Covid-19 Management System



**A Project Report**

Submitted in partial fulfilment of the Requirement for the award of the Degree of

## BACHELOR OF SCIENCE (INFORMATION TECHNOLOGY)

**By**

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**Under the esteemed guidance of**

## Prof. Murugesh Chandran



**DEPARTMENT OF INFORMATION TECHNOLOGY**

## VIVEK COLLEGE OF COMMERCE

***(Affiliated to University of Mumbai)***



# ACKNOWLEDGEMENT

I would like to place on record my sincere gratitude to everyone who has contributed to the successful completion of this project directly or indirectly.

I wish to thank the Principal of my college, **Dr. Vijetha Shetty** and my respected

**B.Sc. I. T. Coordinator Prof. Maria Muthukumar,** Prof. **Murugesh Chandran** and **Prof. Sukanya Sawant** as well as the Management and the Library staff for their great support throughout my graduation years.

I take this opportunity to express my profound gratitude and deep regards to my guide **Prof. Murugesh Chandran** without whose guidance & critical appreciation, this project would have been incomplete. Right from the beginning, this project has been shaped by him expert opinions and he has helped me to improve this project in all manners and achieve the level that it has acquired.

I wish to extend my heartfelt gratitude to our lab assistant, **Mr. Neeraj Tiwari**, for having helped a lot during our brainstorming sessions and particularly for the permission to use the computer labs whenever needed. Last but not the least I place a deep sense of gratitude to my family members and my friends who have been constant source of inspiration during the preparation of this project work.



# DECLARATION

I hereby declare that the project entitled, “**Covid19 Management System”** done at place **GOREAGOAN (WEST)**, has not been in any case duplicated to submit to any other university for the award of any degree. To the best of my knowledge other than me, no one has submitted to any other university.

The project is done in partial fulfilment of the requirements for the award of degree of **BACHELOR OF SCIENCE (INFORMATION TECHNOLOGY)** to be submitted as final semester project as part of our curriculum.

**Neelu kewat**

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**Chapter 1. Introduction**

**1.a. Synopsis**



My Project “Covid-19 Management System” is a website. The outbreak of Coronavirus in the world has big implications for the world. Covid19 Management System is powerful, flexible, and easy to use and is designed and developed to deliver real conceivable benefits to hospitals. **The Covid-19 Pandemic in India**  is a part of the [worldwide pandemic](https://en.wikipedia.org/wiki/COVID-19_pandemic) of [coronavirus disease 2019](https://en.wikipedia.org/wiki/COVID-19) (COVID-19) caused by [severe acute respiratory syndrome coronavirus 2](https://en.wikipedia.org/wiki/Severe_acute_respiratory_syndrome_coronavirus_2) (SARS-CoV-2)

The system can be used in any hospital, clinic for maintaining patients details and their results. It integrates the entire resources of hospital into one integrated website. Covid-19 management system is a computer system that helps to manage the information related to health care and aids in the job completion of health care providers effectively. The patient data can be kept safe by using CMS in your hospital. It can be made accessible by only a limited amount of authorized personnel.

In my website you can see that Coronavirus symptoms. You can also search for the vaccination centers. Patient can also check the precautions for covid19, check their health history, etc. In dashboard you can see the new cases, active cases, no. of death due to Covid19 and recovery cases of covid19 in India. You can book the vaccination for first and second dose and after that you can download your certificate from the website by login.

In this way my project is a humble attempt to provide a solution in this difficult pandemic situation.

**1.b. Objective**

**The Objectives of CMS are:**



**Functional Requirements:**

**User:**

* Find the Vaccination Center: Patient can find the vaccination center by searching center name.
* Book Appointment: Patient can book the appointment for vaccination dose of first and second and they can also choose the vaccine which vaccine they want.
* Symptoms: You can see the symptoms for your covid-19 by providing your symptoms.
* MyChart: In MyChart the patient can see the history, the charges and the appointments and detail of vaccine which dose have completed, etc.
* Vaccine List: Patient can see the available vaccines of the center.
* Statistics: You can see the new cases, active cases, no. death due to covid19 patients and recovery case of covid19 in India.
* Print Certificate: Patient can download the certificate for first dose and second dose.

**Admin:**

* Add Center: Admin can add center.
* Add Vaccine: Admin add vaccine.
* CenterSetting: Admin can update or delete the available centers.
* VaccinationSetting: Admin can update or delete available vaccine.
* Allot Vaccine: Admin can allot vaccine to the center.
* User List: Admin can view the patient.

**Center:**

* Get Vaccination: center will allow patient that they have completed their doses.
* Print Certificate: center will generate the certificate of vaccination.
* Vaccine List: center can see the available vaccines.

**Non-Functional Requirement:**



* Security: The website is secure enough, so as not to compromise any data in the database.
* Speed: Each page load within 2 seconds.
* Performance: The query and processing time of the said interface are reasonably fast.
* Integrity: Data integrity and referential integrity are maintained in the database tables and interfaces.
* Usability: Look and feel of the screen elements on the interface flow colors, keyboard shortcuts, are simple and easy to follow and use.

**1.c. SCOPE**



This Covid19 Management System (CMS) is a website. Therefore, it is accessible to all those who are seeking help to face the pandemic situation.

**CHAPTER 2: SYSTEM ANALYSIS**

**2.a. EXISTING SYSTEM**



Hospitals currently use a manual system for the management and maintenance of critical information. The current system requires numerous paper forms, with data stores spread throughout the hospital management infrastructure. Often information is incomplete or does not follow management standards. Forms are often lost in transit between departments requiring a comprehensive auditing process to ensure that no vital information is lost. Multiple copies of the same information exist in the hospital and may lead to inconsistencies in data in various data stores.

**2.b. PROPOSED SYSTEM**



The Covid19 Management System(CMS) is designed for any hospital to replace their existing manual paper based system. The new system is to manage the information of covid19 patients, Covid-19 vaccine & information, Book appointment and check symptoms of covid19, etc. These services are to be provided in an efficient, cost effective manner, with the goal of reducing the time and resources currently required for such tasks.

**2.c.1. SOFTWARE REQUIREMENTS AND HARDWARE REQUIREMENTS**

Software plays an important role in any project development. One should understand which software to use to develop the project.



1. Operating System: Windows.
2. Front end: C#
3. Back end: SQLServer (Database plays an important role in solving the problem of information management).
4. Microsoft .Net frame work

**Justification of selection of Technology:**

**Front End:**

I am working with C# because I knows C# much better regarding the language and frameworks. C# is object oriented programming language. It provides a lot of **features** that are given below.

1. Simple
2. Modern programming language
3. Object oriented
4. Type safe
5. Interoperability
6. Scalable and Updateable
7. Component oriented
8. Structured programming language
9. Rich Library
10. Fast speed

It was developed by Microsoft led by Anders Hejlsberg and his team within the .Net initiative and was approved by the European Computer Manufacturers Association (ECMA) and International Standards Organization (ISO).

C# is among the languages for [Common Language Infrastructure](https://en.wikipedia.org/wiki/Common_Language_Infrastructure) and the current version of C# is version 9.0. C# is a lot similar to Java syntactically and is easy for the users who have knowledge of C, C++ or Java.



**Back end**

**Microsoft SQL Server** is a [relational database management system](https://en.wikipedia.org/wiki/Relational_database_management_system) developed by [Microsoft](https://en.wikipedia.org/wiki/Microsoft). As a [database server](https://en.wikipedia.org/wiki/Database_server), it is a [software product](https://en.wikipedia.org/wiki/Software_product) with the primary function of storing and retrieving data as requested by other [software applications](https://en.wikipedia.org/wiki/Software_application)—which may run either on the same computer or on another computer across a network (including the Internet). Microsoft makes SQL Server available in multiple editions, with different feature sets and targeting different users. These editions are **Enterprise, Standard, Web, etc.** SQL Server supports different data types, including [primitive types](https://en.wikipedia.org/wiki/Primitive_type) such as *Integer*, *Float*, *Decimal*, *Char* (including character strings), *Varchar* (variable length character strings), binary (for unstructured [blobs](https://en.wikipedia.org/wiki/Binary_large_object) of data), *Text* (for textual data) among others. SQL Server allows multiple clients to use the same database concurrently. As such, it needs to control concurrent access to shared data, to ensure data integrity—when multiple clients update the same data, or clients attempt to read data that is in the process of being changed by another client. SQL Server provides two modes of concurrency control: [pessimistic concurrency](https://en.wikipedia.org/wiki/Concurrency_control) and [optimistic concurrency](https://en.wikipedia.org/wiki/Optimistic_concurrency_control). SQL Server Analysis Services (SSAS) adds [OLAP](https://en.wikipedia.org/wiki/OLAP) and [data mining](https://en.wikipedia.org/wiki/Data_mining) capabilities for SQL Server databases.

**2.c.2. HARDWARE REQUIREMENTS**



The most common set of requirements defined by any operating system or software application is the physical computer resources, also known as hardware. A hardware requirements list is often accompanied by a hardware compatibility list (HCL), especially in case of operating systems. An HCL lists tested, compatibility and sometimes incompatible hardware devices for a particular operating system or application. The following sub-sections discuss the various aspects of hardware requirements.

**HARDWARE REQUIREMENTS FOR MY PROJECT**:

PROCESSOR : Minimum 1 GHz

RAM : 1 GB

DISK SPACE : 1GB and higher

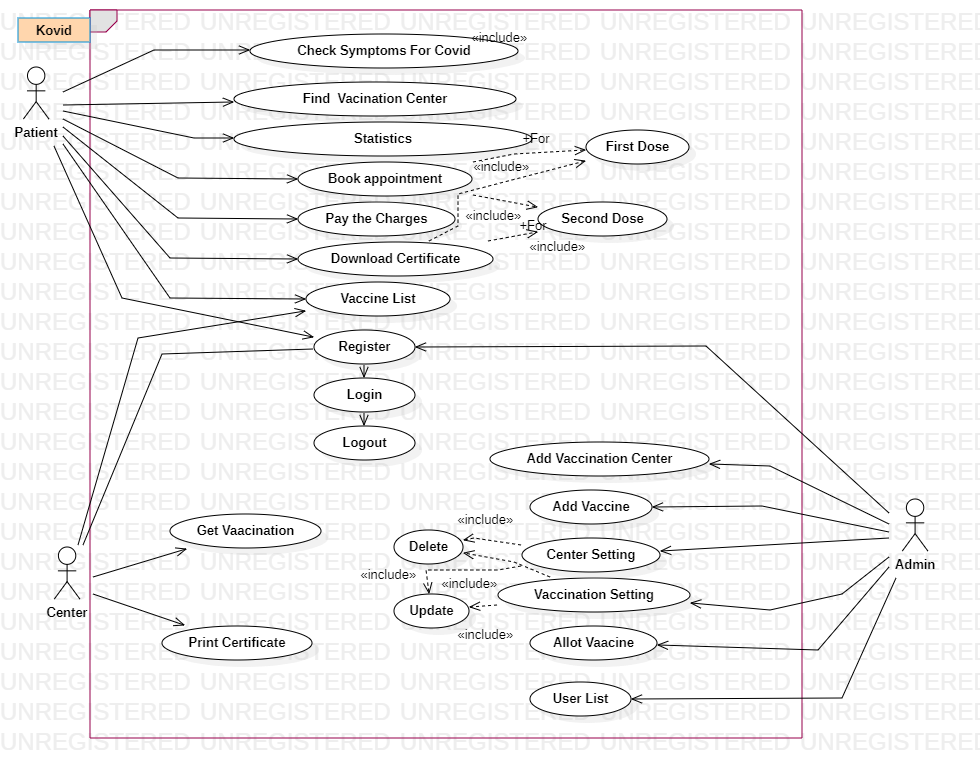
Internet Connection OR a wireless adapter (Wi-Fi).



**CHAPTER 3: SYSTEM DESIGN**

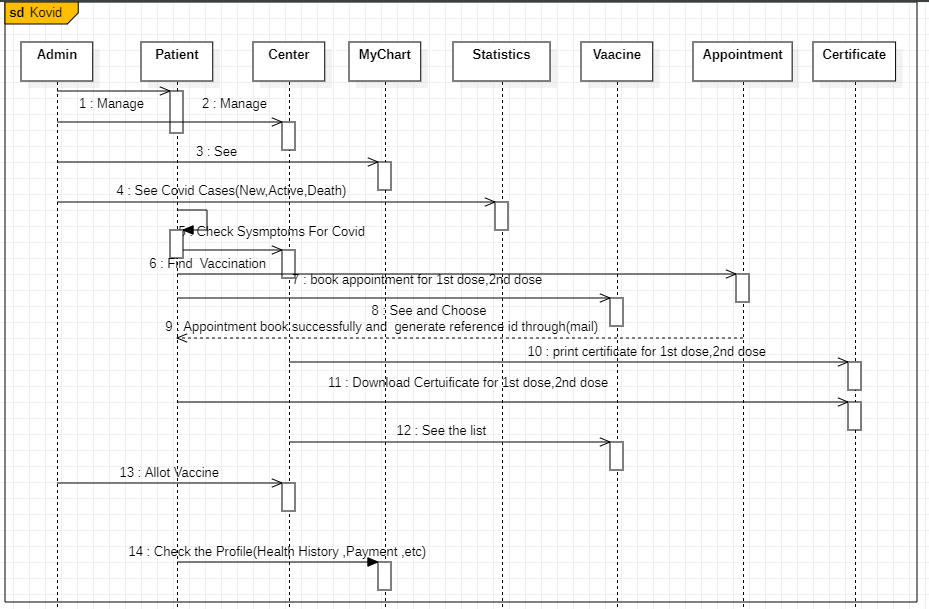
3.

a. USE CASE DIAGRAM:



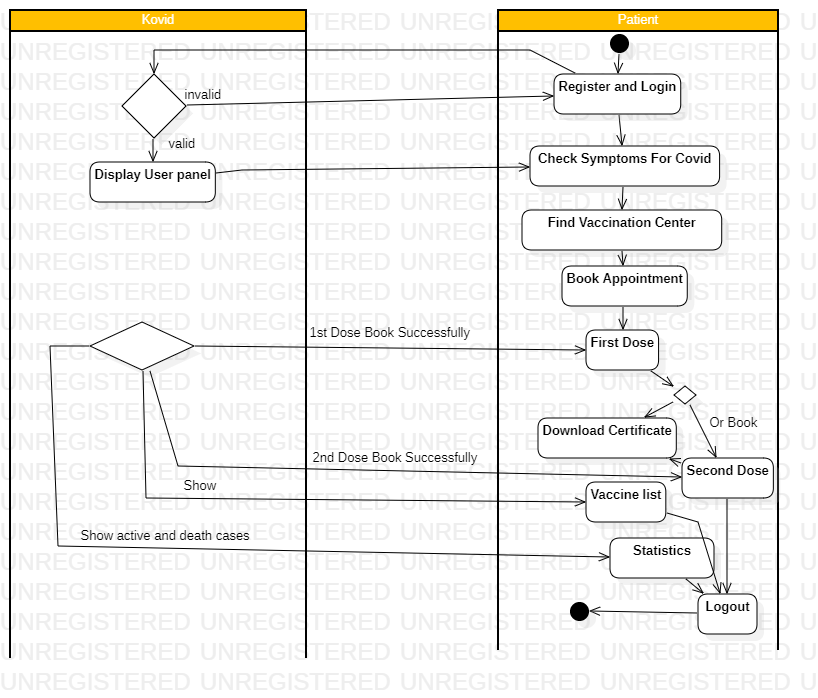
b. SEQUENCE DIAGRAM:





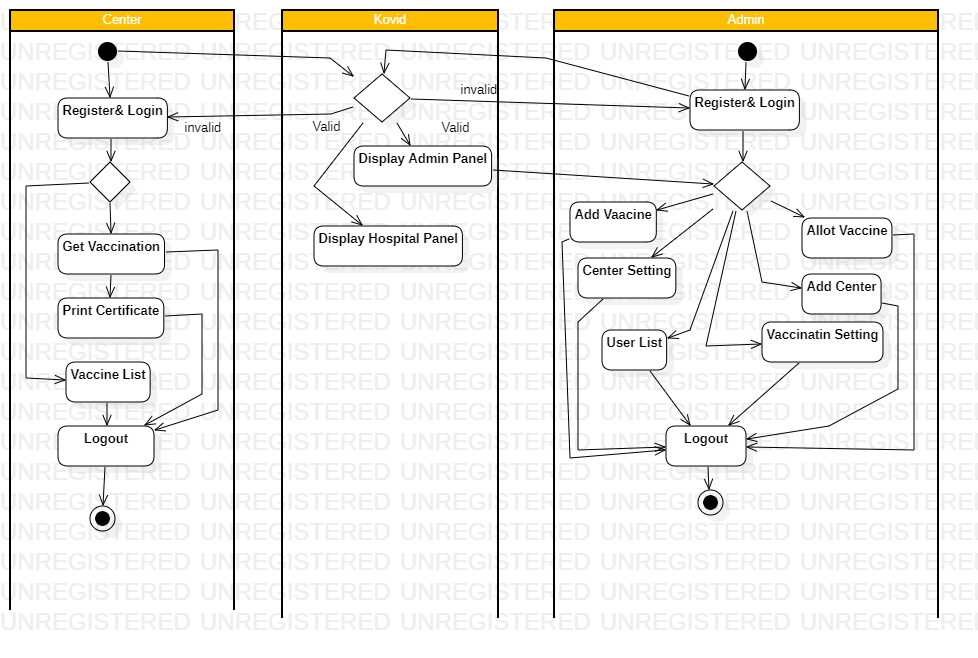
c. ACTIVITY DIAGRAM:



System And User : 

System Admin and Center:





d. CONTEXT LEVEL DIAGRAM (LEVEL 0 & LEVEL 1): 

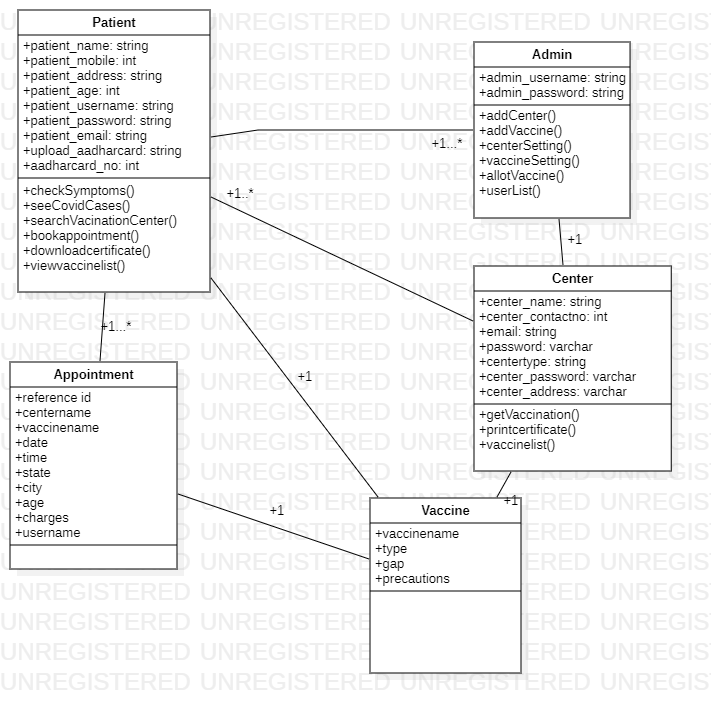






e) CLASS DIAGRAM:





f) ER DIAGRAM:





g) DATA DICTIONARY:



Signup Table

|  |  |  |  |
| --- | --- | --- | --- |
| Sr.no | Column | Type | Constraints |
| 1 | P\_username | Varchar | Primary |
| 2 | P\_Name | Varchar | Not null |
| 3 | P\_Email | Varchar | Not null |
| 4 | P\_DOB | Varchar | Not null |
| 5 | Address | Varchar | Not null |
| 6 | City | Varchar | Not null |
| 7 | Contact no. | Varchar | Not null |
| 8 | AAdharCard No. | int | Not null |
| 9 | AddAadharimg | varchar | Not null |

Add Center

|  |  |  |  |
| --- | --- | --- | --- |
| Sr.no. | Column | Type | Constraints |
| 1 | Username | Varchar | Primary Key |
| 2 | Name | Varchar | Not null |
| 3 | Email | Varchar | Not Null |
| 4 | Password | Varchar | Not Null |
| 5 | Centertype | Varchar | Not Null |
| 6 | Address | Varchar | Not Null |
| 8 | ContactNo | Int | Not Null |

Appointment Table

|  |  |  |  |
| --- | --- | --- | --- |
| Sr.no. | Column | Type | Constraints |
| 1 | P\_username | Varchar | foreign Key |
| 2 | Centername | Varchar | Not Null |
| 3 | Vaccinetype | Varchar | Not null |
| 4 | Date | Date | Not null |
| 5 | Time | Time | Not null |
| 6 | Age | int | Not null |
| 7 | ReferenceNo | int | Primary key |
| 8 | Charges | int | Not null |
| 9 | State | Varchar | Not null |

Add Vaccine Table



|  |  |  |  |
| --- | --- | --- | --- |
| Sr.no | Column | Type | Constraints |
| 1 | Vaccinename | Varchar | Not null |
| 2 | Gap | Int | Not null |
| 3 | Precautions | Varchar | Not null |

Allot Vaccine Table



|  |  |  |  |
| --- | --- | --- | --- |
| Sr.no | Column | Type | Constraints |
| 1 | Vaccinename | Varchar | Not null |
| 2 | AgeAbove18 | Int | Not null |
| 3 | AgeAbove45 | Int | Not null |
| 4 | Charges | Int | Not null |
| 5 | Centername | Varchar | Not null |

Print Certificate Table

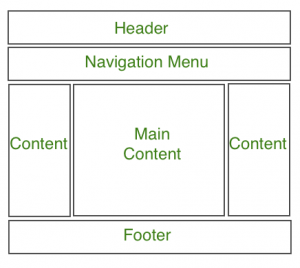


|  |  |  |  |
| --- | --- | --- | --- |
| Sr.no | Column | Type | Constraints |
| 1 | Certificate No | Varchar | Primary Key |
| 2 | username | Varchar | Foreign Key |
| 3 | Certificate type | Varchar | Not null |

h) GANTT CHART:



1. ROUGH INTERFACE DESIGN



**CHAPTER 4: Coding**



**Addvaccine.aspx:**

<%@ Page Title="" Language="C#" MasterPageFile="~/Site1.Master" AutoEventWireup="true" EnableEventValidation="false" CodeBehind="addVaccine.aspx.cs" Inherits="Covid19\_management\_system.addVaccine" %>

<asp:Content ID="Content1" ContentPlaceHolderID="head" runat="server">

</asp:Content>

<asp:Content ID="Content2" ContentPlaceHolderID="ContentPlaceHolder1" runat="server">

<!-- Required meta tags -->

<meta charset="utf-8">

<meta name="viewport" content="width=device-width, initial-scale=1, shrink-to-fit=no">

<link href="css/StyleSheet2.css" rel="stylesheet" />

<!-- ======= Hero Section ======= -->

<section id="hero" class="d-flex align-items-center">

<div class="container text-right position-relative">

<asp:Label ID="Label1" runat="server" Text="Add Vaccine" CssClass="accordion-body" Font-Size="XX-Large" ForeColor="White" Font-Bold="True"></asp:Label>

<br />

<asp:Label ID="Label2" runat="server" Text="Prevent the spread stay at home,stay safe" CssClass="accordion-body" Font-Size="Large" ForeColor="WhiteSmoke" Font-Bold="false"></asp:Label>

</div>

</section>

<!-- End Hero -->

<div class="container mt-4 p-4">

<div class="row">

<div class="col-md-6">

<center>

<h2 class="text-center my-mx-xxl-auto">Add Vaccination</h2>

<form>

<div class="form-group row">

<div class="col-sm-8 col-lg-8">

<asp:TextBox ID="TextBox1" runat="server" class="form-control" placeholder="Name of Vaccine\*"></asp:TextBox>

<asp:RequiredFieldValidator ID="RequiredFieldValidator4" runat="server" ControlToValidate="TextBox1" ErrorMessage="Please Enter Name of Vaccine" ForeColor="#CC0000"></asp:RequiredFieldValidator>

</div>

</div>

<br />

<!---->

<div class="form-group row">



<div class="col-sm-8 col-lg-8">

<asp:TextBox ID="TextBox2" runat="server" class="form-control" placeholder="Gap between 2 dose\*"></asp:TextBox>

<asp:RequiredFieldValidator ID="RequiredFieldValidator1" runat="server" ControlToValidate="TextBox2" ErrorMessage="Please Enter the Gap between 2 dose" ForeColor="#CC0000"></asp:RequiredFieldValidator>

</div>

</div>

<br />

<!---->

<div class="form-group row">

<div class="col-sm-8 col-lg-8">

<asp:TextBox ID="TextBox3" runat="server" class="form-control" placeholder="Precautions\*" Text="Age must be above 18 years. Do not take the vaccine on an Empty Stomach Drink plenty of the Water And the stay hydrated. Get good peaceful sleep at night Avoid Excess Alcohol intake at it may dehydrate you.

"

TextMode="MultiLine" ReadOnly="true" Width="350" Height="150" Font-Bold="true" ForeColor="IndianRed" CssClass="align-items-center" Style="text-align:center" BorderColor="White"></asp:TextBox>

&nbsp;&nbsp;&nbsp;

</div>

</div>

<br />

<div class="form-group row justify-content-end">

<div class="col-sm-5">

<br />

<asp:Button class="btn btn-success btn-lg btn-danger" ID="Button1" runat="server" Text="Add Vaccine" OnClick="Button1\_Click" />

</div>

</div>

</form>

</div>

</div>

</div>

</asp:Content>

**addvaccine.cs**



using System;

using System.Collections.Generic;

using System.Configuration;

using System.Data;

using System.Data.SqlClient;

using System.Linq;

using System.Web;

using System.Web.UI;

using System.Web.UI.WebControls;

namespace Covid19\_management\_system

{

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

{

string strcon = ConfigurationManager.ConnectionStrings["con"].ConnectionString;

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

{

if (!IsPostBack)

{

//if (Session["username"] == null)

//{

// Response.Redirect("login.aspx");

//}

}

}

[Obsolete]

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

{

try

{

SqlConnection con = new SqlConnection(strcon);

if (con.State == ConnectionState.Closed)

{

con.Open();

}

SqlCommand cmd = new SqlCommand("INSERT INTO addvaccine(vaccinename,gap,precautions) values(@vaccinename,@gap,@precautions)", con);

cmd.Parameters.AddWithValue("@vaccinename", TextBox1.Text.Trim());

cmd.Parameters.AddWithValue("@gap", TextBox2.Text.Trim());

cmd.Parameters.AddWithValue("@precautions", TextBox3.Text.Trim());

cmd.ExecuteNonQuery();

con.Close();



Page.RegisterStartupScript("Usermsg", "<script>alert('Vaccine Added Successfully'); if (alert) { window.location = 'adminhomepage.aspx'; }</script>");

}

catch (Exception ex)

{

Response.Write("<script>alert('" + ex.Message + "');</script>");

}

}

}

}

**Addvaccinecenter.aspx:**

<%@ Page Title="" Language="C#" MasterPageFile="~/Site1.Master" EnableEventValidation="false" AutoEventWireup="true" CodeBehind="addVaccineCenter.aspx.cs" Inherits="Covid19\_management\_system.addVaccineCenter" %>

<asp:Content ID="Content1" ContentPlaceHolderID="head" runat="server">

</asp:Content>

<asp:Content ID="Content2" ContentPlaceHolderID="ContentPlaceHolder1" runat="server">

<!-- Required meta tags -->

<meta charset="utf-8">

<meta name="viewport" content="width=device-width, initial-scale=1, shrink-to-fit=no">

<link href="css/StyleSheet2.css" rel="stylesheet" />

<!-- ======= Hero Section ======= -->

<section id="hero" class="d-flex align-items-center">

<div class="container text-right position-relative">

<asp:Label ID="Label1" runat="server" Text="Add Center" CssClass="accordion-body" Font-Size="XX-Large" ForeColor="White" Font-Bold="True"></asp:Label>

<br />

<asp:Label ID="Label2" runat="server" Text="Prevent the spread stay at home,stay safe" CssClass="accordion-body" Font-Size="Large" ForeColor="WhiteSmoke" Font-Bold="false"></asp:Label>

</div>

</section>

<!-- End Hero -->



<div class="container mt-4 p-4">

<div class="row">

<div class="col-md-6">

<center>

<h2 class="text-center my-mx-xxl-auto">Add Center</h2>

<form>

<div class="form-group row">

<div class="col-sm-8 col-lg-8">

<div class="form-group">

<asp:DropDownList class="form-control" ID="DropDownList1" runat="server">

<asp:ListItem Text="Select State" Value="select" />

<asp:ListItem Text="Maharashtra" Value="Maharashtra" />

<asp:ListItem Text="Punjab" Value="Punjab" />

</asp:DropDownList>

<asp:RequiredFieldValidator ID="RequiredFieldValidator1" runat="server" ControlToValidate="DropDownList1"

ErrorMessage="Please Enter State Name"

ForeColor="#CC0000"></asp:RequiredFieldValidator>

</div>

</div>

</div>

<br />

<div class="form-group row">

<div class="col-sm-8 col-lg-8">

<div class="form-group">

<asp:DropDownList class="form-control" ID="DropDownList2" runat="server">

<asp:ListItem Text="Select City" Value="select" />

<asp:ListItem Text="Mumbai" Value="Mumbai" />

<asp:ListItem Text="Pune" Value="Pune" />

</asp:DropDownList>

<asp:RequiredFieldValidator ID="RequiredFieldValidator2" runat="server" ControlToValidate="DropDownList2"

ErrorMessage="Please Enter City Name"

ForeColor="#CC0000"></asp:RequiredFieldValidator>

</div>

</div>

</div>

<br />

<!---->

<div class="form-group row">

<div class="col-sm-8 col-lg-8">

<asp:TextBox ID="TextBox1" runat="server" class="form-control" placeholder="Name of Center\*"></asp:TextBox>



<asp:RequiredFieldValidator ID="RequiredFieldValidator5" runat="server" ControlToValidate="TextBox1"

ErrorMessage="Please Enter Name of Center"

ForeColor="#CC0000"></asp:RequiredFieldValidator>

</div>

</div>

<br />

<!---->

<div class="form-group row">

<div class="col-sm-8 col-lg-8">

<asp:TextBox ID="TextBox2" runat="server" TextMode="MultiLine" class="form-control" placeholder="Address\*" required></asp:TextBox>

<asp:RequiredFieldValidator ID="RequiredFieldValidator6" runat="server" ControlToValidate="TextBox2"

ErrorMessage="Please Enter Address."

ForeColor="#CC0000"></asp:RequiredFieldValidator>

</div>

</div>

<br />

<!---->

<div class="form-group row">

<div class="col-sm-8 col-lg-8">

<asp:TextBox ID="TextBox3" runat="server" TextMode="Number" class="form-control" placeholder="Contact\*"></asp:TextBox>

<asp:RequiredFieldValidator ID="RequiredFieldValidator4" runat="server" ControlToValidate="TextBox3" ErrorMessage="Please Enter your Contact No" ForeColor="#CC0000"></asp:RequiredFieldValidator>

</div>

</div>

<br />

<!---->

<div class="form-group row">

<div class="col-sm-8 col-lg-8">

<asp:TextBox ID="TextBox4" runat="server" TextMode="Email" class="form-control" placeholder="Email\*"></asp:TextBox>

<asp:RequiredFieldValidator ID="RequiredFieldValidator3" runat="server" ControlToValidate="TextBox4" ErrorMessage="Please Enter your Email ID" ForeColor="#CC0000"></asp:RequiredFieldValidator>

<br />

<asp:RegularExpressionValidator ID="RegularExpressionValidator1" runat="server" ControlToValidate="TextBox4" ValidationExpression="\w+([-+.']\w+)\*@\w+([-.]\w+)\*\.\w+([-.]\w+)\*" ErrorMessage="Invalid Email Id" ForeColor="#CC0000"></asp:RegularExpressionValidator>



</div>

</div>

<br />

<!---->

<div class="form-group row">

<div class="col-sm-8 col-lg-8">

<asp:TextBox ID="TextBox5" runat="server" TextMode="Password" class="form-control" placeholder="Password\*" required></asp:TextBox>

<asp:RequiredFieldValidator ID="RequiredFieldValidator7" runat="server" ControlToValidate="TextBox5"

ErrorMessage="Please Enter Password."

ForeColor="#CC0000"></asp:RequiredFieldValidator>

</div>

</div>

<br />

<div class="form-group row">

<div class="col-sm-8 col-lg-8">

<div class="form-group">

<asp:DropDownList class="form-control" ID="DropDownList3" runat="server">

<asp:ListItem Text="Choose Center Type\*" Value="select" />

<asp:ListItem Text="Goverment" Value="goverment" />

<asp:ListItem Text="Private" Value="private" />

</asp:DropDownList>

<asp:RequiredFieldValidator ID="RequiredFieldValidator8" runat="server" ControlToValidate="DropDownList3"

ErrorMessage="Please Enter Center Type."

ForeColor="#CC0000"></asp:RequiredFieldValidator>

</div>

</div>

</div>

<div class="form-group row justify-content-end">

<div class="col-sm-5">

<br />

<asp:Button class="btn btn-success btn-lg btn-danger" ID="Button1" runat="server" Text="Add Center" OnClick="Button1\_Click" />

</div>

</div>

</form>

</div>

</div>



</div>

</asp:Content>

**Addvaccinecenter.cs:**

using System;

using System.Collections.Generic;

using System.Configuration;

using System.Data;

using System.Data.SqlClient;

using System.Linq;

using System.Net.Mail;

using System.Text;

using System.Web;

using System.Web.UI;

using System.Web.UI.WebControls;

namespace Covid19\_management\_system

{

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

{

string strcon = ConfigurationManager.ConnectionStrings["con"].ConnectionString;

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

{

//if (!IsPostBack)

//{

// if (Session["username"] == null)

// {

// Response.Redirect("login.aspx");

// }

//}

}

[Obsolete]

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

{

if (checkCenterExits())

{

Page.RegisterStartupScript("Usermsg", "<script>alert('Center Alreay Exist with this Center Name, try other Center Name'); if (alert) { window.location = 'adminhomepage.aspx'; }</script>");

}



else

{

addcenter();

}

SendMail(TextBox4.Text, "covidmanagementsystem@gmail.com", TextBox4.Text, "Your Vaccination center has been Registered successfully", "Congratulations Your Vaccination center is now Registered:", TextBox4.Text.Trim(), TextBox5.Text.Trim());

}

// user defined method

bool checkCenterExits()

{

try

{

SqlConnection con = new SqlConnection(strcon);

if (con.State == ConnectionState.Closed)

{

con.Open();

}

SqlCommand cmd = new SqlCommand("SELECT \* from addcenter where centername ='" + TextBox1.Text.Trim() + "';", con);

SqlDataAdapter da = new SqlDataAdapter(cmd);

DataTable dt = new DataTable();

da.Fill(dt);

if (dt.Rows.Count >= 1)

{

return true;

}

else

{

return false;

}

}

catch (Exception ex)

{

Response.Write("<script>alert('" + ex.Message + "');</script>");

return false;

}

}

[Obsolete]

void addcenter()

{

try



{

SqlConnection con = new SqlConnection(strcon);

if (con.State == ConnectionState.Closed)

{

con.Open();

}

SqlCommand cmd = new SqlCommand("INSERT INTO addcenter(state,city,centername,address,contact,email,password,centertype)values(@state,@city,@centername,@address,@contact,@email,@password,@centertype)", con);

cmd.Parameters.AddWithValue("@state", DropDownList1.SelectedItem.Value);

cmd.Parameters.AddWithValue("@city", DropDownList2.SelectedItem.Value);

cmd.Parameters.AddWithValue("@centername", TextBox1.Text.Trim());

cmd.Parameters.AddWithValue("@address", TextBox2.Text.Trim());

cmd.Parameters.AddWithValue("@contact", TextBox3.Text.Trim());

cmd.Parameters.AddWithValue("@email", TextBox4.Text.Trim());

cmd.Parameters.AddWithValue("@password", TextBox5.Text.Trim());

cmd.Parameters.AddWithValue("@centertype", DropDownList3.SelectedItem.Value);

cmd.ExecuteNonQuery();

con.Close();

Page.RegisterStartupScript("Usermsg", "<script>alert('Center Added Successfully'); if (alert) { window.location = 'adminhomepage.aspx'; }</script>");

}

catch (Exception ex)

{

Response.Write("<script>alert('" + ex.Message + "');</script>");

}

}

private static string SendMail(string toList, string from, string ccList, string subject, string body ,string username,string password)

{

MailMessage message = new MailMessage();

SmtpClient smtpClient = new SmtpClient();

string msg = string.Empty;

try

{

MailAddress fromAddress = new MailAddress(from);

message.From = fromAddress;

message.To.Add(toList);

if (ccList != null && ccList != string.Empty)

message.CC.Add(ccList);

message.Subject = subject;

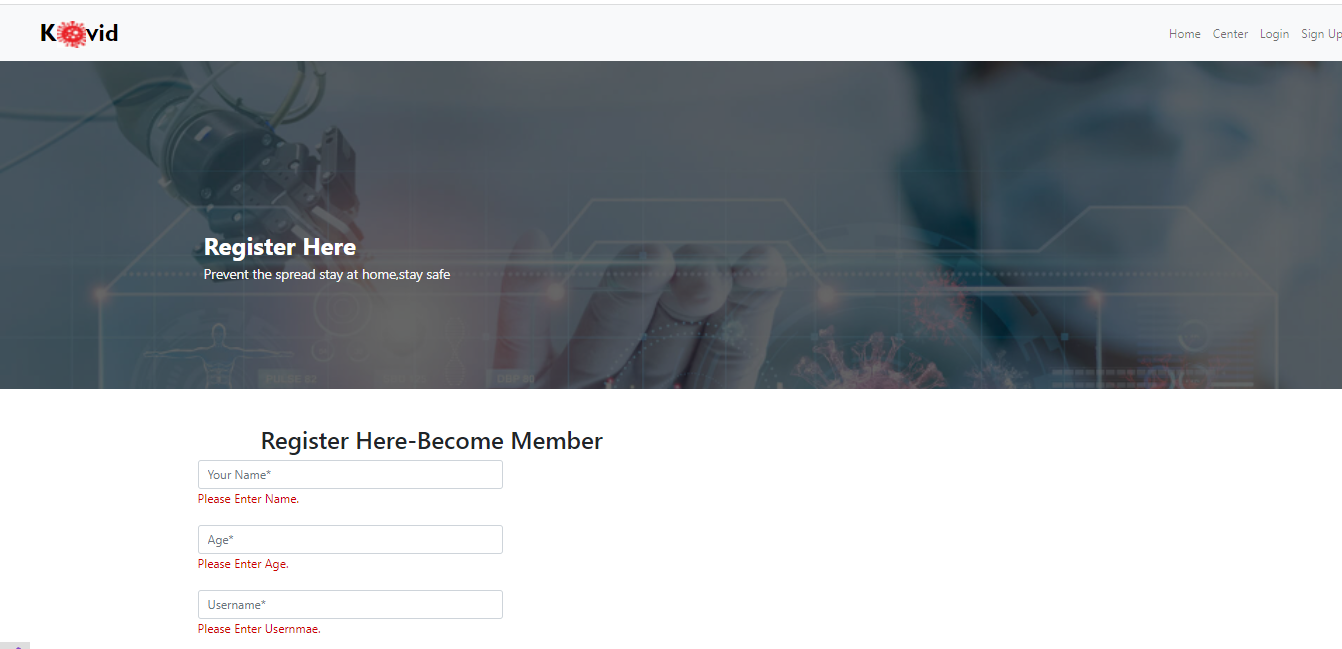
message.IsBodyHtml = true;

**CHAPTER 5: Screenshots:**

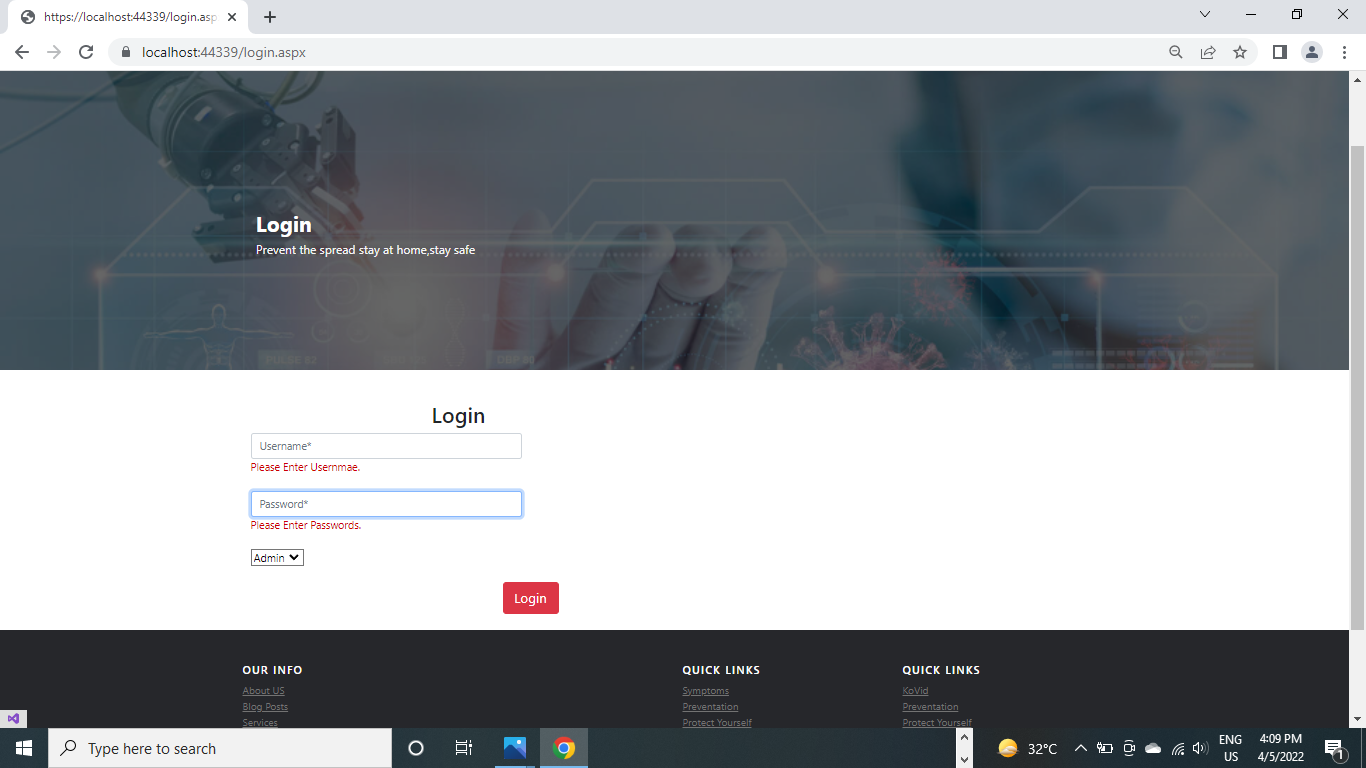


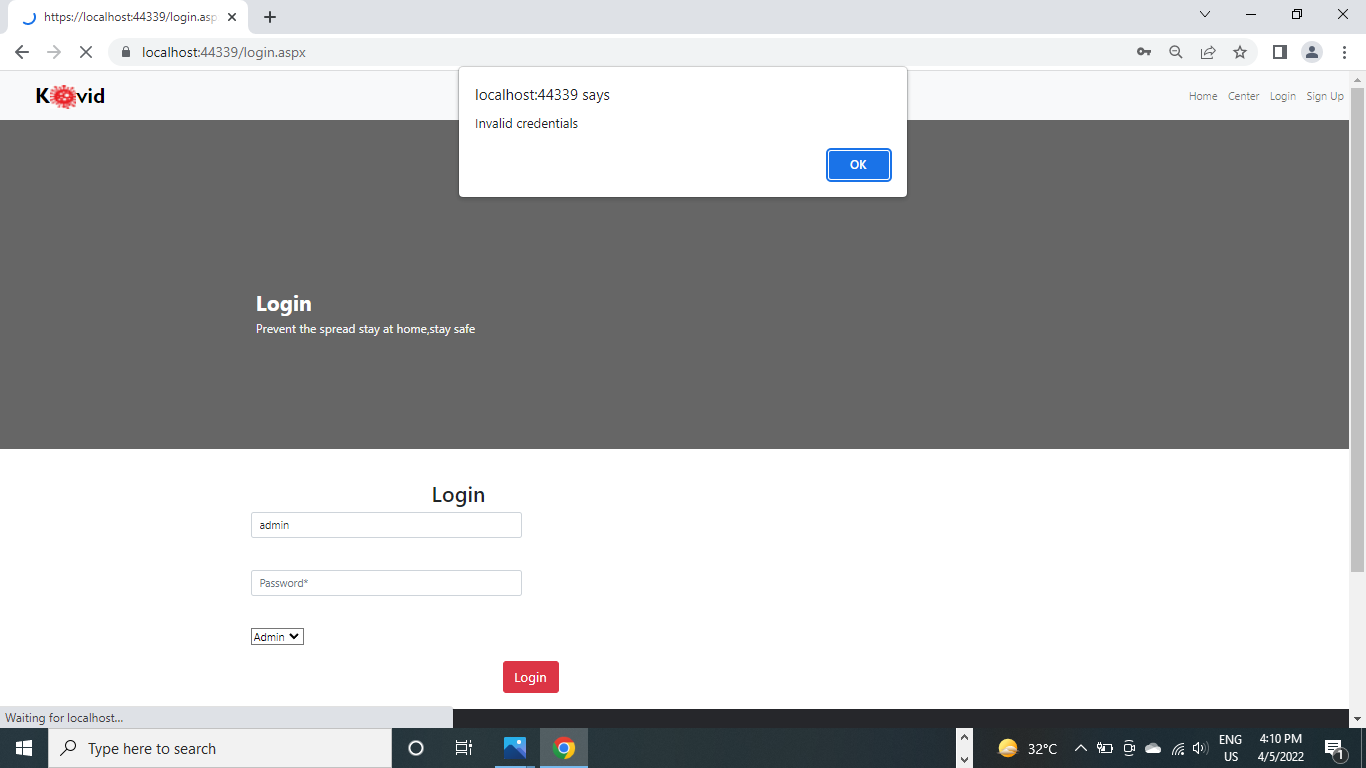
Invalid:

1)



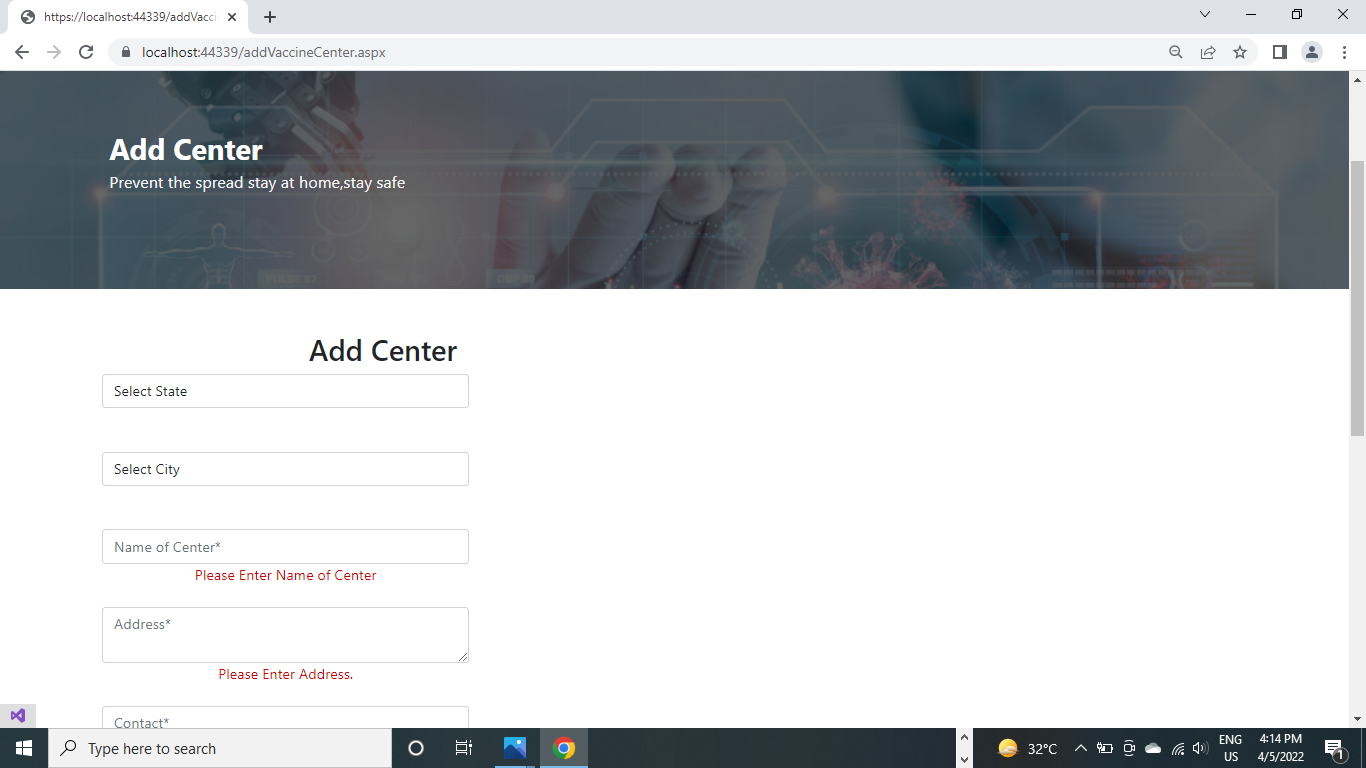
2)





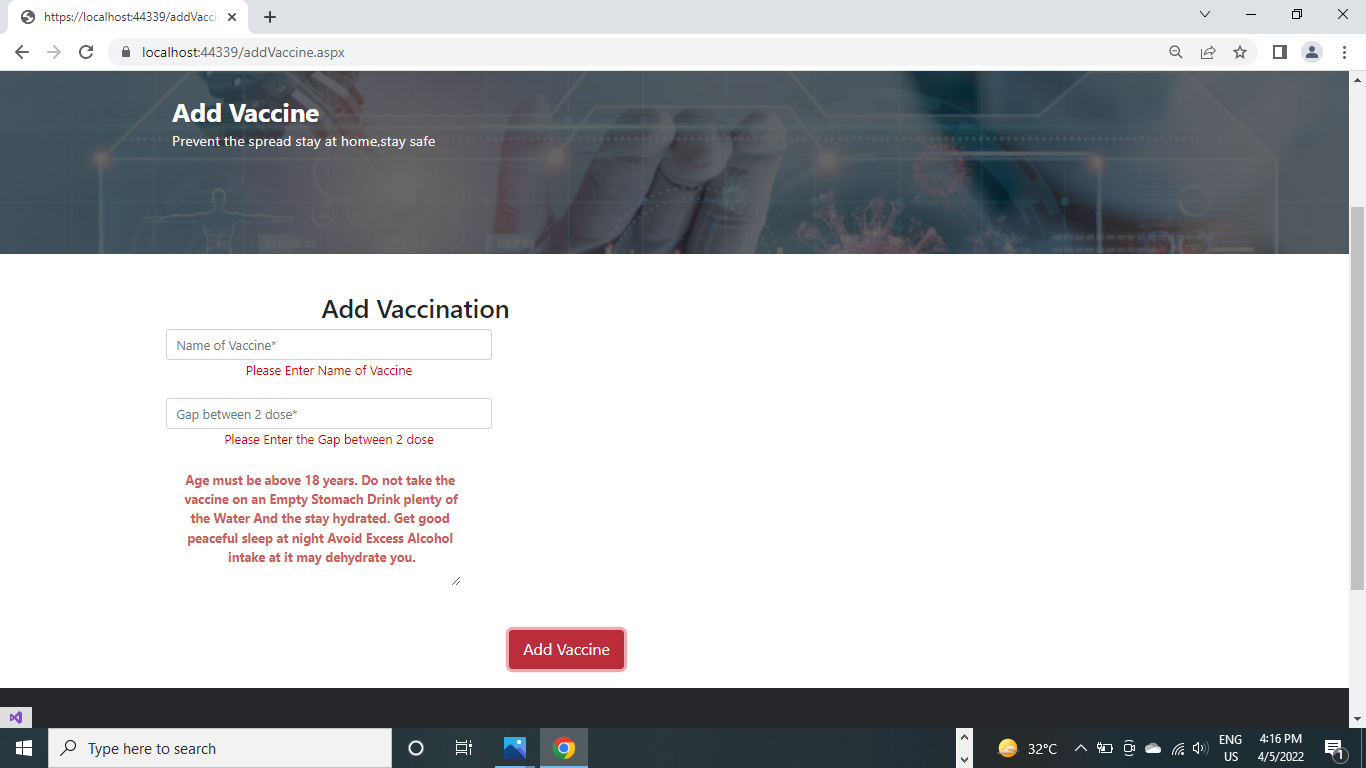


3)

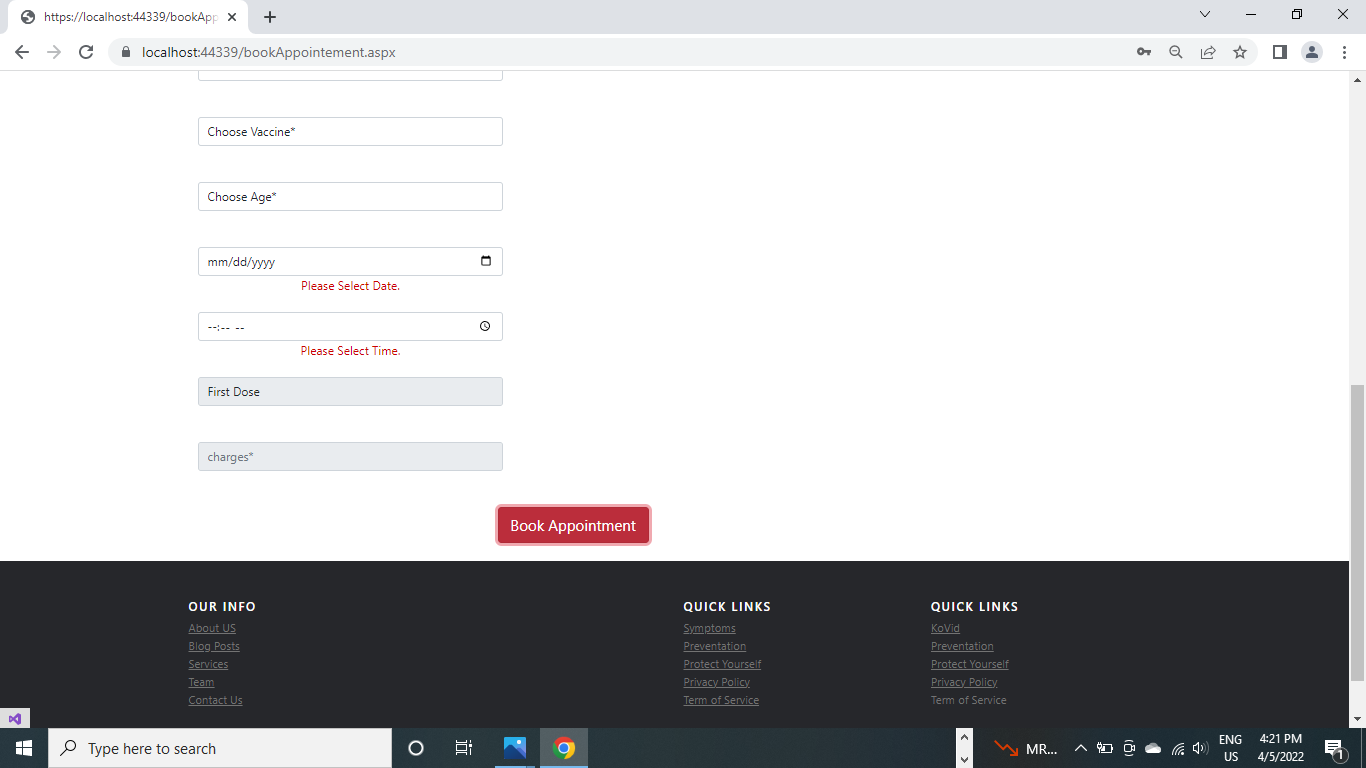


4)



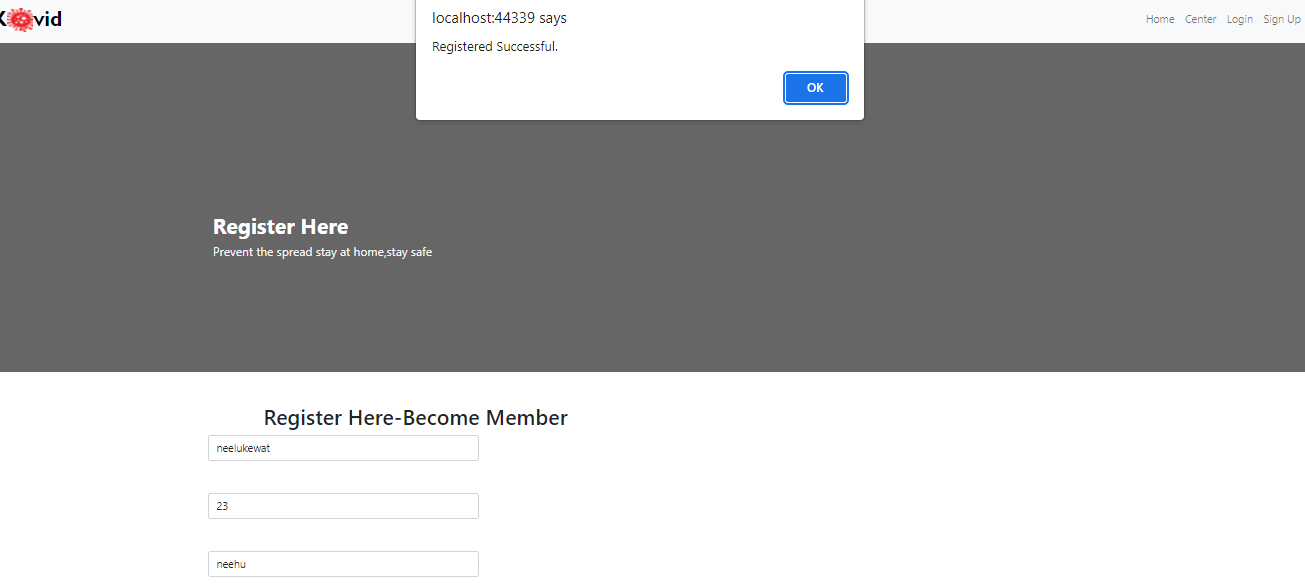


5)

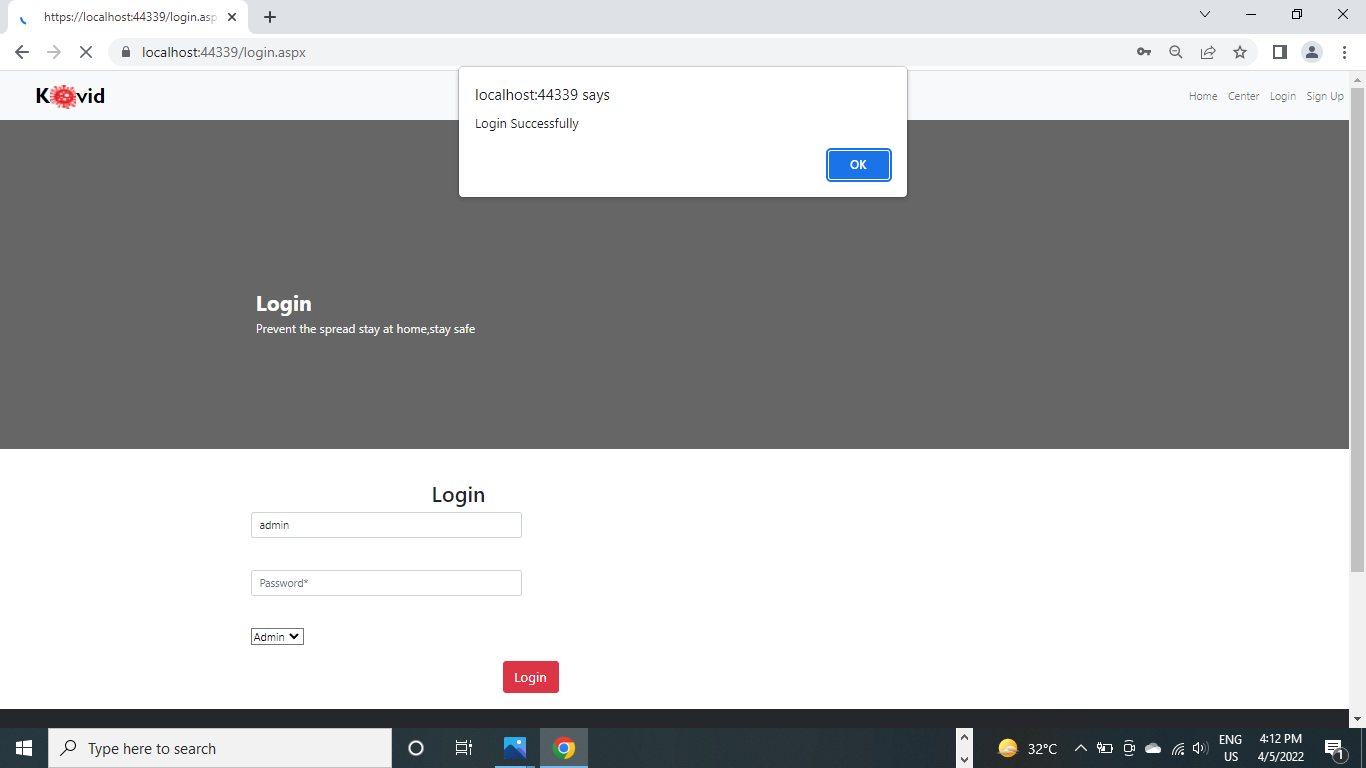


Valid:

1)

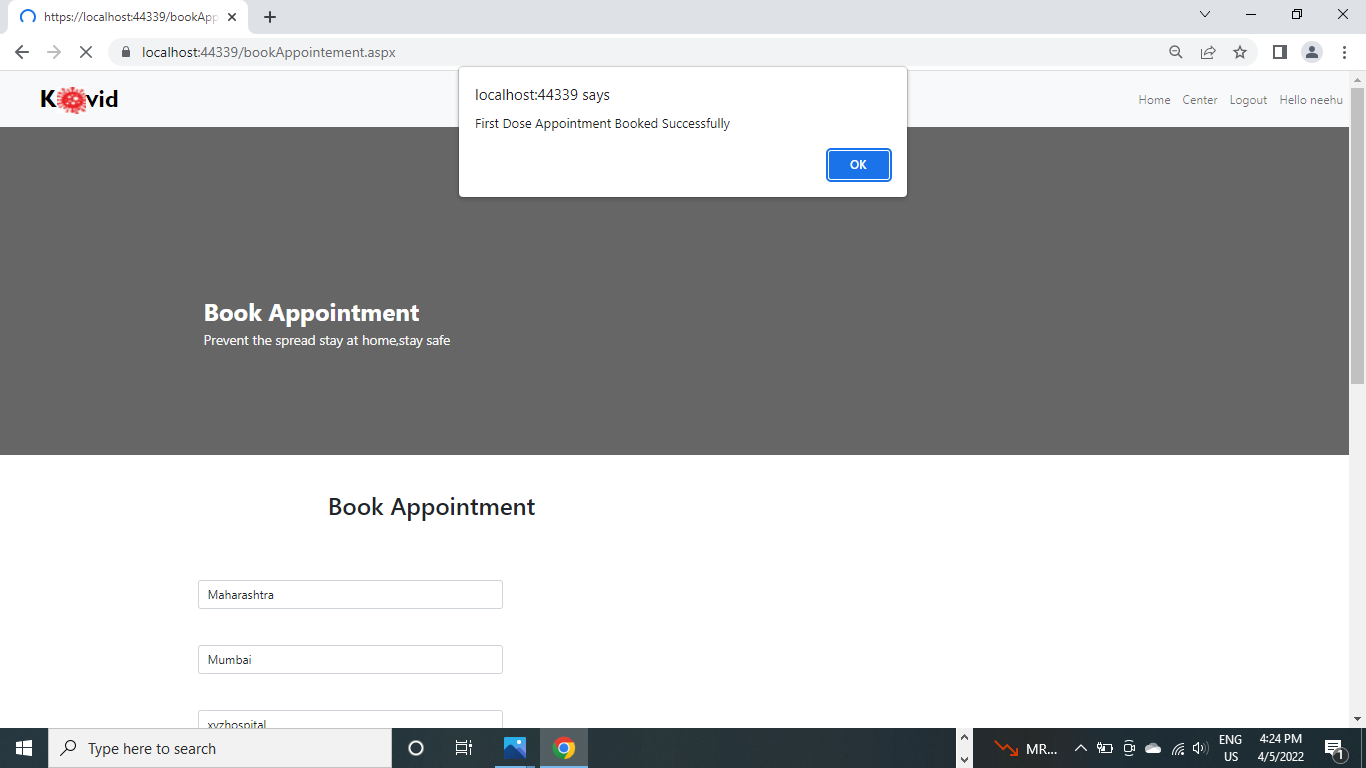


2)

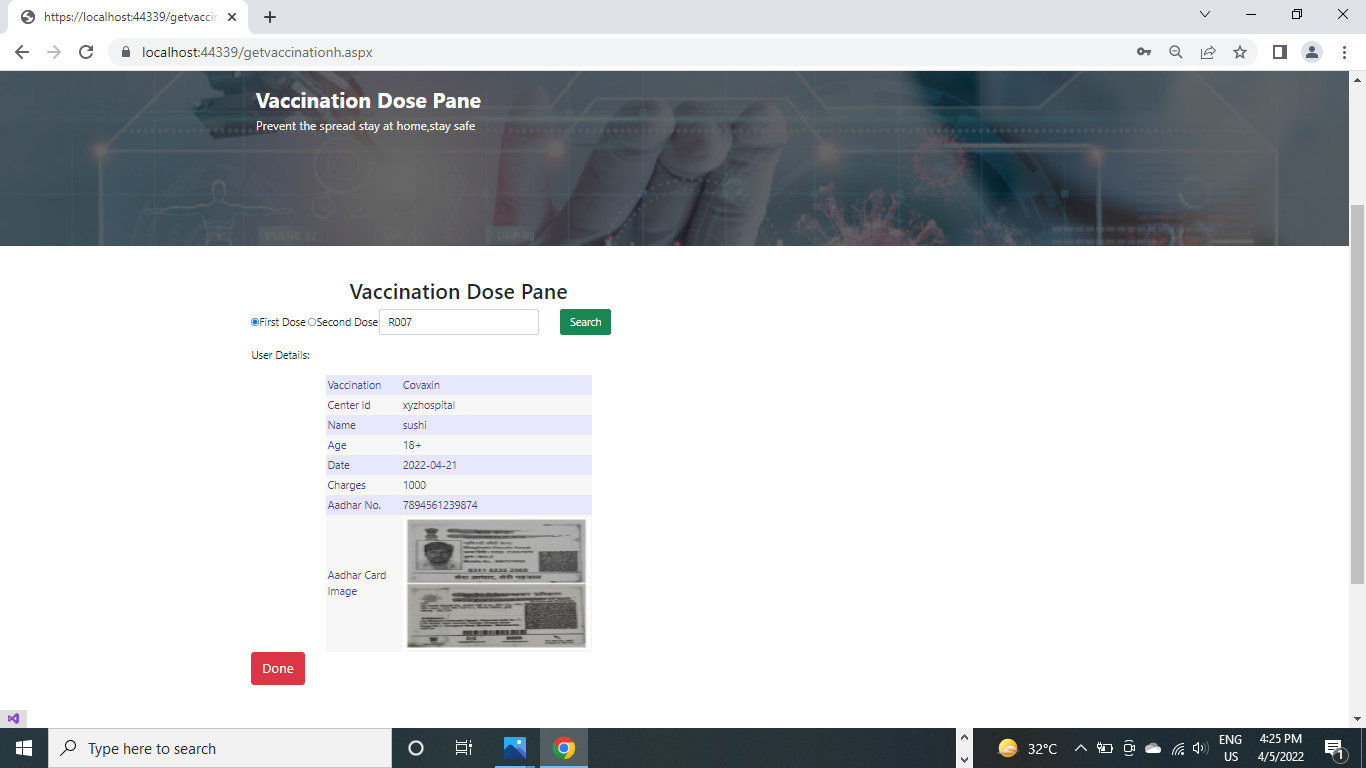


3)



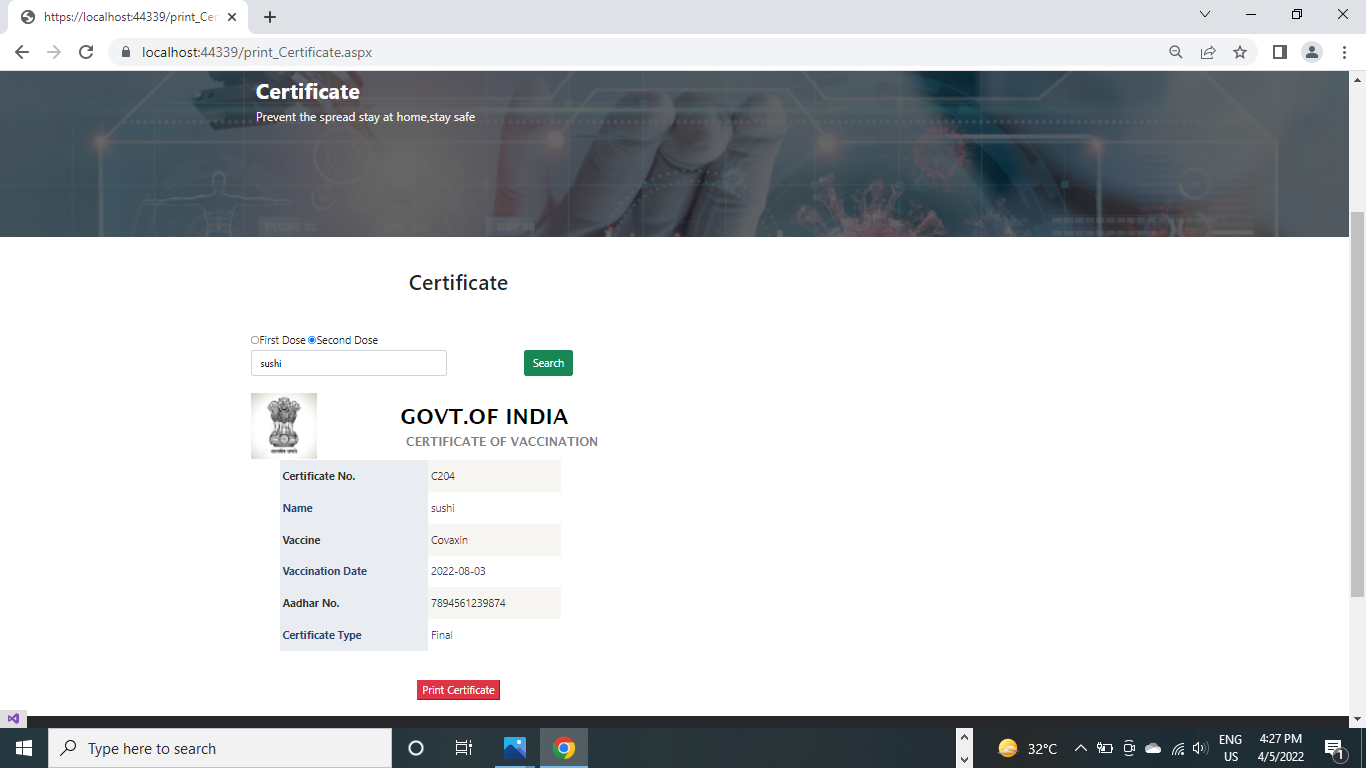


4)



5)





**CHAPTER 6:Testing**



A) Block Box Testing:

Admin\_Login.cs:

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Test Case | Test Scenario | Input | Expected output | Obtained output | Result |
| When username  & password is  filled & submitted | Correct username, correct password | Username: ADMIN  Password: 123@admin | Login Successful | Login Successful | Pass |
| Correct username, Incorrect password | Username: ADMIN  Password: 123 | Invalid Credentials | Invalid Credentials | Pass |
| Incorrect username, correct password | Username: ADIN  Password: admin | Invalid Credentials | Login Unsuccessful | Pass |
| Incorrect username, Incorrect password | Username: ADIN  Password: ABCD | Invalid Credentials | Invalid Credentials | Pass |
|  |  |  |  |  |  |
| When only Username is filled and Submitted | Correct username, No password | Username: ADMIN  Password:<empty> | Invalid Credentials | Invalid Credentials | Pass |
| Incorrect username, No password | Username: ADIN  Password:<empty> | Invalid Credentials | Invalid Credentials | Pass |
|  |  |  |  |  |  |
| When only password is filled & submitted | No username,  Correct password | Username:<empty>  Password: admin | Invalid Credentials | Invalid Credentials | Pass |
| No Username,  Incorrect password | Username:<empty>  Password: 123 | Invalid Credentials | Invalid Credentials | Pass |
|  |  |  |  |  |  |
| When form is submitted empty | No username,  No password | Username: <empty>  Password: <empty> | Invalid Credentials | Invalid Credentials | Pass |

Add\_Center.cs:



|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Test Case | Test Scenario | Input | Expected output | Obtained output | Result |
| When Centername  & type is  filled & submitted | Correct Centername, correct Type | Centername: Covid  Type: Private | Center Added Successfully | Center Added Successfully | Pass |
| Correct Centername,  Type filled is empty. | Centername: Covid  Type: | Please Select center type. | Please Select center type. | Pass |
| Incorrect  Center name,  Type is correct | Centername: Cvid  Type: Private | Please enter correct Centername. | Please enter Correct Centername. | Pass |
| Centername is empty, correct type | Centername:  Type: Private | Please enter  Centername | Please enter  Centername | Pass |
|  |  |  |  |  |  |

Book Appointment:

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Test Case | Test Scenario | Input | Expected output | Obtained output | Result |
| When Date  & time is  filled & submitted | Correct Date, correct Time | Date:12/04/2022  Time:12:30 | Appoint Book Successfully | Appoint Book Successfully | Pass |
| Correct Date  Time filled is empty. | Date:12/04/2022  Time: | Please Select time. | Please Select time. | Pass |
| Center name is empty,  Type is empty | Date:  Time: | Please Select date and time | Please Select date and time. | Pass |
| Centername is empty, correct type | Date:  Time:12:30 | Please  Select date | Please Select date | Pass |

1. White Box Testing:

bookAppointement.aspx:

if else statement in this page =13.

Try-catch block in this page=5.

All the above statements were individually tested



**CHAPTER 7: Cost Benefit Analysis**

I used Visual Studio version 2022, the total licensing costs is 18,492 rupees and for backend I used Microsoft Sql server management studio and the license software cost is 70,708 rupees.



**CHAPTER 8: Future Enhancement**



Real time Dashboard of active case, death case, recovered case.

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