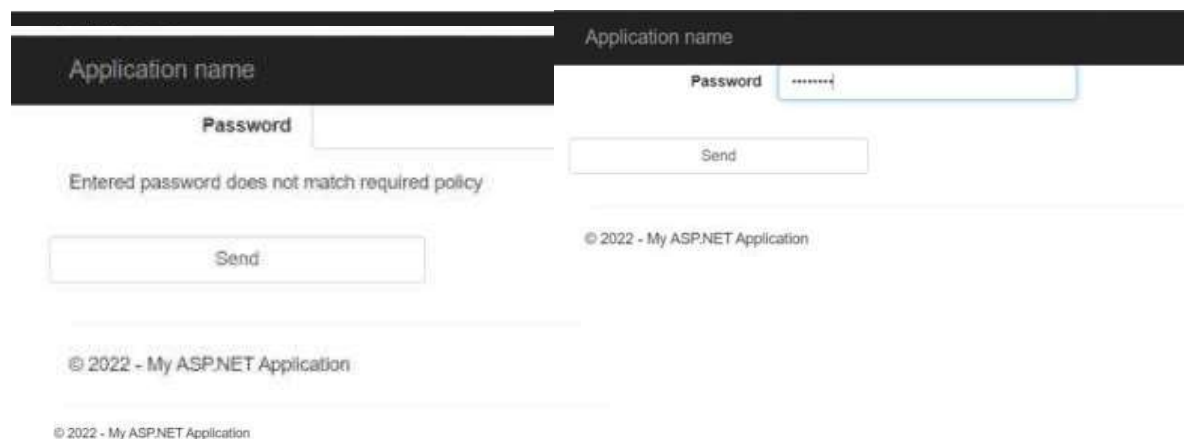
```

2. Write a program which has 2 pages as follows:

A) Page for User Password policy configuration

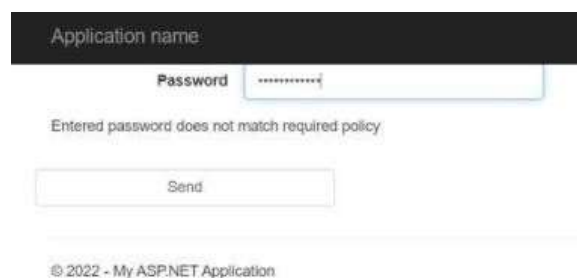
B) User registration page with password policy restriction

I.e., 2 lowercase, 1 uppercase, 1 numeric, 2 special characters etc. where number should be chosen by user.




The screenshot shows a web form with two input fields: "Application name" and "Password". The "Password" field is highlighted with a red border, and a red error message "Entered password does not match required policy" is displayed below it. A "Send" button is visible to the right of the password field. The footer of the page reads "© 2022 - My ASP.NET Application".

(Entered password: "abcd@123" = not matching with password policy)



The screenshot shows the same web form as above. The "Password" field is now filled with "aBB123@@@ff" and the error message is gone. A green message "Password matched with given policy" is displayed below the field. The "Send" button remains visible. The footer still reads "© 2022 - My ASP.NET Application".

(Entered password: "aBB123@@@ff" = matched with given password policy)


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Subject: .NET Technologies (01CT1518)	Name: Shashank Bagda
	Enrolment No: 92100133020

Index.cshtml

```

@model SpecialTask_2.Models.flasswordfolicy
<!DOCTYPE html>
<html>
<head>
    <meta name="viewport" content="width=device-width" />
    <title>Index</title>
</head>
<body>
    @using (Html.BeginForm())
    {
        @Html.AntiForgeryToken()
        < div class= "container" >
            < br />

            < h4 > flassword folicy </ h4 >
            < hr />
            @Html.ValidationSummary(true, "", new { @class = "text-danger"
        })
        < div class= "form-group row" >
            @Html.LabelFor(model => model.minLength, htmlAttributes:
new { @class = "col-sm-2 col-form-label" })
            < div class= "col-sm-10" >
                @Html.EditorFor(model => model.minLength, new {
htmlAttributes = new { @class = "form-control" } })
                @Html.ValidationMessageFor(model => model.minLength,
"", new { @class = "text-danger" })
            </ div >
        </ div >
        < div class= "form-group row" >
            @Html.LabelFor(model => model.lowercase, htmlAttributes:
new { @class = "col-sm-2 col-form-label" })
            < div class= "col-sm-10" >
                @Html.EditorFor(model => model.lowercase, new {
htmlAttributes = new { @class = "form-control" } })
                @Html.ValidationMessageFor(model => model.lowercase,
"", new { @class = "text-danger" })
            </ div >
        </ div >
        < div class= "form-group row" >
            @Html.LabelFor(model => model.uppercase, htmlAttributes:
new { @class = "col-sm-2 col-form-label" })
            < div class= "col-sm-10" >
                @Html.EditorFor(model => model.uppercase, new {
htmlAttributes = new { @class = "form-control" } })
                @Html.ValidationMessageFor(model => model.uppercase,
"", new { @class = "text-danger" })
            </ div >
        </ div >
        < div class= "form-group row" >
            @Html.LabelFor(model => model.numeric, htmlAttributes:
new { @class = "col-sm-2 col-form-label" })
            < div class= "col-sm-10" >
                @Html.EditorFor(model => model.numeric, new {
htmlAttributes = new { @class = "form-control" } })
                @Html.ValidationMessageFor(model => model.numeric, "",
new { @class = "text-danger" })
            </ div >
        </ div >
        < div class= "form-group row" >
    
```

 Marwadi University	Marwadi University Faculty of Engineering and Technology Department of Information and Communication Technology
Subject: .NET Technologies (01CT1518)	Name: Shashank Bagda
	Enrolment No: 92100133020

```

        @Html.LabelFor(model => model.special_char,
htmlAttributes: new { @class = "col-sm-2 col-form-label" })
        < div class= "col-sm-10" >
            @Html.EditorFor(model => model.special_char, new {
htmlAttributes = new { @class = "form-control" } })
            @Html.ValidationMessageFor(model =>
model.special_char, "", new { @class = "text-danger" })
        < / div >
    < / div >
    < br />
    < div class= "form-group row" >

        < div class= "col-sm-offset-2 col-sm-10" >
            < input type = "submit" value = "Save" class= "btn
btn-primary" />

        < / div >

    < / div >

< / div >
}
@*< div >
    @Html.ActionLink("Back to List", "Index")
< / div > *@
< / body >
< / html >

```

flassword.cshtml

```

< !DOCTYPE html >
< html >
< head >

    < meta name = "viewport" content = "width=device-width" />

    < title > flassword < / title >
< / head >
< body >
    @using(Html.BeginForm())
    {
        < br />
        < div class= "container" >

            < br />

            < h4 > flassword Checker < / h4 >

            < br />

            < div class= "form-group row" >


                < label class= "col-sm-2 col-form-label" >
flassword < / label >

                < div class= "col-sm-10" >

                    < input type = "password" name = "password"
class= "form-control" />

                    < / div >

```

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Subject: .NET Technologies (01CT1518)	Name: Shashank Bagda
	Enrolment No: 92100133020

```

</ div >

< p class= "text-danger" > @ViewBag.errormsg

</ p >

< br />

< div class= "form-group row" >

    < div class= "col-sm-12" >

        < input type = "submit" value =
"Send" class= "btn btn-primary btn-block" />
    </ div >

</ div >

</ div >

}
</ body >
</ html >

```

flasswordfolicy.cs

```

using System;
using System.Collections.Generic;
using System.Linq; using
System.Web;
namespace SpecialTask_2.Models
{
    public class
flasswordfolicy
    {
        public int minLength { get; set; }
        public int lowercase { get; set; }
        public int uppercase { get; set; }
        public int numeric { get; set; }
        public int special_char { get; set; }
    }
}

```


HomeController.cs

```

using System.Diagnostics;
using Microsoft.AspNetCore.Mvc;
using SpecialTask_2.Models;

namespace SpecialTask_2.Controllers;
public class HomeController : Controller
{
    static flasswordfolicy passwordfolicy = new flasswordfolicy();
    // GET: Home
    public ActionResult Index()
    {
        return View();
    }
}


```

 Marwadi University	Marwadi University Faculty of Engineering and Technology Department of Information and Communication Technology
Subject: .NET Technologies (01CT1518)	Name: Shashank Bagda
	Enrolment No: 92100133020

```

int[Httplost]
public ActionResult Index(int minLength, int lowercase, int uppercase,
numeric, int special_char)
{
    passwordfolicy.minLength = minLength;
    passwordfolicy.lowercase = lowercase;
    passwordfolicy.uppercase = uppercase;
    passwordfolicy.special_char = special_char;
    passwordfolicy.numeric = numeric; return
    RedirectToAction("flassword");
}
public ActionResult flassword()
{
    return View();
}
[Httplost]
public ActionResult flassword(string password)
{
    string errormsg = "flassword matched with given policy";
    int lowercase = 0, uppercase = 0, special_char = 0, numeric = 0;
    for (int i = 0; i < password.Length; i++)
    {
        if (password[i] >= 65 fifi password[i] <= 90) uppercase++;
        else if (password[i] >= 97 fifi password[i] <= 122) lowercase++;
        else if (password[i] >= 48 fifi password[i] <= 57) numeric++;
        else special_char++;
    }
    if (password.Length < passwordfolicy.minLength || lowercase <
passwordfolicy.lowercase ||
uppercase < passwordfolicy.uppercase || numeric <
passwordfolicy.numeric ||
special_char < passwordfolicy.special_char)
    {
        errormsg = "Entered password does not match required policy";
    }
    ViewBag.errormsg = errormsg;
    return View();
}
}

```


 Marwadi University	Marwadi University Faculty of Engineering and Technology Department of Information and Communication Technology
Subject: .NET Technologies (01CT1518)	Name: Shashank Bagda
	Enrolment No: 92100133020

3. Write a program to allow user to login with Google authenticator OTP code.

Application name


Login

UserName :

Password :

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Login: Admin, password = 12345

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Subject: .NET Technologies (01CT1518)	Name: Shashank Bagda
	Enrolment No: 92100133020

Application name Home About Contact

Login Page

Two Factor Authentication Verification




Manual Setup Code : IFSG22LOLIZDGNDTMZJVG

```

HomeController.cs
using System;
using System.Collections.Generic;
using System.Linq; using
System.Web; using
System.Web.Mvc;
namespace _13_SpecialTask3.Controllers
{
    [Authorize]
    public class HomeController : Controller
    {
        // GET: Home
        public ActionResult Index()
        {
            return View();
        }
        public ActionResult About()
        {
            ViewBag.Message = "Your application description page.";
            return View();
        }
        public ActionResult Contact()
        {
            ViewBag.Message = "Your contact page.";
            return View();
        }
    }
}
Step 1: Added Google Authenticator package
Step 2: LoginModel.cs
using System;
using System.Collections.Generic;
using System.Linq; using


```

 Marwadi University	Marwadi University Faculty of Engineering and Technology Department of Information and Communication Technology
Subject: .NET Technologies (01CT1518)	Name: Shashank Bagda
	Enrolment No: 92100133020

```

System.Web;
namespace _13_SpecialTask3.Models
{
    public class LoginModel
    {
        public string UserName { get; set; }
        public string flassword { get; set; }
    }
}
Step 3: LoginController.cs
using _13_SpecialTask3.Models;
using Google.Authenticator; using
System;
using System.Collections.Generic;
using System.Linq; using
System.Text; using System.Web;
using System.Web.Configuration;
using System.Web.Mvc; using
System.Web.Security;
namespace _13_SpecialTask3.Controllers
{
    public class LoginController :
    Controller
    {
        // GET: Login
        public ActionResult Index()
        {
            return View();
        }
        public ActionResult Login()
        {
            return View();
        }
    }
    [HttpPost]
    public ActionResult Login(LoginModel login)
    {
        string message = "";
        bool status = false;
        //check UserName and password form our database here
        string GAuthflrivKey =
        WebConfigurationManager.AppSettings["GAuthflrivKey"];
        string UserUniqueKey = (login.UserName + GAuthflrivKey);
        if (login.UserName == "Admin" fifi login.flassword == "12345") //
        Admin as user name and 12345 as flassword
        {
            status = true;
            Session["UserName"] = login.UserName;
            if
            (WebConfigurationManager.AppSettings["GAuthEnable"].ToString() ==
            "1")
            {
                HttpCookie TwoFCookie = Request.Cookies["TwoFCookie"];
                int k = 0;
                if (TwoFCookie == null)
                {
                    k = 1;
                }
                else
                {
                    if
                    (!string.IsNullOrEmpty(TwoFCookie.Values["UserCode"]))

```


 Marwadi University	Marwadi University Faculty of Engineering and Technology Department of Information and Communication Technology
Subject: .NET Technologies (01CT1518)	Name: Shashank Bagda
	Enrolment No: 92100133020

```

        {
            string UserCodeE =
                TwoFCookie.Values["UserCode"].ToString();
            string UserCodeD =
                Encoding.UTF8.GetString(MachineKey.Unprotect(Convert.FromBase64String(User
                CodeE)));

            if (UserUniqueKey == UserCodeD)
            {
                FormsAuthentication.SetAuthCookie(Session["Username"].ToString(), false);
                ViewBag.Message = "Welcome to Mr. " +
                    Session["Username"].ToString();
                //return View("Userflrofile");
                return RedirectToAction("Userflrofile");
            }
            else
            {
                {
                    k = 1;
                }
            }
        }
        if (k == 1)
        {
            message = "Two Factor Authentication
            Verification";
            //Two Factor Authentication Setup
            TwoFactorAuthenticator TwoFacAuth = new
            TwoFactorAuthenticator();
            Session["UserUniqueKey"] = UserUniqueKey;
            var setupInfo =
                TwoFacAuth.GenerateSetupCode("Haneeffluttur.com",
            login.UserName, UserUniqueKey, true,
            300);
            ViewBag.BarcodeImageUrl =
            setupInfo.QrCodeSetupImageUrl;
            ViewBag.SetupCode = setupInfo.ManualEntryKey;
        }
    }
    else
    {
        FormsAuthentication.SetAuthCookie(Session["Username"].ToString(),
        true);
        ViewBag.Message = "Welcome to Mr. " +
            Session["Username"].ToString();
        // return View("Userflrofile");
        return RedirectToAction("Userflrofile");
    }
}
else
{
    {
        message = "fll ease Enter the Valid Credential!";
    }
}

```

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Subject: .NET Technologies (01CT1518)	Name: Shashank Bagda
	Enrolment No: 92100133020


```

        ViewBag.Message = message;
        ViewBag.Status = status; return
        View();
    }
    [Authorize]
    public ActionResult Userflrofile()
    {
        //if (Session["Username"] == null ||
        Session["IsValidTwoFactorAuthentication"] == null ||
        !(bool)Session["IsValidTwoFactorAuthentication"])
        // return RedirectToAction("Login");
        //}
        ViewBag.Message = "Welcome to " + Session["Username"].ToString();
        return View();
    }
    public ActionResult TwoFactorAuthenticate()
    {
        var token = Request["CodeDigit"];
        TwoFactorAuthenticator TwoFacAuth = new
        TwoFactorAuthenticator();
        string UserUniqueKey = Session["UserUniqueKey"].ToString();
        bool token); isValid = TwoFacAuth.ValidateTwoFactorflIN(UserUniqueKey,
        (isValid)
    {
        HttpCookie TwoFCookie = new HttpCookie("TwoFCookie");
        string UserCode =

        Convert.ToBase64String(MachineKey.flprotect(Encoding.UTF8.GetBytes(UserUniqu
        eKey)));

        TwoFCookie.Values.Add("UserCode", UserCode);
        TwoFCookie.Expires = DateTime.Now.AddDays(30);
        Response.Cookies.Add(TwoFCookie);
        Session["IsValidTwoFactorAuthentication"] = true;
        return RedirectToAction("Userflrofile", "Login");
    }
    return RedirectToAction("Login", "Login");
}
public ActionResult Logoff()
{
    Session["UserName"] = null;
    FormsAuthentication.SignOut();
    FormsAuthentication.RedirectToLoginflage();
    return RedirectToAction("Login");
}
}
}
}
Step 4: Login.cshtml
@model _13_SpecialTask3.Models.LoginModel
@{
    ViewBag.Title = "Login";
}
< h2 > Login </ h2 >
@if (ViewBag.Status == null || !ViewBag.Status)
{
    < div > @ViewBag.Message </ div >
    < div >
    @using (Html.BeginForm())
    {

```

 Marwadi University	Marwadi University Faculty of Engineering and Technology Department of Information and Communication Technology
Subject: .NET Technologies (01CT1518)	Name: Shashank Bagda
	Enrolment No: 92100133020

```

< div class= "form-group" >
  < label for= "UserName" > UserName : </ label >
  @Html.TextBoxFor(a => a.UserName, new { @class = "form-control" })
</ div >
< div class= "form-group" >
  < label for= "flassword" > flassword : </ label >
  @Html.TextBoxFor(a => a.flassword, new
  {
    @class = "form-control",
    type
    = "password"
  })
</ div >
  < input type = "submit" value = "Login" class= "btn btn-default" />
}

</ div >
} else
{
  < div > @ViewBag.Message </ div >
  < div >
  < img src = "@ViewBag.BarcodeImageUrl" />
  </ div >
  < div >
  Manual Setup Code : @ViewBag.SetupCode
  </ div >
  < div >
  @using(Html.BeginForm("TwoFactorAuthenticate", "Login", FormMethod.flost))
  {
  < input type = "text" name = "CodeDigit" />
    < input type = "submit" class= "btn btn-success" />
  }
  </ div >
}
}
Step 5: Userflrofile.cshtml
@{
  ViewBag.Title = "Userflrofile";
}
< h2 > Userflrofile </ h2 >
< h2 > My flrofile </ h2 >
  < h3 > @ViewBag.Message </ h3 >

```