

PROJECT REPORT

Employee Repository  
(Using ASP.NET and MySql Database)

Mentor: Submitted by:

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**ACKNOWLEDGEMENT**

Training in GAIL INDIA LTD. has been one of the best learning experiences in not just full stack development, but about the corporate world too.

I would like to express my gratitude to my mentors, Shri **S S Sethi** Sir, who gave me the opportunity to do this training entitled “Web Pages using ASP.NET”.

The success and final outcome of this project required a lot of guidance and assistance from many people, and I am extremely privileged to have got this all along the completion of the project.

All that I have done is only due to such supervision and assistance and I would not forget to thank them.

## ABSTRACT

The Employee Repository is a database that stores information about the employees of an organization. It typically includes details such as the employee's name, ID and contact information. The Employee Repository project is a tool that allows an organization to manage and track its employees efficiently. It can be used to store and search for employee information. The employee list project can be accessed and modified by authorized personnel, and it can be customized to meet the specific needs of the organization.

#### ASP.NET- ASP.NET is a web development framework developed by Microsoft that allows developers to build dynamic web applications, websites, and web services. It is based on the .NET framework and uses the C# or VB.NET programming languages.

#### ASP.NET Frameworks-

##### Web Forms

ASP.NET Web Forms is a part of the ASP.NET web development framework that allows developers to build dynamic web applications using a drag-and-drop, event-driven model. It abstracts the underlying complexity of building web applications and makes it easier for developers to create powerful and interactive user experiences. With ASP.NET Web Forms, developers can create forms, manage state, and interact with databases using server-side controls. It also provides features such as data binding, authentication and authorization, and caching to help developers build efficient and scalable applications.

##### MVC

ASP.NET MVC (Model-View-Controller) is a web development framework that provides an alternative to the traditional ASP.NET Web Forms model. It is based on the MVC architectural pattern, which separates an application into three main components: the model, the view, and the controller.ASP.NET MVC also provides a rich set of features such as routing, dependency injection, and asynchronous programming to help developers build modern, high-performance web applications.

##### ASP.NET Web Pages

ASP.NET Web Pages is a part of the ASP.NET web development framework that provides an easy and lightweight way to create dynamic web pages using HTML, CSS, and server-side code. It uses the Razor syntax, which allows developers to mix HTML and C# code in a single file.

ASP.NET Web Pages is designed to be easy to learn and use, making it a good choice for developers who are new to web development or who want to build simple, lightweight web applications. It also provides a number of helpful features such as data access, security, and templates to make it easier to build web applications. However, it may not be suitable for large or complex web applications that require more advanced features and functionality.

## INTRODUCTION

#### ASP.NET

ASP.NET offers three frameworks for creating web applications: Web Forms, ASP.NET MVC, and ASP.NET Web Pages,each better than the other in one way or another. ASP.NET is a great platform to design and create sustainable, reliable, and error free web page

During the training, tasks related for ASP.NET were assigned with integrating an sql database. Basics of C#,HTML, ASP.NET and SQL queries were brushed up.

White getting familiar with the ASP.NET framework,a project was assigned which included designing a web form to get, display and search data of employees data from a MySql Database.The basic functionality of ASP.NET and SQL were understood during the project.

#### MySQL

SQL (Structured Query Language) is a programming language used to manage data stored in relational database management systems (RDBMS). It is used to create, modify, and query databases.

SQL is a standard language that is used by many different RDBMS software, such as MySQL, Oracle, Microsoft SQL Server, and others. It consists of a set of commands that are used to create, manipulate, and query data stored in a database. Some common SQL commands include SELECT, INSERT, UPDATE, DELETE, and CREATE.

The components used in the process:-

* + Query Dispatcher
  + Optimization Engines
  + Classic Query Engine
  + SQL Query Engine

A classic query engine handles all the non-SQL queries, but a SQL query engine won’t handle logical files.

#### C# implementation in ASP.NET-

C# is a programming language that is commonly used with ASP.NET, a web development framework developed by Microsoft. In ASP.NET, C# is used to write server-side code that runs on the server and generates HTML, CSS, and JavaScript for the client.

To use C# in an ASP.NET project, you will need to create a new ASP.NET project in Visual Studio or another development environment. Once the project is created, you can write C# code in the .cs files within the project. This code will be compiled and executed on the server when a request is made to the website.

## **PROJECT DESCRIPTION**

The following project was developed with various functions during the 4 week training.

### Employee List Page:

****

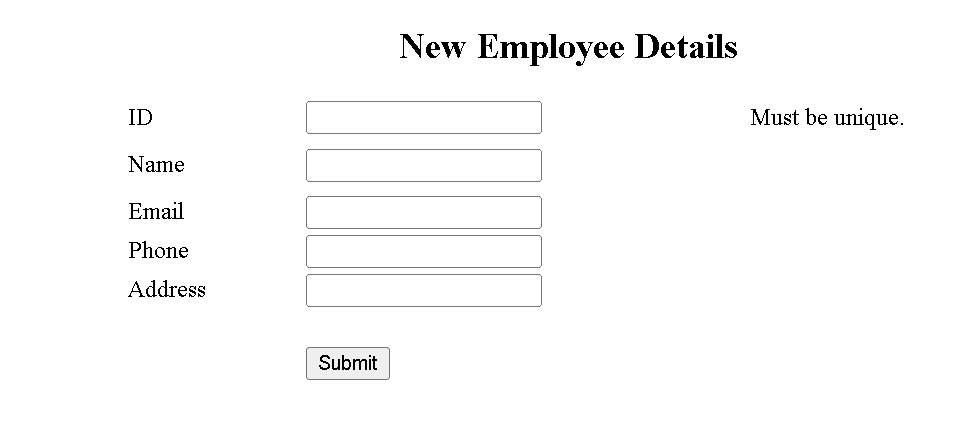
The employee list page:

When the page is loaded, it establishes a connection with the MySql server and displays a list of employees along with their ID, email, phone number, address and the timestamp of when the data was uploaded from the Mysql database.

The page comes with 2 functions:

1. New Employee
2. Search Function

#### 1.New Employee

The button redirects the user to a page where details of the new employee are to be filled.  
When all the fields are filled correctly and the submit button is clicked, the data is inserted into the database and the user is redirected to the Employee List Page with the updated table.

#### 2.Search Function

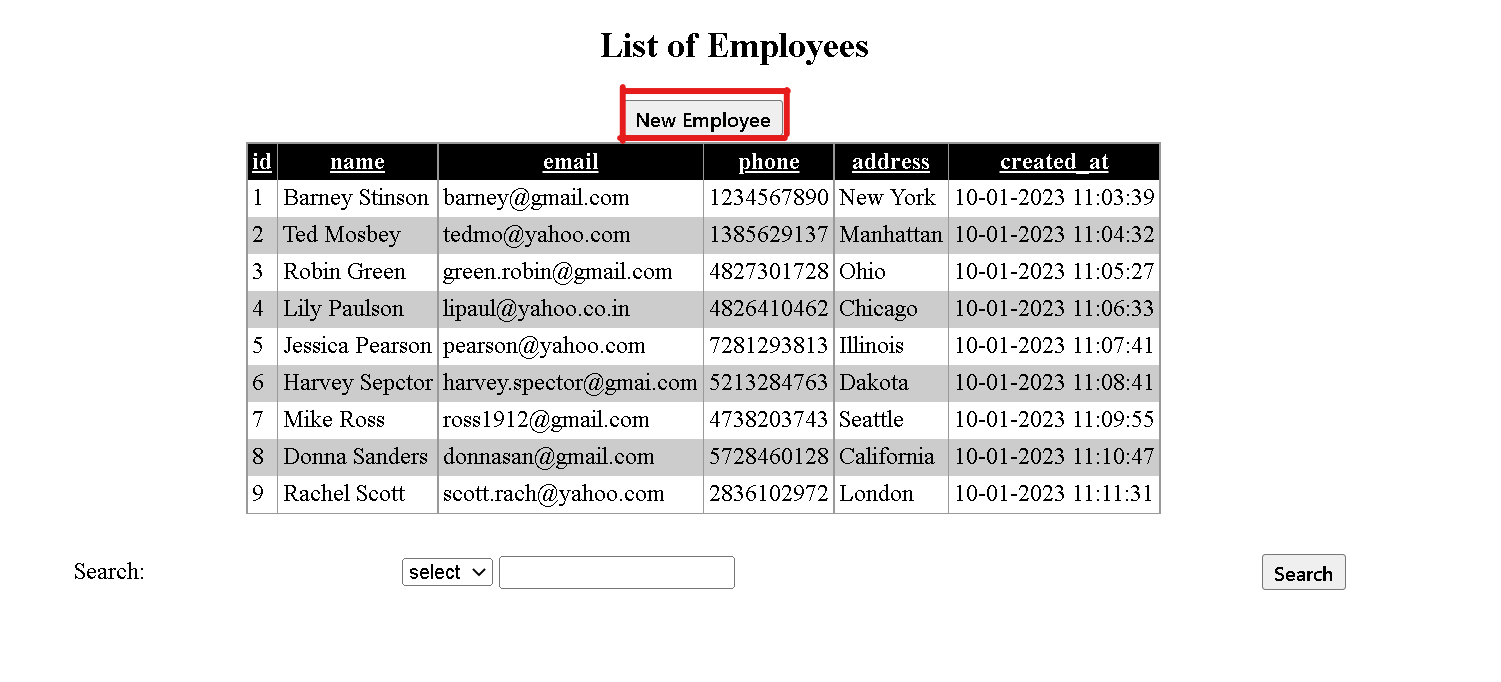
The search function allows the user to search for the details of the employees under 4 parameters:

* ID
* Name
* Email
* Phone

When the parameters are filled correctly, the form shows the details of the employee who was searched for.

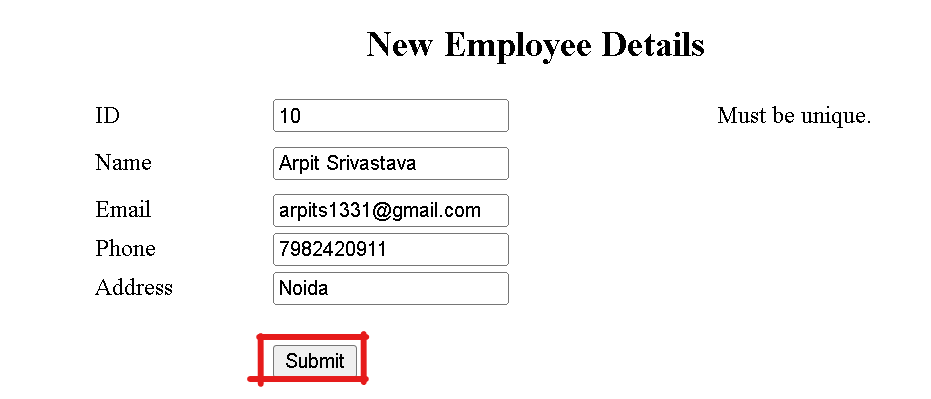
## HOW TO USE?

To add details of a new employee, click on the “New Employee Button”



This will redirect to the “new employee web page”.



Enter correct new employee details and click on the “submit” button.  


This will add the data to the database and will redirect to Employee List page with the updated data.

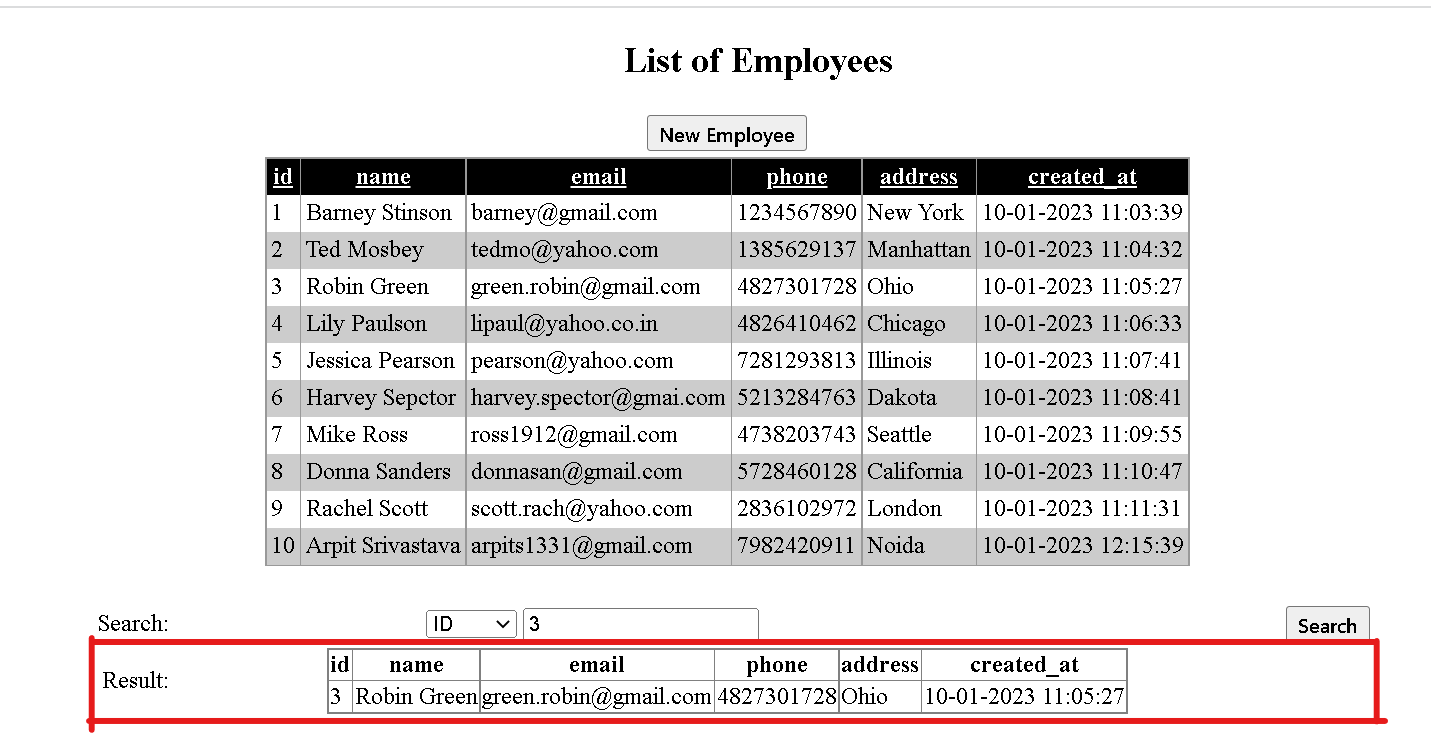


New Employee Data has been added.

To search for a data, select the parameter and the value which is to be searched



and click on the “Search” Button.

  
Search Results are displayed on the bottom of the page.

## CODES:

### For employee list:

#### ASPX:

<%@ Page Language="C#" AutoEventWireup="true" CodeBehind="EmployeeList.aspx.cs" Inherits="Employee.WebForm1" %>

<!DOCTYPE html>

<html xmlns="http://www.w3.org/1999/xhtml">

<head runat="server">

<title></title>

<style type="text/css">

.auto-style1 {

width: 737px;

}

.auto-style2 {

width: 236px;

}

</style>

</head>

<body>

<form id="form1" runat="server">

<h2 style="font-family: 'Times New Roman', Times, serif; text-align: center; ">List of Employees</h2>

<table style="width:100%;">

<tr>

<td class="auto-style2"></td>

<td class="auto-style1" align="center">

<asp:Button ID="new" runat="server" OnClick="addNewEmployee" Text="New Employee" Font-Names="Segoe UI Variable Text Semibold" align="center" ValidationGroup="G1"/>

</td>

<td>&nbsp;</td>

</tr>

<tr>

<td class="auto-style2">&nbsp;</td>

<td class="auto-style1">

<asp:GridView ID="employees" runat="server" AllowSorting="True" BackColor="White" BorderColor="#999999" BorderStyle="Solid" BorderWidth="1px" CaptionAlign="Top" CellPadding="3" ForeColor="Black" GridLines="Vertical" HorizontalAlign="Center" ShowHeaderWhenEmpty="True">

<AlternatingRowStyle BackColor="#CCCCCC" />

<FooterStyle BackColor="#CCCCCC" />

<HeaderStyle BackColor="Black" Font-Bold="True" ForeColor="White" />

<PagerStyle BackColor="#999999" ForeColor="Black" HorizontalAlign="Center" />

<SelectedRowStyle BackColor="#000099" Font-Bold="True" ForeColor="White" />

<SortedAscendingCellStyle BackColor="#F1F1F1" />

<SortedAscendingHeaderStyle BackColor="#808080" />

<SortedDescendingCellStyle BackColor="#CAC9C9" />

<SortedDescendingHeaderStyle BackColor="#383838" />

</asp:GridView>

</td>

<td>&nbsp;</td>

</tr>

<tr>

<td>&nbsp;</td>

<td>

&nbsp;</td>

<td>&nbsp;</td>

</tr>

<tr>

<td class="auto-style2" align="right">Search:</td>

<td class="auto-style1" align="center">

<asp:DropDownList ID="DropDownList1" runat="server" ValidationGroup="G2">

<asp:ListItem>select</asp:ListItem>

<asp:ListItem>ID</asp:ListItem>

<asp:ListItem>Name</asp:ListItem>

<asp:ListItem>Email</asp:ListItem>

<asp:ListItem>Phone</asp:ListItem>

</asp:DropDownList>

<asp:TextBox ID="TextBox1" runat="server" ValidationGroup="G2"></asp:TextBox>

<asp:RequiredFieldValidator ID="RequiredFieldValidator1" runat="server" ControlToValidate="TextBox1" ErrorMessage="RequiredFieldValidator" ValidationGroup="G2">Enter parameters to search.</asp:RequiredFieldValidator>

</td>

<td align="left">

<asp:Button ID="srch" runat="server" OnClick="search" Text="Search" Font-Names="Segoe UI Variable Text Semibold;" ValidationGroup="G2"/>

</td>

</tr>

<tr>

<td align ="right">

<asp:Label ID="Label1" runat="server"></asp:Label>

</td>

<td align ="center" class="auto-style1">

<asp:GridView ID="searchemp" runat="server">

</asp:GridView>

</td>

<td aria-atomic="True">

&nbsp;</td>

</tr>

</table>

<div>

</div>

</form>

</body>

</html>

#### ASPX.CS:

using System;

using System.Collections.Generic;

using System.Linq;

using System.Web;

using System.Web.UI;

using System.Web.UI.WebControls;

using System.Data;

using MySql.Data.MySqlClient;

using System.Text;

namespace Employee

{

public partial class WebForm1 : System.Web.UI.Page

{

string TNS = "server=localhost;user id = root;database=schema1;Password=shinicii";

protected void Page\_Load(object sender, EventArgs e)

{

try

{

MySqlConnection con = new MySqlConnection();

con.ConnectionString = TNS;

con.Open();

String sqlquery = "select \* from employees";

MySqlCommand cm = new MySqlCommand(sqlquery, con);

MySqlDataReader dr = cm.ExecuteReader(CommandBehavior.CloseConnection);

DataTable dt = new DataTable();

dt.Load(dr);

employees.DataSource = dt;

employees.DataBind();

con.Close();

}

catch (Exception ex)

{

Response.Write(ex);

}

}

protected void addNewEmployee(object sender, EventArgs e)

{

Response.Redirect("NewEmployee.aspx");

}

protected void search(object sender, EventArgs e)

{

MySqlConnection con = new MySqlConnection();

con.ConnectionString = TNS;

con.Open();

String sqlquery = "SELECT \* FROM employees WHERE " + DropDownList1.SelectedValue +"='"+TextBox1.Text+"';";

MySqlCommand cm = new MySqlCommand(sqlquery, con);

MySqlDataReader dr = cm.ExecuteReader();

if (!dr.HasRows)

{

Response.Write("<script> alert('No Employee Found')</script>");

}

else

{

DataTable dt1 = new DataTable();

dt1.Load(dr);

searchemp.DataSource = dt1;

searchemp.DataBind();

Label1.Text = "Result: ";

}

con.Close();

}

}

}

### New Employee:

#### ASPX:

<%@ Page Language="C#" AutoEventWireup="true" CodeBehind="NewEmployee.aspx.cs" Inherits="Employee.WebForm2" %>

<!DOCTYPE html>

<html xmlns="http://www.w3.org/1999/xhtml">

<head runat="server">

<title></title>

<style type="text/css">

.auto-style9 {

width: 280px;

}

.auto-style10 {

width: 184px;

}

.auto-style11 {

margin-left: 0px;

}

.auto-style12 {

width: 115px;

}

.auto-style13 {

width: 115px;

height: 33px;

}

.auto-style14 {

width: 280px;

height: 33px;

}

.auto-style15 {

width: 184px;

height: 33px;

}

</style>

</head>

<body>

<form id="form1" runat="server">

<h2 style="text-align: center">New Employee Details</h2>

<table align="center">

<tr>

<td class="auto-style12">ID</td>

<td class="auto-style9">

<asp:TextBox ID="TextBox1" runat="server" TextMode="Number" CssClass="auto-style11"></asp:TextBox>

</td>

<td class="auto-style10">

<asp:RequiredFieldValidator ID="RequiredFieldValidator1" runat="server" ControlToValidate="TextBox1" ErrorMessage="RequiredFieldValidator" ForeColor="Red">\*</asp:RequiredFieldValidator>

Must be unique.</td>

</tr>

<tr>

<td class="auto-style13">Name</td>

<td class="auto-style14">

<asp:TextBox ID="TextBox2" runat="server"></asp:TextBox>

</td>

<td class="auto-style15">

<asp:RequiredFieldValidator ID="RequiredFieldValidator2" runat="server" ControlToValidate="TextBox2" ErrorMessage="RequiredFieldValidator" ForeColor="Red">\*</asp:RequiredFieldValidator>

</td>

</tr>

<tr>

<td class="auto-style12">Email</td>

<td class="auto-style9">

<asp:TextBox ID="TextBox3" runat="server" TextMode="Email"></asp:TextBox>

</td>

<td class="auto-style10">

<asp:RequiredFieldValidator ID="RequiredFieldValidator3" runat="server" ControlToValidate="TextBox3" ErrorMessage="RequiredFieldValidator" ForeColor="Red">\*</asp:RequiredFieldValidator>

</td>

</tr>

<tr>

<td class="auto-style12">Phone</td>

<td class="auto-style9">

<asp:TextBox ID="TextBox4" runat="server" TextMode="Phone"></asp:TextBox>

</td>

<td class="auto-style10">

<asp:RequiredFieldValidator ID="RequiredFieldValidator4" runat="server" ControlToValidate="TextBox4" ErrorMessage="RequiredFieldValidator" ForeColor="Red">\*</asp:RequiredFieldValidator>

</td>

</tr>

<tr>

<td class="auto-style12">Address</td>

<td class="auto-style9">

<asp:TextBox ID="TextBox5" runat="server" TextMode="Phone"></asp:TextBox>

</td>

<td class="auto-style10">

<asp:RequiredFieldValidator ID="RequiredFieldValidator5" runat="server" ControlToValidate="TextBox5" ErrorMessage="RequiredFieldValidator" ForeColor="Red">\*</asp:RequiredFieldValidator>

</td>

</tr>

<tr>

<td class="auto-style12">&nbsp;</td>

<td class="auto-style9">&nbsp;</td>

<td class="auto-style10">&nbsp;</td>

</tr>

<tr>

<td class="auto-style12">&nbsp;</td>

<td class="auto-style9">

<asp:Button ID="Button1" runat="server" Text="Submit" OnClick="Button1\_Click" />

</td>

<td class="auto-style10">&nbsp;</td>

</tr>

</table>

</form>

</body>

</html>

#### ASPX.CS:

using System;

using System.Collections.Generic;

using System.Linq;

using System.Web;

using System.Web.UI;

using System.Web.UI.WebControls;

using System.Data;

using MySql.Data.MySqlClient;

using System.Text;

namespace Employee

{

public partial class WebForm2 : System.Web.UI.Page

{

protected void Page\_Load(object sender, EventArgs e)

{

}

protected void Button1\_Click(object sender, EventArgs e)

{

string TNS = "server=localhost;user id = root;database=schema1;Password=shinicii";

MySqlConnection con = new MySqlConnection();

con.ConnectionString = TNS;

con.Open();

StringBuilder check = new StringBuilder("SELECT \* FROM employees WHERE id ='" + TextBox1.Text + "';");

MySqlCommand chk = new MySqlCommand(check.ToString(), con);

MySqlDataReader dr = chk.ExecuteReader();

bool dataExists = dr.HasRows;

dr.Close();

con.Close();

if (dataExists)

{

Response.Write("<script> alert('User ID already exist.') </script>");

TextBox1.Text = "";

}

else

{

MySqlConnection con1 = new MySqlConnection();

con1.ConnectionString = TNS;

con1.Open();

StringBuilder insert = new StringBuilder("INSERT INTO employees VALUES('"+TextBox1.Text+"','"+TextBox2.Text + "','" +TextBox3.Text + "','" +TextBox4.Text + "','" + TextBox5.Text +"',DEFAULT);");

MySqlCommand insrt = new MySqlCommand(insert.ToString(),con1);

insrt.ExecuteNonQuery();

Response.Write("<script> alert('Data Inserted.') </script>");

}

Response.Redirect("EmployeeList.aspx");

}

}

}

## REFERENCES

[**https://www.javatpoint.com/asp-net-web-form-introduction**](https://www.javatpoint.com/asp-net-web-form-introduction) **- Asp.net web form**

[**https://www.w3schools.com/sql/**](https://www.w3schools.com/sql/) **- oracle sql basics syntaxes**