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CAMPUS ONLINE HELP DESK

- A Project Work Submitted in Fulfillment of the requirements for the **ACCP course third semester ASP.NET Core MVC**
- In
- Software Engineering
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- Ahmer Ali
- Muhammad Muslim
- Muhammad Ahad
- Samuel
- Tania Dcruz

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Abstract:

The project titled "Online help desk" (OHD) is using MS SQL Server, C# with onion Architecture.

This project is aimed at developing an Online Help Desk for the facilities in the campus. This is an Internet based application that can be accessed throughout the campus. This system can be used to automate the workflow of service requests for the various facilities in the campus. This is one integrated system that covers different kinds of facilities like classrooms, Labs, Hostels, Mess, Computer Center faculty club etc. Registered users (Students, Faculty-head, and Admin) will be able to log in a request for service for any of the supported facilities. These requests will be sent to the concerned people, who are also valid users of the system, to get them resolved. There are attractive features like online notice board, chat box, query resolution etc.

There are registered people in the system (students, faculty and admin). Some of them are responsible for maintaining the facilities (like, admin is responsible for keeping the records of all the queries and send it to particular faculty head, the students can make queries to any department faculty head, faculty-head, faculty head will responsible for answering all the queries sent by students or admin etc.

Introduction

Help Desk systems are mainly used in colleges with big number of students. Manual method of checking students information will no longer be there again because it will be done by the computer with the help of the computerized Campus Online Help Desk. Because of the easy to use nature of the Campus Online Help Desk, any organization can easily buy it to make use of them.

The goal of this document is to give a description of the development of practical online helpdesk for facilities in the campus.

a) Purpose:

The purpose of this document is to give a detailed description of the requirements for the "Online Help Desk". It will illustrate the purpose and describe the software requirement of Development of practical online help desk.

b) Scope:

It deals with the development of Campus Online Help Desk to help in the checking of customers information.

c) Overview:

- This is an Intrnal based application that can be accessed throughout the campus.
- This system can be used to automate the workflow of service requests for the various facilities in the campus.
- This is one integrated system that covers different kinds of facilities like class-rooms, labs, computer center, hostels faculty club etc.
- Registered users (Admin, Students and Faculty-heads) will be able to log in a request for service for any of the supported facilities.

Aims and Objectives

The aims and objectives of the project are listed below:

- To develop software called Campus Online Help Desk that will replace the manual method.
- To develop, promote, and provide adequate and efficiently Campus Online help Desk.
- To maintain an efficient system of collection, sorting and delivery of users information.
- To eliminate the error involved with the manual method of checking users information.
- To save the time wasted with manual method of checking users information.

Architectural Strategies:

The following tools have been used to develop the system:

- ❖ MS SQL: is the database where all information/data related to requests records and logs are stored.
- ❖ C#: is programming language used to develop the system to enable it to be web-based application. C# is considered the link used to connect users to databases through a user-friendly interface. Additionally SQL server application was used as a local server to host C# file to generate them.
- ❖ Server: is the place that hosts all project code.

Functional Requirements

Administrator:

- i. Login to the first page.
- ii. Create new faculty account.
- iii. View all student details.
- iv. View all faculty details.
- v. Check request sent by the user.
- vi. Forward request to the faculty as per requirement.
- vii. View all queries.
- viii. View new queries.
- ix. Reply/delete queries.
- x. Add new notice for students.
- xi. Add new notice for faculty.
- xii. Logout.

Students

Students:

- i. Register Him/Her.
- ii. Login to the first page.
- iii. Change the password after login into the system.
- iv. Edit user details.
- v. Create queries in the system.
- vi. View the status of the query.
- vii. View the list of queries created by him/her over the past.
- viii. Edit and delete query created by him/her.
- ix. Live chat with the faculty.
- x. Logout

Facility-heads

Facility-Heads:

- i. Login to the first page.
- ii. Change the password after login into the page..
- iii. Edit details of his/her profile..
- iv. View all queries.
- v. View new queries..
- vi. See the queries created by the users and assigned by the Admin.
- vii. Work on the queries assigned to them.
- viii. Reply/delete the query..
- ix. View replied queries..
- x. Add new notice for students.
- xi. View all notice..
- xii. Logout.

Environmental Characteristics

Hardware:

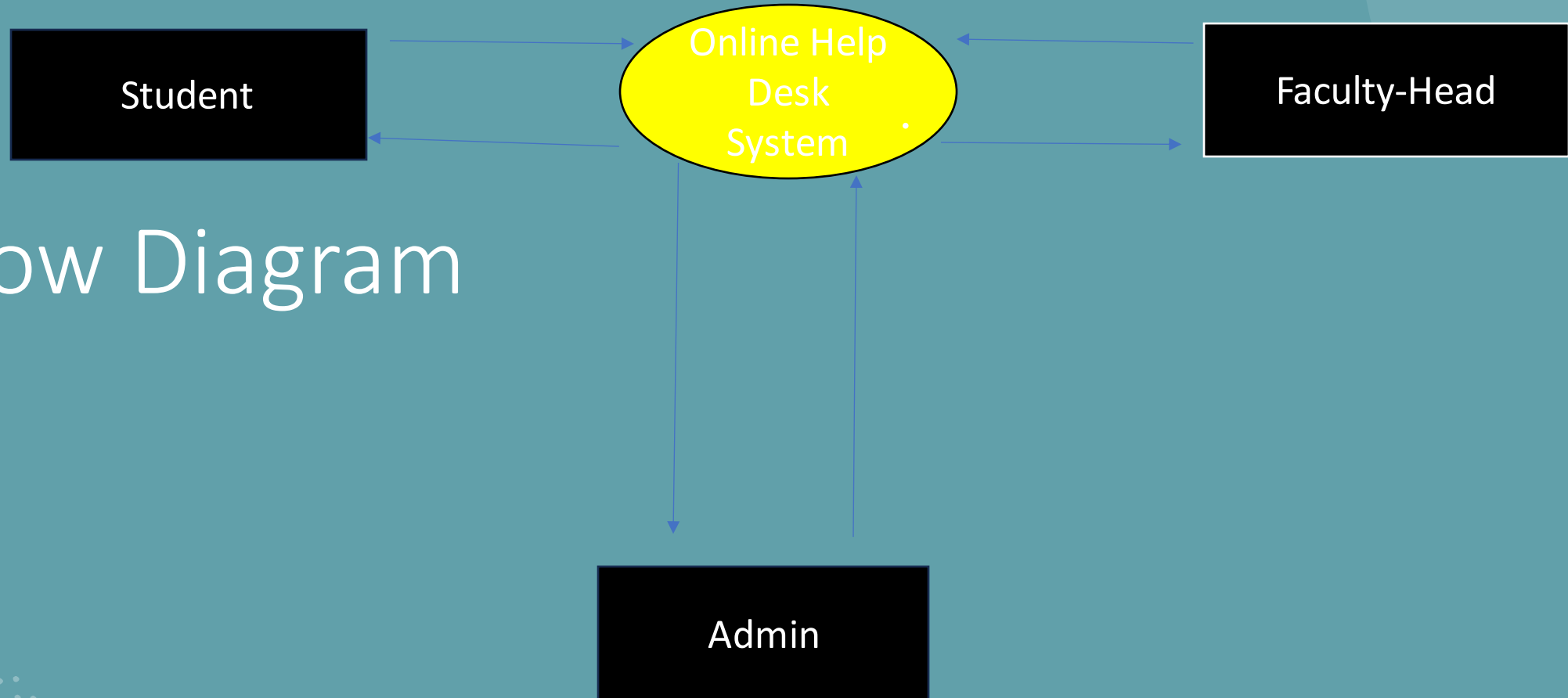
1. ProBook 6460b Laptop with 128G SSD hard-disk and 4GB RAM.
2. Network infrastructure (wired and wireless).
3. Windows personal Laptop.
4. The environment that will host the Local host MS SQL Server.

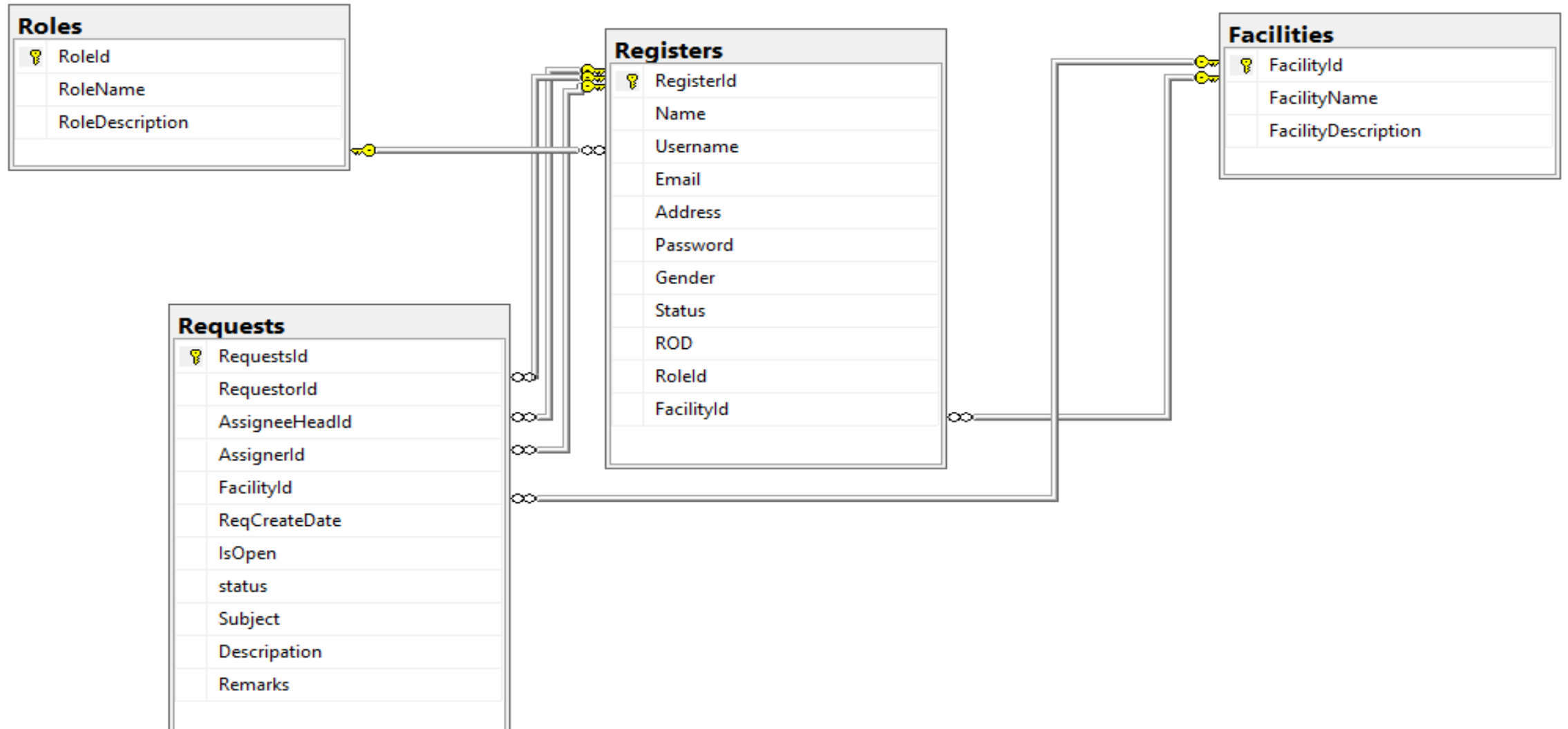
Software:

1. Windows 10Pro N version 22H2
2. System Type 64 bit operating system, x64-based processor.
3. MS-SQL Server
4. Visual Studio 2022 version 7.0
5. Network software and protocols in order for systems to communicate: HTTP, HTTPS.

Data Flow Diagram

DFD Level 0





DATABASE ER DIAGRAM

Database Structure

Data Table Properties:



The System database is normalized and designed with the needed table that store the needed information inside columns. Also the need for developing the system capabilities and functionalities has been taken in to account.

Database table created with the following structure:

1. Each table column is assigned with suitable data type.
2. Each table column is assigned with suitable data auto increment primary Key.
3. For each table a foreign key is assigned when necessary plus its constraint type on.
Delete and on Update
4. For each table an index and its type is assigned when necessary.
5. For each column a default value is set when necessary.

SYSTEM DATABASE MAIN TABLES

- Roles Table

#	Name	Type	Collation	Null	Default
1	Role_Id	int	Primary key	Not null	Not set
2	Role_Name	varchar		Not null	Not set
3	Role_Description	varchar		null	null

FACILITY TABLE:

#	Name	Type	Collation	Null
1	FacilityId	int	primary	Not null
2	FacilityName	varchar	index	Not null
3	FacilityDescription	varchar	index	Not

Registers INFO TABLE:

#	Name	Type	Collation	Null	foreign key
1	RegisterId	int	Primary key	Not null	
2	Name	Varchar(max)	index	Not null	
3	Username	Varchar(max)	index	Not null	
4	Email	Varchar(max)	index	Not null	
5	Address	Varchar(max)	index	Not null	
6	Password	Varchar(max)	index	Not null	
7	Gender	TinyInt	index	0	
8	RoleId	int	Foreign key	Not null	Roles
9	FacilityId	int	Foreign key	Not null	Facility
10	Status	tinyint	index	0	
11	ROD	Datetime	index	Today	

Request Table

#	NAME	TYPE	COLLATION	NULL	FOREIGN KEY
1	RequestsId	int	Primary key	Not null	
2	RequestorId	Int	Foreign key	Not null	Register(Requestor)
3	AssigneeHeadId	Int	Foreign key	Not null	Register(AssigneeHead)
4	AssignerId	Int	Foreign key	Not null	Register(Assigner)
5	FacilityId	Int	Foreign key	Not null	Facility
6	Subject	Varchar(max)	index	Not null	
7	Description	Varcahr(max)	index	0	
8	Remarks	Varchar(max)	index	Not null	
9	FacilityId	int	Foreign key	Not null	Facility
10	Status	tinyint	index	0	
11	ReqCreateDate	Datetime	index	Today	

Create User Request Page

Online Help Desk

Home > [Students](#) > [Tickets](#) > [Create](#)

January 2018 ▾

Create

CreateRequestView

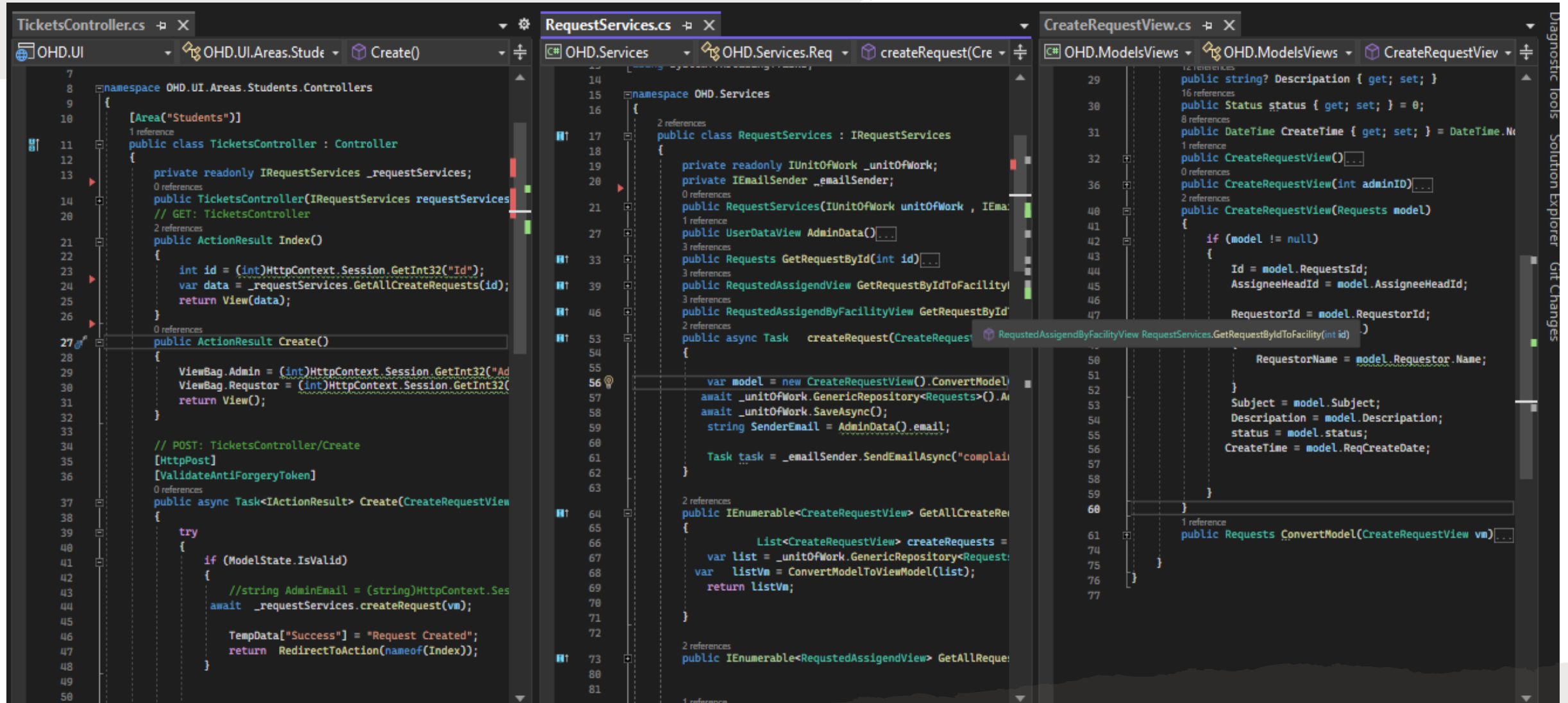
Subject

Description

Create

[Back to List](#)

Create User Request Code



```
namespace OHD.UI.Areas.Students.Controllers
{
    [Area("Students")]
    public class TicketsController : Controller
    {
        private readonly IRequestServices _requestServices;

        public TicketsController(IRequestServices requestServices)
        {
            // GET: TicketsController
        }

        public ActionResult Index()
        {
            int id = (int)HttpContext.Session.GetInt32("Id");
            var data = _requestServices.GetAllCreateRequests(id);
            return View(data);
        }

        public ActionResult Create()
        {
            ViewBag.Admin = (int)HttpContext.Session.GetInt32("AdminId");
            ViewBag.Requestor = (int)HttpContext.Session.GetInt32("RequestorId");
            return View();
        }

        // POST: TicketsController/Create
        [HttpPost]
        [ValidateAntiForgeryToken]
        public async Task<ActionResult> Create(CreateRequestView createRequestView)
        {
            try
            {
                if (ModelState.IsValid)
                {
                    //string AdminEmail = (string)HttpContext.Session.GetInt32("AdminId");
                    await _requestServices.CreateRequest(createRequestView);

                    TempData["Success"] = "Request Created";
                    return RedirectToAction(nameof(Index));
                }
            }
        }
    }
}
```

```
namespace OHD.Services
{
    public class RequestServices : IRequestServices
    {
        private readonly IUnitOfWork _unitOfWork;
        private IEmailSender _emailSender;

        public RequestServices(IUnitOfWork unitOfWork, IEmailSender emailSender)
        {
            _unitOfWork = unitOfWork;
            _emailSender = emailSender;
        }

        public async Task CreateRequest(CreateRequestView createRequestView)
        {
            var model = new CreateRequestView().ConvertModel(createRequestView);
            await _unitOfWork.GenericRepository<Requests>().Add(model);
            await _unitOfWork.SaveAsync();
            string SenderEmail = AdminData().Email;

            Task task = _emailSender.SendEmailAsync("complaints@oht.com", "Request Created", SenderEmail);
        }

        public IEnumerable<CreateRequestView> GetAllCreateRequests(int id)
        {
            List<CreateRequestView> createRequests =
                _unitOfWork.GenericRepository<Requests>().GetByFacilityId(id).Select(r => r.ConvertModelToViewModel()).ToList();
            return createRequests;
        }

        public IEnumerable<RequestedAssignView> GetAllRequestedAssignViews(int id)
        {
            List<RequestedAssignView> requestedAssignViews =
                _unitOfWork.GenericRepository<Requests>().GetByFacilityId(id).Select(r => r.ConvertModelToViewModel()).ToList();
            return requestedAssignViews;
        }
    }
}
```

```
public class CreateRequestView
{
    public string? Description { get; set; }
    public Status status { get; set; } = 0;
    public DateTime CreateTime { get; set; } = DateTime.Now;
    public int AdminId { get; set; }
    public int RequestorId { get; set; }
    public string RequestorName { get; set; }
    public string Subject { get; set; }
    public string Description { get; set; }
    public Status status { get; set; }
    public DateTime CreateTime { get; set; }

    public Requests ConvertModel(CreateRequestView vm)
    {
        var request = new Requests
        {
            FacilityId = vm.AdminId,
            RequestorId = vm.RequestorId,
            RequestorName = vm.RequestorName,
            Subject = vm.Subject,
            Description = vm.Description,
            status = vm.status,
            CreateTime = vm.CreateTime
        };
        return request;
    }
}
```

Admin assign the request to the assigner

Online Help Desk

[Home](#) > [Admin](#) > [Tickets](#) > [Edit](#) > 4001

January 2018 ▾

Edit RequestedAssigendView

Id

4001

FacilityId

IT Department ▾

☐ IsOpen

status

pedding ▾

AssignerId

Samuel ▾

Save

Admin Assign the Request to the Assigner Code

```
TicketsController.cs
namespace OHD.UI.Areas.Admin.Controllers
{
    [Area("Admin")]
    public class TicketsController : Controller
    {
        private readonly IRequestServices _requestServices;
        private HttpContext _httpContext;

        public TicketsController(IRequestServices requestServices)
        {
            // GET: TicketsController
        }

        [HttpGet]
        public ActionResult Index()
        {
            // GET: TicketsController/Create
        }

        public IActionResult Edit(int id)
        {
            var modelVmData = _requestServices.GetRequestByIdToFac
            ViewBag.AllFacility = new SelectList(_requestServices

            return View(modelVmData);
        }

        // POST: TicketsController/Create
        [HttpPost]
        [ValidateAntiForgeryToken]
        public ActionResult Edit(RequestedAssignendView vm)
        {
            try
            {
                //if (ModelState.IsValid)
                //{
                    var model = _requestServices.GetRequestById(v
                    _requestServices.UpdateAssignerRequestToAssigne
                    TempData["Success"] = "Request update";
                    return RedirectToAction(nameof(Index));
                }
            }
        }
    }
}

RequestServices.cs
public IEnumerable<CreateRequestView> GetAllCreateRe
public IEnumerable<RequestedAssignendView> GetAllReque
private IEnumerable<RequestedAssignendView> ConvertModel
private IEnumerable<CreateRequestView> ConvertModelTo
public async Task UpdateAssignerRequestToAssignen(Request
{
    var model = new RequestedAssignendView().ConvertMo
    _unitOfWork.GenericRepository<Requests>().Update
    _unitOfWork.Save();
    string SenderEmail = GetUserByFacilityIdAndAssigner
    string AssignerName = GetUserByFacilityIdAndAssigner
    Task task = _emailSender.SendEmailAsync("Assigner
}

public async Task UpdateAssignerRequestRemarks(Request
{
    var model = new RequestedAssignendByFacilityView()
    _unitOfWork.GenericRepository<Requests>().Update
    _unitOfWork.Save();
    string SenderEmail = GetUserByFacilityIdAndAssigner
    string Name = GetUserByFacilityIdAndAssigner(model
    string Remark = vm.Remarks;
    Task task = _emailSender.SendEmailAsync("Reslove
}

public IEnumerable<Facility> GetAllFacility()
public IEnumerable<UserDataView> GetAllAssignerByFaci
private IEnumerable<UserDataView> ConvertModelToView

RequestedAssignendView.cs
{
    if (model != null)
    {
        Id = model.RequestsId;
        AssignerId = model.AssignerId;
        if (model.Assigner != null) {
            AssignerName = model.Assigner.Name;
            AssignerEmail = model.Assigner.Email;
        }
        RequestorId = model.RequestorId;
        if (model.Requestor != null) {
            RequestorName = model.Requestor.Name;
            RequestorEmail = model.Requestor.Email;
        }
        if (model.Facility != null)
        {
            AssigneLocation = model.Facility.Facility
        }

        FacilityId = model.FacilityId;
        Subject = model.Subject;
        Description = model.Description;
        status = model.status;
        CreateTime = model.ReqCreateDate;
    }
}

1 reference
public Requests ConvertModel(RequestedAssignendView vm
{
    return new Requests
    {
        //admin can work only this filed
        RequestsId = vm.Id,
        AssignerId = vm.AssignerId,
        FacilityId = vm.FacilityId,
        status = vm.status,
        IsOpen = vm.IsOpen,

        //already Create RequestorDefine
    }
}
```

Assigner Remarks pages after done job

Online Help Desk

Home > ITDep > Tickets > Edit > 4001

January 2018 ▾

Edit

RequestedAssignendView

Id

4001

Remarks

i Dont no what happen

status

pedding ▾

Save

[Back to List](#)

Assigners given Remarks after done job page Controller and Service and ViewModel code

```
TicketsController.cs
OHD.UI
OHD.UI.Areas.ITDep
Edit(RequestedAssignByFacilityView)
7 using System.Net.WebSockets;
8
9 namespace OHD.UI.Areas.ITDep.Controllers
10 {
11     [Area("ITDep")]
12     public class TicketsController : Controller
13     {
14         private readonly IRequestServices _requestServices;
15         private HttpContext _httpContext;
16         public TicketsController(IRequestServices requestServices)
17         {
18             _requestServices = requestServices;
19         }
20         public ActionResult Index()
21         {
22             // GET: TicketsController/Create
23             // GET: TicketsController/Edit
24             public ActionResult Edit(int id)
25             {
26                 var modelVmData = _requestServices.GetRequestByIdToFacility(id);
27                 return View(modelVmData);
28             }
29             // POST: TicketsController/Create
30             [HttpPost]
31             [ValidateAntiForgeryToken]
32             public ActionResult Edit(RequestedAssignByFacilityView vm)
33             {
34                 try
35                 {
36                     //if (ModelState.IsValid)
37                     //{
38                         var model = _requestServices.GetRequestById(vm.Id);
39                         _requestServices.UpdateAssignerRequestRemarks(vm, model);
40                         TempData["Success"] = "Request update";
41                         return RedirectToAction(nameof(Index));
42                     }
43                     catch (Exception ex)
44                     {
45                     }
46                 }
47             }
48         }
49     }
50 }
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Change password page

The image shows a web application interface with a sidebar and a main content area. The sidebar on the left contains the following elements:

- Top navigation: A hamburger menu icon and a search icon.
- User profile: A circular profile picture of a man, a settings gear icon, a notification bell icon, and a dropdown arrow.
- Dropdown menu: A list of options: 'Profile', 'Setting' (highlighted with a blue border), 'Help', and 'Log Out'.
- Online Help Desk: A section with a title and a breadcrumb trail: 'Home > Home > Auth > Profile'.
- Profile: A section with a title and a breadcrumb trail: 'Home > Profile'.
- User card: A large white card featuring a profile picture of a man, a pencil icon for editing, and the name 'Ahmer Ali'.

The main content area on the right is titled 'DeskApp' and includes a 'Help?' link. It displays a 'Change Password' form with the following components:

- Title: 'Change Password' in blue text.
- Section header: 'Change Your Password'.
- Form fields: Three input fields labeled 'Old Password', 'New Password', and 'Retype Password', each with a password icon on the right.
- Buttons: A blue 'Submit' button, an 'OR' separator, and a white 'Login' button with a blue border.

Change password page Controller and Service and ViewModel code

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AuthController.cs
OHD.UI
OHD.UI.Areas.Hc
ViewImport()
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if (c == true)
{
    TempData["success"] = "Password Update successfully";
    return RedirectToAction("Profile", "auth", new { area = "Home" });
}
else { TempData["error"] = "old password is not match"; }

return View(vm);

private void ViewImport()
{
    _RoleId = (int)HttpContext.Session.GetInt32("Role");
    if (_RoleId == 2000)
    {
        //admin MyLayout
        MyLayout = "~/Areas/Admin/Views/Shared/_Layout.cshtml";
    }
    else if (_RoleId == 2001)
    {
        //ITDop MyLayout
        MyLayout = "~/Areas/ITDop/Views/Shared/_Layout.cshtml";
    }
    else if (_RoleId == 2002 || _RoleId == 2004)
    {
        //IT Department View
        MyLayout = "~/Areas/Students/Views/Shared/_Layout.cshtml";
    }
    else
    {
        MyLayout = "~/Areas/Home/Views/Shared/_Layout.cshtml";
    }
}

AuthorizationServices.cs
OHD.Services
OHD.Services.Au
UpdatePasswor
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public string GetAdminEmail()
{
    var data = _unitOfWork.GenericRepository<Register>().Get(x => x.RoleId == 2000);
    return data.Email;
}

public int GetAdminID()
{
    var data = _unitOfWork.GenericRepository<Register>().Get(x => x.RoleId == 2000);
    return data.RegisterId;
}

public ProfileUpdateView GetProfileUser(int id)
{
    var model = _unitOfWork.GenericRepository<Register>().Get(x => x.RegisterId = id);
    var modelVm = new ProfileUpdateView(model);
    return modelVm;
}

public bool UpdatePassword(ModifyPasswordView view)
{
    try
    {
        var model = _unitOfWork.GenericRepository<Register>().Get(x => x.RegisterId = view.RegisterId);
        if (model.Password == view.OldPassword)
        {
            var modelVm = new ModifyPasswordView().ConvertModel(view, model);
            _unitOfWork.GenericRepository<Register>().Update(modelVm);
            _unitOfWork.Save();
            return true;
        }
        catch (NullReferenceException N)
        {
            Console.WriteLine(N);
        }
        return false;
    }
    catch (NullReferenceException N)
    {
        Console.WriteLine(N);
    }
}

public bool ForgetPassword(ChangePasswordView view)
{
    try
    {
        var model = _unitOfWork.GenericRepository<Register>().Get(x => x.RegisterId = view.RegisterId);
        var modelVm = new ChangePasswordView().ConvertModel(view, model);
        _unitOfWork.GenericRepository<Register>().Update(modelVm);
        _unitOfWork.Save();
        return true;
    }
    catch (NullReferenceException N)
    {
        Console.WriteLine(N);
    }
}

ChangePasswordView.cs
OHD.ModelsViews
OHD.ModelsViews.Cha
confirmPassword
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public class ChangePasswordView
{
    public ChangePasswordView()
    {
    }

    public int id { get; set; }
    public string? username { get; set; }
    [DataType(DataType.Password)]
    public string? newPassword { get; set; }
    [Compare("newPassword")]
    public string? confirmPassword { get; set; }
    public string? email { get; set; }
    public int pin { get; set; }

    public ChangePasswordView(Register model)
    {
        if (model != null)
        {
            id = model.RegisterId;
            email = model.Email;
            username = model.Username;
        }
    }

    public Register ConvertModel(ChangePasswordView modelVm, Register model)
    {
        return new Register()
        {
            //only change Password
            Password = modelVm.newPassword,
            RegisterId = modelVm.id,
            Name = model.Name,
            Email = model.Email,
            Address = model.Address,
            Username = model.Username,
            FacilityId = model.FacilityId,
            RoleId = model.RoleId,
            Status = model.Status,
            Gender = model.Gender,
            RDO = model.RDO
        };
    }
}
```

All Facility pages

Online Help Desk

Home > [Admin](#) > [Facility](#)

January 2018 ▾

Facilities Table

➕ Create

Here all available [Facility](#)

Id	Facility	Description	Action
1000	Administrare	this is admin department	Edit Details Delete
1001	IT Department	this is IT	Edit Details Delete
1002	ClassRoom	this is class	Edit Details Delete

Facility page Controller, Service and ViewModel code

```
FacilityController.cs
using Microsoft.AspNetCore.Mvc;
using OHD.ModelsViews;
using OHD.Services;

namespace OHD.UI.Areas.Admin.Controllers
{
    [Area("Admin")]
    public class FacilityController : Controller
    {
        private IFacilityServices _facilityServices;

        public FacilityController(IFacilityServices facilityServices)
        {
            _facilityServices = facilityServices;
        }

        public IActionResult Index()
        {
            var dataList = _facilityServices.GetAllFacility();
            return View(dataList);
        }

        [HttpGet]
        public IActionResult CreateUpdate(int id)
        {
            FacilityView model = new FacilityView();
            if (id == null || id == 0)
            {
                return View(model);
            }
            else
            {
                var data = _facilityServices.GetFacilityById(id);
                if (data == null)
                {
                    return NotFound();
                }
                else { return View(data); }
            }
        }

        [HttpPost]
        [ValidateAntiForgeryToken]
        public IActionResult CreateUpdate(FacilityView modelVw)
        {
            if (ModelState.IsValid)
            {
                if (modelVw.Id == 0)
                {
                    _facilityServices.InsertFacility(modelVw);
                    TempData["Success"] = "Successfully create Done";
                }
                else
                {
                    _facilityServices.UpdateFacility(modelVw);
                }
            }
        }
    }
}

FacilityServices.cs
using OHD.Services;
using OHD.Services.Facility;
using OHD.Services.Facility;

namespace OHD.Services
{
    public class FacilityServices : IFacilityServices
    {
        private IUnitOfWork _unitOfWork;

        public FacilityServices(IUnitOfWork unitOfWork)
        {
            _unitOfWork = unitOfWork;
        }

        public void DeleteFacility(int id)
        {
            try
            {
                var FacilityVw = _unitOfWork.GenericRepository<Facility>().Get(x => x.FacilityId == id);
                _unitOfWork.GenericRepository<Facility>().DeleteAsync(FacilityVw);
                _unitOfWork.Save();
            }
            catch (NullReferenceException N)
            {
                Console.WriteLine(N);
            }
            catch (Exception ex)
            {
                Console.WriteLine(ex);
            }
        }

        public IEnumerable<FacilityView> GetAllFacility()
        {
            List<FacilityView> vwList = new List<FacilityView>();
            var FacilityModel = _unitOfWork.GenericRepository<Facility>().GetAll();
            vwList = ConvertModelToViewModel(FacilityModel);
            return vwList;
        }

        public FacilityView GetFacilityById(int id)
        {
            var FacilityVw = _unitOfWork.GenericRepository<Facility>().Get(x => x.FacilityId == id);
            var vw = new FacilityView(FacilityVw);
            return vw;
        }

        public void InsertFacility(FacilityView vw)
        {
            try
            {
                var model = new FacilityView().ConvertModel(vw);
                _unitOfWork.GenericRepository<Facility>().Add(model);
                _unitOfWork.Save();
            }
            catch (NullReferenceException N)
            {
                Console.WriteLine(N);
            }
        }
    }
}

IFacilityServices.cs
using OHD.Services;
using OHD.Services.Facility;

namespace OHD.Services
{
    public interface IFacilityServices
    {
        void DeleteFacility(int id);
        IEnumerable<FacilityView> GetAllFacility();
        FacilityView GetFacilityById(int id);
        void InsertFacility(FacilityView vw);
    }
}

FacilityView.cs
using OHD.Models;
using System;
using System.Collections.Generic;
using System.ComponentModel.DataAnnotations;
using System.Linq;
using System.Text;
using System.Threading.Tasks;

namespace OHD.ModelsViews
{
    public class FacilityView
    {
        public FacilityView() { }

        public int Id { get; set; }

        [Required]
        public string Facility { get; set; }

        public string Description { get; set; }

        public FacilityView(Facility model)
        {
            Id = model.FacilityId;
            Facility = model.FacilityName;
            Description = model.FacilityDescription;
        }

        public Facility ConvertModel(FacilityView modelVw)
        {
            return new Facility()
            {
                FacilityId = modelVw.Id,
                FacilityName = modelVw.Facility,
                FacilityDescription = modelVw.Description
            };
        }
    }
}
```

Role Page

Online Help Desk

Home > Admin > Roles

January 2018 ▾

Roles Table

Here all available Roles

Create

Role	Description	Action
admin	this is admin	<a>Edit <a>Details <a>Delete
IT Officer	this is IT	<a>Edit <a>Details <a>Delete
Students	this is students	<a>Edit <a>Details <a>Delete
teacher	this is teacher	<a>Edit <a>Details <a>Delete

Roles page Controller and Service and ViewModel code

```
RolesController.cs
namespace OHD.UI.Areas.Admin.Controllers
{
    [Area("Admin")]
    public class RolesController : Controller
    {
        private readonly IRolesServices RolesServices;

        // GET: Admin/Roles
        public ActionResult Index()
        {
            var roles = RolesServices.GetAllRoles();
            return View(roles);
        }

        // GET: Admin/Roles/Details/5
        public ActionResult Details(int id)
        {
            // GET: Admin/Roles/Create
            public ActionResult Create()
            {
                // POST: Admin/Roles/Create
                [HttpPost]
                [ValidateAntiForgeryToken]
                public ActionResult Create(RolesView vm)
                {
                    if (ModelState.IsValid)
                    {
                        RolesServices.InsertRoles(vm);
                        TempData["Success"] = "Create Successfully";
                        return RedirectToAction(nameof(Index));
                    }
                    return View(vm);
                }

                // GET: Admin/Roles/Edit/5
                public async Task<ActionResult> Edit(int id)
                {
                    // POST: Admin/Roles/Edit/5
                    [HttpPost]
                    [ValidateAntiForgeryToken]
                    public ActionResult Edit(RolesView vm)
                    {
                        if (ModelState.IsValid)
                        {
                            try
                            {
                                RolesServices.UpdateRoles(vm);
                                TempData["Success"] = "Update Successfully";
                            }
                            catch (DbUpdateConcurrencyException)
                            {
                                //
                            }
                            return RedirectToAction(nameof(Index));
                        }
                    }
                }
            }
}

RolesServices.cs
using OHD.Infrastructure;
using OHD.Models;
using OHD.ModelsViews;
using System;
using System.Collections.Generic;
using System.Linq;
using System.Threading.Tasks;

namespace OHD.Services
{
    public class RolesServices : IRolesServices
    {
        private IUnitOfWork _unitOfWork;

        public RolesServices(IUnitOfWork unitOfWork)
        {
            _unitOfWork = unitOfWork;
        }

        public void DeleteRoles(int id)
        {
            //
        }

        public IEnumerable<RolesView> GetAllRoles()
        {
            //
        }

        public RolesView GetById(int id)
        {
            //
        }

        public void InsertRoles(RolesView vm)
        {
            try
            {
                var model = new RolesView() { ConvertModel(vm) };
                _unitOfWork.GenericRepository<Roles>().Add(model);
                _unitOfWork.Save();
            }
            catch (NullReferenceException n)
            {
                Console.WriteLine(n);
            }
            catch (Exception ex)
            {
                Console.WriteLine(ex);
            }
        }

        public void UpdateRoles(RolesView vm)
        {
            //
        }

        private List<RolesView> ConvertModelToViewModel(IEnumerable<Roles> RolesModel)
        {
            //
        }
    }
}

RolesView.cs
using OHD.Models;
using System;
using System.Collections.Generic;
using System.Linq;
using System.Threading.Tasks;

namespace OHD.ModelsViews
{
    public class RolesView
    {
        public RolesView()
        {
            //
        }

        public int Id { get; set; }
        public string? Role { get; set; }
        public string? Description { get; set; }
        public RolesView(Roles model)
        {
            Id = model.RoleId;
            Role = model.RoleName;
            Description = model.RoleDescription;
        }

        public Roles ConvertModel(RolesView modelVm)
        {
            return new Roles()
            {
                RoleId = modelVm.Id,
                RoleName = modelVm.Role,
                RoleDescription = modelVm.Description;
            };
        }
    }
}
```

Register page

Online Help Desk

Home > Admin > Registers

January 2018 ▾

Registration Table

+ Create

Here all available Register

ID	Username	Email	Address	Gender	Status	Role	Facility	Action
3000	admin	ahmerali1813@gmail.com	Street 12, Azam Basti, Jamshed Town, Near Mehmodabad Karachi	Male	Online	admin	Administrative	<div>Edit</div> <div>Details</div> <div>Delete</div>
3001	Samuel123	ahmerali1813@gmail.com	karachi	Female	Offline	IT Officer	IT Department	<div>Edit</div> <div>Details</div> <div>Delete</div>

Register page Controller and Service and ViewModel code

```
RegistersController.cs
using Microsoft.AspNetCore.Mvc;
using Microsoft.AspNetCore.Mvc.Rendering;
using Microsoft.EntityFrameworkCore.Internal;
using OHD.ModelsViews;
using OHD.Services;

namespace OHD.UI.Areas.Admin.Controllers
{
    [Area("Admin")]
    public class RegistersController : Controller
    {
        IRegisterServices _registerServices;

        public RegistersController(IRegisterServices registerServices)
        {
            _registerServices = registerServices;
        }

        public IActionResult Index()
        {
            IEnumerable<RegisterView> vm = _registerServices.GetAllRegisters().ToList();
            return View(vm);
        }

        [HttpGet]
        public IActionResult Create()
        {
            ViewBag.AllRoles = new SelectList(_registerServices.GetAllRoles(), "RoleId", "RoleName");
            ViewBag.AllFacility = new SelectList(_registerServices.GetAllFacility(), "FacilityId", "FacilityName");
            return View();
        }

        [HttpPost]
        public IActionResult Create(RegisterView model)
        {
            _registerServices.InsertRegister(model);
            TempData["Success"] = "Create Successfully";
            return RedirectToAction("Index");
        }

        [HttpGet]
        public IActionResult Edit(int id)
        {
            if (id == null || id == 0)
            {
                return RedirectToAction("badRequest", "Home", new { area = "Home" });
            }
            else
            {
                ViewBag.AllRoles = new SelectList(_registerServices.GetAllRoles(), "RoleId", "RoleName");
                ViewBag.AllFacility = new SelectList(_registerServices.GetAllFacility(), "FacilityId", "FacilityName");
                var vm = _registerServices.GetRegisterByExpression(id);
                if (vm == null || vm.Id == 0)
                {
                    return RedirectToAction("badRequest", "Home", new { area = "Home" });
                }
                else
                {
                    return View(vm);
                }
            }
        }
    }
}

RegisterServices.cs
public class RegisterServices : IRegisterServices
{
    private IUnitOfWork _unitOfWork;
    private ILogger<RegisterServices> _logger;

    public RegisterServices(IUnitOfWork unitOfWork, ILogger<RegisterServices> logger)
    {
        _unitOfWork = unitOfWork;
        _logger = logger;
    }

    public void DeleteRegister(int id)
    {
        try
        {
            var register = _unitOfWork.GenericRepository<Register>().Get(x => x.RegId == id);
            _unitOfWork.GenericRepository<Register>().Delete(register);
            _unitOfWork.Save();
        }
        catch (NullReferenceException n)
        {
            Console.WriteLine(n);
        }
        catch (Exception ex)
        {
            Console.WriteLine(ex);
        }
    }

    public IEnumerable<Facility> GetAllFacility()
    {
        return _unitOfWork.GenericRepository<Facility>().GetAll().ToList();
    }

    public IEnumerable<RegisterView> GetAllRegisters()
    {
        return _unitOfWork.GenericRepository<Register>().GetAll().ToList();
    }

    public IEnumerable<Role> GetAllRoles()
    {
        var list = _unitOfWork.GenericRepository<Role>().GetAll().ToList();
        return list;
    }

    public RegisterView GetRegisterByExpression(int id)
    {
        var register = _unitOfWork.GenericRepository<Register>().Get(x => x.RegId == id);
        var vm = new RegisterView(register);
        return vm;
    }

    public void InsertRegister(RegisterView registerView)
    {
        try
        {
            var model = new RegisterView().ConvertModel(registerView);
            _unitOfWork.GenericRepository<Register>().Add(model);
            _unitOfWork.Save();
        }
        catch (NullReferenceException n)
        {
            Console.WriteLine(n);
        }
    }
}

IRequestServices.cs
public class RequestServices : IRequestServices
{
    private IUnitOfWork _unitOfWork;
    private ILogger<RequestServices> _logger;

    public RequestServices(IUnitOfWork unitOfWork, ILogger<RequestServices> logger)
    {
        _unitOfWork = unitOfWork;
        _logger = logger;
    }

    public void DeleteRequest(int id)
    {
        try
        {
            var request = _unitOfWork.GenericRepository<Request>().Get(x => x.RequestId == id);
            _unitOfWork.GenericRepository<Request>().Delete(request);
            _unitOfWork.Save();
        }
        catch (NullReferenceException n)
        {
            Console.WriteLine(n);
        }
        catch (Exception ex)
        {
            Console.WriteLine(ex);
        }
    }

    public IEnumerable<Facility> GetAllFacility()
    {
        return _unitOfWork.GenericRepository<Facility>().GetAll().ToList();
    }

    public IEnumerable<RequestView> GetAllRequests()
    {
        return _unitOfWork.GenericRepository<Request>().GetAll().ToList();
    }

    public IEnumerable<Role> GetAllRoles()
    {
        var list = _unitOfWork.GenericRepository<Role>().GetAll().ToList();
        return list;
    }

    public RequestView GetRequestByExpression(int id)
    {
        var request = _unitOfWork.GenericRepository<Request>().Get(x => x.RequestId == id);
        var vm = new RequestView(request);
        return vm;
    }

    public void InsertRequest(RequestView requestView)
    {
        try
        {
            var model = new RequestView().ConvertModel(requestView);
            _unitOfWork.GenericRepository<Request>().Add(model);
            _unitOfWork.Save();
        }
        catch (NullReferenceException n)
        {
            Console.WriteLine(n);
        }
    }
}

RegisterView.cs
using System;
using System.Collections.Generic;
using System.ComponentModel.DataAnnotations;
using System.Linq;
using System.Text;
using System.Threading.Tasks;
using static OHD.Models.Register;

namespace OHD.ModelsViews
{
    public class RegisterView
    {
        public RegisterView()
        {
        }

        public int Id { get; set; }
        public string Name { get; set; }
        public string Username { get; set; }
        public string Email { get; set; }
        public string Address { get; set; }
        public string Password { get; set; }
        public Gender Gender { get; set; }
        public Status Status { get; set; }
        public DateTime MOD { get; set; }
        public Roles roles { get; set; }
        [Required]
        public int RoleId { get; set; }
        [Required]
        public Facility Facilities { get; set; }
        [Required]
        public int FacilityId { get; set; }

        public RegisterView(Register model)
        {
            if (model != null)
            {
                Id = model.RegisterId;
                Name = model.Name;
                Username = model.Username;
                Email = model.Email;
                Address = model.Address;
                Password = model.Password;
                Gender = model.Gender;
            }
        }
    }
}
```


Profile Page View

Search Here

Welcome Ahmer Ali

Profile

Home > Profile



Ahmer Ali

Lorem ipsum dolor sit amet

Contact Information

Email Address:
ahmerali1813@gmail.com

Phone Number:
619-229-0054

Address:
Street 12, Azam Basti, Jamshed Town, Near Mehmodabad Karachi

Timeline

Tasks

Settings

Edit Your Personal Setting

Name

Ahmer Ali

Email

ahmerali1813@gmail.com

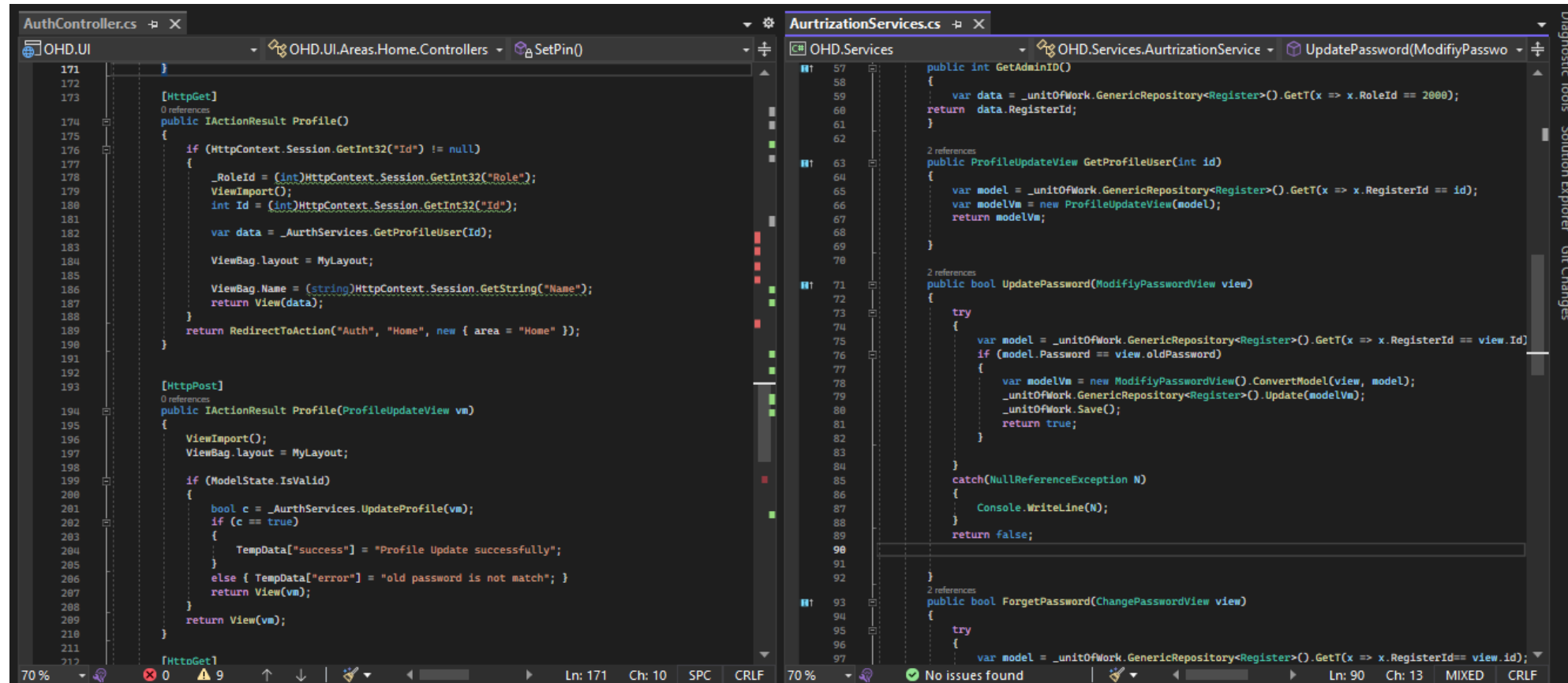
Address

Street 12, Azam Basti, Jamshed Town, Near Mehmodabad Karachi

☐ I agree to receive notification emails

Update Information

Profile page view controller , services



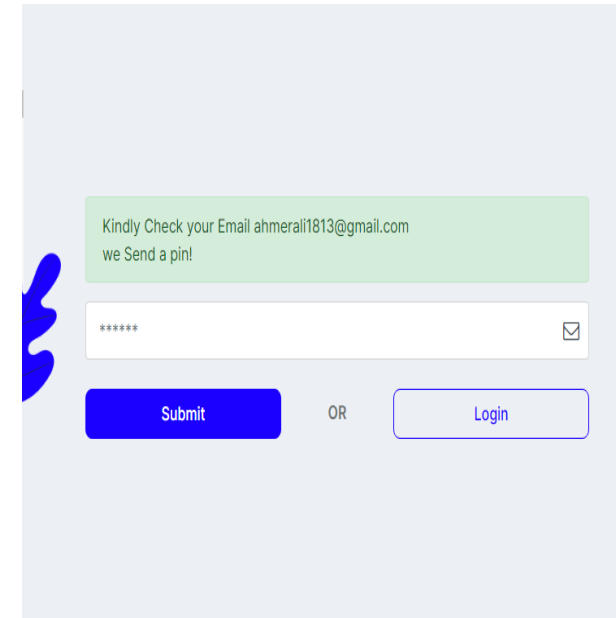
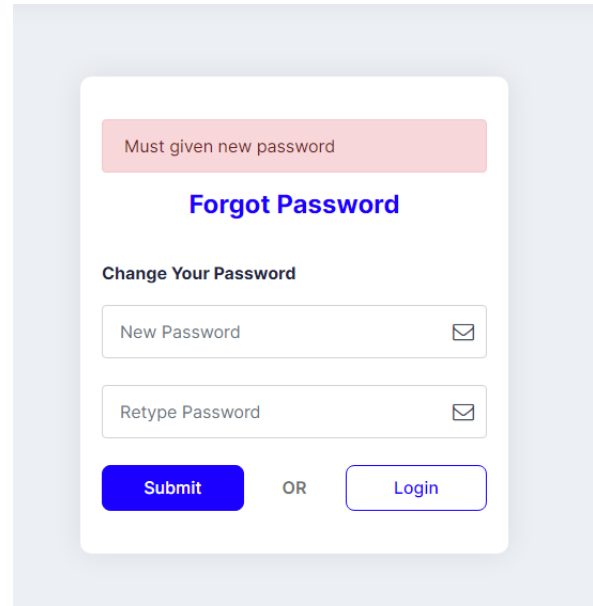
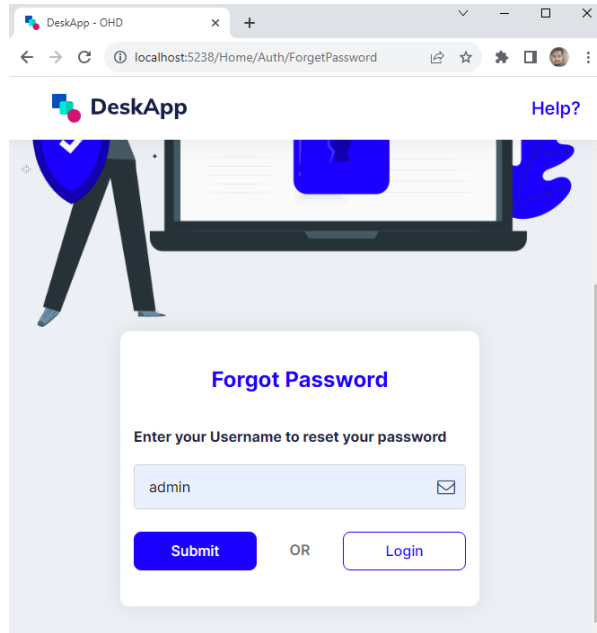
The image shows a screenshot of the Visual Studio IDE with two code files open: `AuthController.cs` and `AurtrizationServices.cs`. The `AuthController.cs` file is on the left, and the `AurtrizationServices.cs` file is on the right. The `AuthController.cs` file contains a `Profile()` method that handles GET requests and a `Profile(ProfileUpdateView vm)` method that handles POST requests. The `AurtrizationServices.cs` file contains a `UpdatePassword(ModifyPasswo` method. The status bar at the bottom indicates 70% zoom, 0 errors, 9 warnings, and no issues found.

```
AuthController.cs
OHD.UI.Areas.Home.Controllers
SetPin()

171
172
173
174 [HttpGet]
175 0 references
176 public IActionResult Profile()
177 {
178     if (HttpContext.Session.GetInt32("Id") != null)
179     {
180         _RoleId = (int)HttpContext.Session.GetInt32("Role");
181         ViewImport();
182         int Id = (int)HttpContext.Session.GetInt32("Id");
183         var data = _AurthServices.GetProfileUser(Id);
184         ViewBag.layout = MyLayout;
185         ViewBag.Name = (string)HttpContext.Session.GetString("Name");
186         return View(data);
187     }
188     return RedirectToAction("Auth", "Home", new { area = "Home" });
189 }
190
191
192
193
194 [HttpPost]
195 0 references
196 public IActionResult Profile(ProfileUpdateView vm)
197 {
198     ViewImport();
199     ViewBag.layout = MyLayout;
200     if (ModelState.IsValid)
201     {
202         bool c = _AurthServices.UpdateProfile(vm);
203         if (c == true)
204         {
205             TempData["success"] = "Profile Update successfully";
206         }
207         else { TempData["error"] = "old password is not match"; }
208         return View(vm);
209     }
210     return View(vm);
211 }
212
213 [HttpGet]
214
```

```
AurtrizationServices.cs
OHD.Services.AurtrizationService
UpdatePassword(ModifyPasswo

57
58
59
60 public int GetAdminID()
61 {
62     var data = _unitOfWork.GenericRepository<Register>().GetT(x => x.RoleId == 2000);
63     return data.RegisterId;
64 }
65
66 2 references
67 public ProfileUpdateView GetProfileUser(int id)
68 {
69     var model = _unitOfWork.GenericRepository<Register>().GetT(x => x.RegisterId == id);
70     var modelVm = new ProfileUpdateView(model);
71     return modelVm;
72 }
73
74 2 references
75 public bool UpdatePassword(ModifyPasswordView view)
76 {
77     try
78     {
79         var model = _unitOfWork.GenericRepository<Register>().GetT(x => x.RegisterId == view.Id);
80         if (model.Password == view.oldPassword)
81         {
82             var modelVm = new ModifyPasswordView().ConvertModel(view, model);
83             _unitOfWork.GenericRepository<Register>().Update(modelVm);
84             _unitOfWork.Save();
85             return true;
86         }
87     }
88     catch (NullReferenceException N)
89     {
90         Console.WriteLine(N);
91     }
92     return false;
93 }
94
95 2 references
96 public bool ForgetPassword(ChangePasswordView view)
97 {
98     try
99     {
100         var model = _unitOfWork.GenericRepository<Register>().GetT(x => x.RegisterId == view.id);
101     }
102 }
```



Forget password Pages

Forget Password Auth Controller and Services

```
AuthController.cs*
OHD.UI
OHD.UI.Areas.Home.Controllers
ForgetPassword(ChangePasswoi

83 public IActionResult ForgetPassword() => View();
84 [HttpPost]
85 0 references
86 public async Task<IActionResult> ForgetPassword(ChangePasswordView Vm)
87 {
88     SetPin();
89     if(!_pin!=0 && Vm.pin == _pin || Vm.id!=0)
90     {
91         ViewBag.SendEmailCheck = true;
92         ViewBag.pinVerified = true;
93         if (Vm.id != 0)
94         {
95             try
96             {
97                 var IsOk = _AurthServices.ForgetPassword(Vm);
98                 if (IsOk == true)
99                 {
100                     Console.WriteLine(ex.Message);
101                 }
102             }
103             catch (Exception ex)
104             {
105                 Console.WriteLine(ex.Message);
106             }
107         }
108         else
109         {
110             try
111             {
112                 var modelVm = _AurthServices.GetUserDataByUsername(Vm.username);
113                 if(modelVm.id == 0)
114                 {
115                     else
116                     {
117                         var PinGenerator = new RandomNumberGenerator().GenerateRandomNumbers(1);
118                         _pin = PinGenerator[0];
119                         HttpContext.Session.SetInt32("pin", _pin);
120                         await _emailSender.SendEmailAsync("Forget Password" ,"If you Don't remmeber pas
121                         Console.WriteLine(_pin);
122                         ViewBag.pinVerified = false;
123                         ViewBag.SendEmailCheck = true;
124                         ViewBag.email = modelVm.email;
125                         HttpContext.Session.SetInt32("FgId", modelVm.id);
126                         _FgId = modelVm.id;
127                         ViewBag.id = _FgId;
128                     }
129                 }
130             }
131         }
132     }
133 }
134 }
135 }

AurtrizationServices.cs
OHD.Services
OHD.Services.AurtrizationService
_emailSender

92 }
93 2 references
94 public bool ForgetPassword(ChangePasswordView view)
95 {
96     try
97     {
98         var model = _unitOfWork.GenericRepository<Register>().GetT(x => x.RegisterId== view.id);
99         var modelVm = new ChangePasswordView().ConvertModel(view, model);
100         _unitOfWork.GenericRepository<Register>().Update(modelVm);
101         _unitOfWork.Save();
102         return true;
103     }
104     catch (NullReferenceException N)
105     {
106         Console.WriteLine(N);
107     }
108     return false;
109 }
110 }
111 }
112 }
113 }
114 2 references
115 public bool UpdateProfile(ProfileUpdateView profile)
116 {
117     try
118     {
119         var model = _unitOfWork.GenericRepository<Register>().GetT(x => x.RegisterId == profile.
120         var modelVm = new ProfileUpdateView().ConvertModel(profile , model);
121         _unitOfWork.GenericRepository<Register>().Update(modelVm);
122         _unitOfWork.Save();
123         return true;
124     }
125     catch(NullReferenceException N)
126     {
127         Console.WriteLine(N);
128     }
129     return false;
130 }
131 }
132 }
```

70 % 0 9 Ln: 104 Ch: 1 SPC CRLF

70 % No issues found Ln: 19 Ch: 28 Col: 34 MIXED CRLF

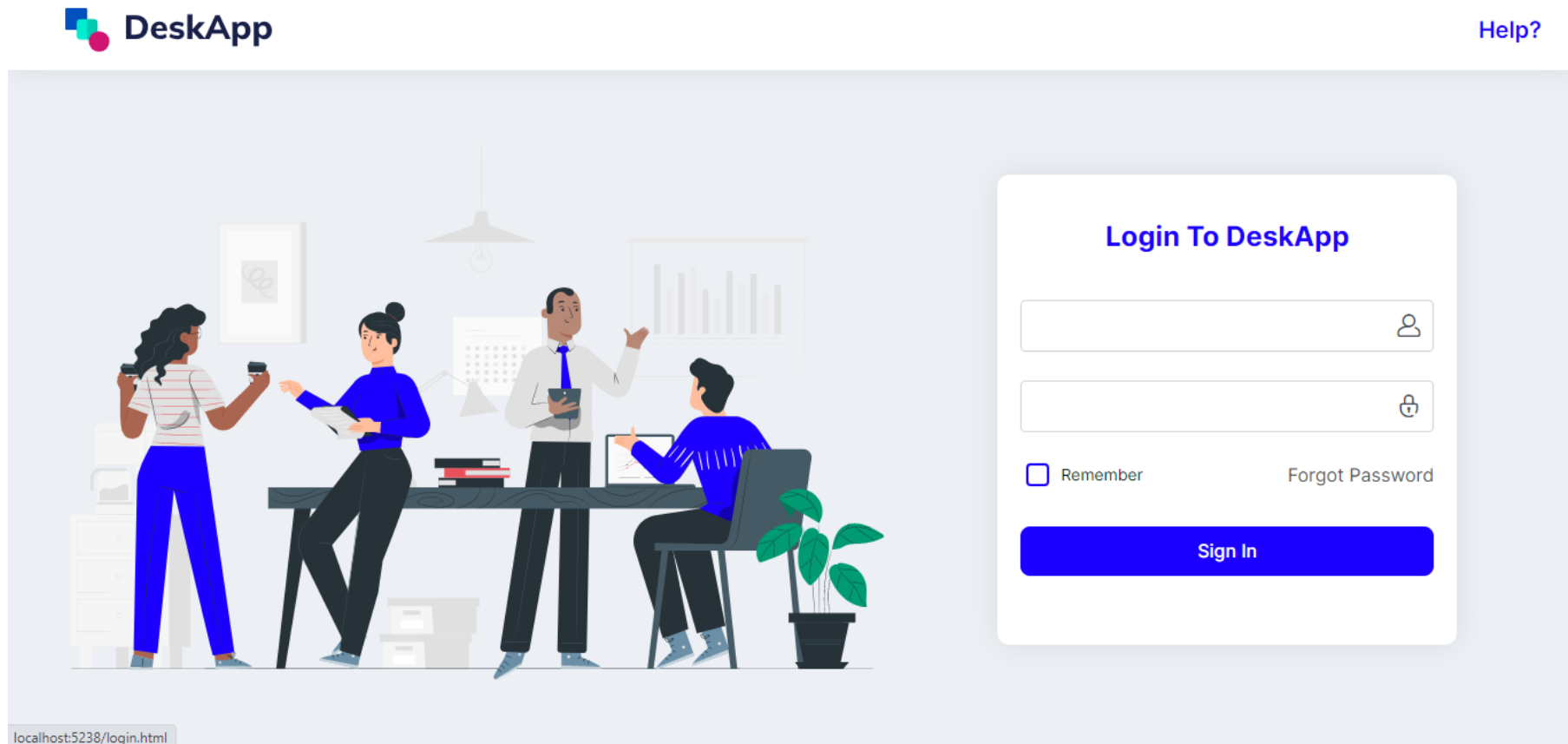
CONCLUSION

The Online Help Desk Project is the small step to reduce the communication distance between the staff and the students.

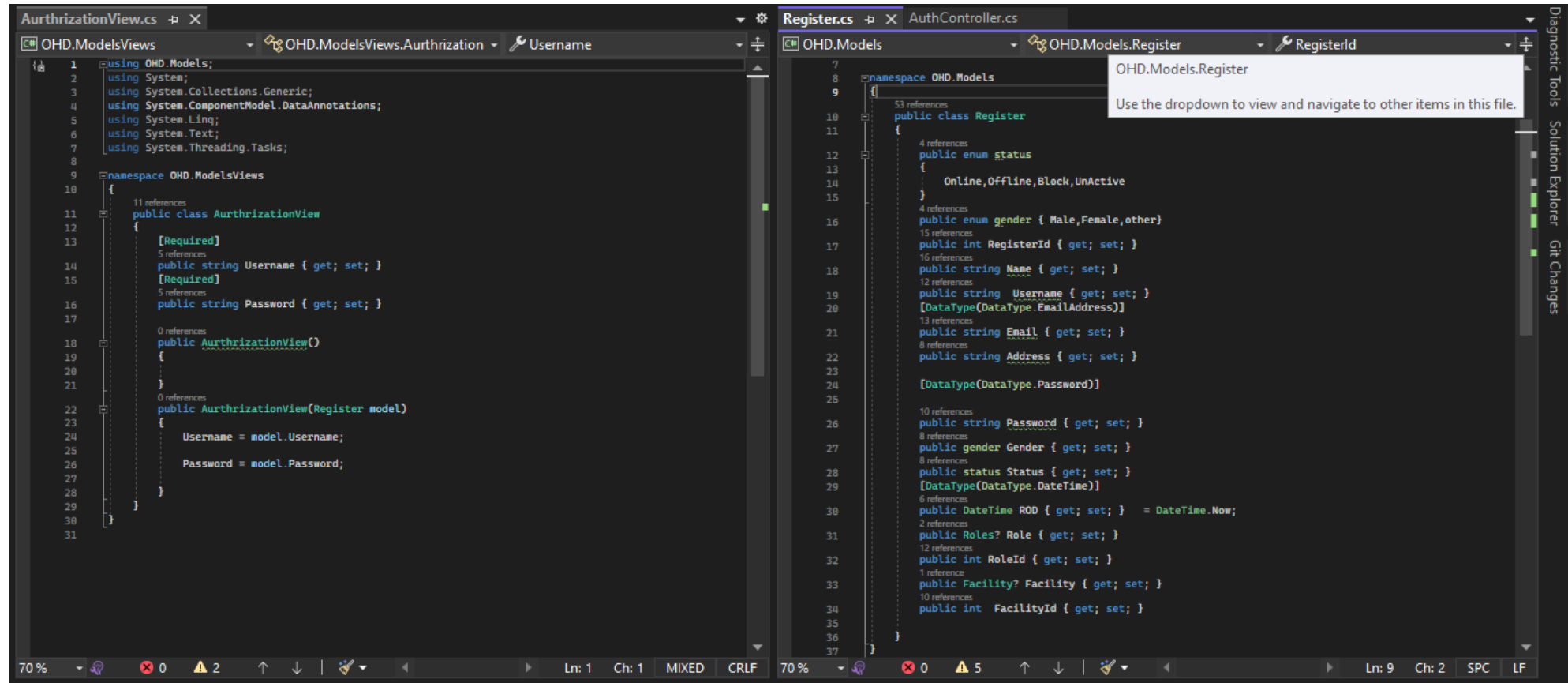
As the growing use of computers and other electronic devices would mean the growing demand on rapid and quick technical support, this Help Desk Support System is carefully designed to fit with the rapid technical support. It not only helps reducing the time of recording and tracking inquiries and problems traditionally, but also improves quality and accuracy of data produced by the system which can lead to more facilitation of decision making process in time.

OHD is designed to accommodate future upgrading and development without the need for building a new system to fit with the growing needs and demands of the system. Having this system hosted online means the ability of both technicians and administrator to track and respond to demands of students at any time beyond the boundaries and walls of college which add one more advantage to replacing the paper-based style.

Login page



Login Auth ViewModel And Registers Models



```
AurthrizationView.cs
1 using OHD.Models;
2 using System;
3 using System.Collections.Generic;
4 using System.ComponentModel.DataAnnotations;
5 using System.Linq;
6 using System.Text;
7 using System.Threading.Tasks;
8
9 namespace OHD.ModelsViews
10 {
11     11 references
12     public class AurthrizationView
13     {
14         5 references
15         [Required]
16         public string Username { get; set; }
17         5 references
18         [Required]
19         public string Password { get; set; }
20
21         0 references
22         public AurthrizationView()
23         {
24         }
25
26         0 references
27         public AurthrizationView(Register model)
28         {
29             Username = model.Username;
30             Password = model.Password;
31         }
32     }
33 }
```

```
Register.cs
7
8 namespace OHD.Models
9 {
10     53 references
11     public class Register
12     {
13         4 references
14         public enum status
15         {
16             Online, Offline, Block, UnActive
17         }
18         4 references
19         public enum gender { Male, Female, other }
20         15 references
21         public int RegisterId { get; set; }
22         16 references
23         public string Name { get; set; }
24         12 references
25         public string Username { get; set; }
26         [DataType(DataType.EmailAddress)]
27         13 references
28         public string Email { get; set; }
29         8 references
30         public string Address { get; set; }
31
32         [DataType(DataType.Password)]
33
34         10 references
35         public string Password { get; set; }
36         8 references
37         public gender Gender { get; set; }
38         8 references
39         public status Status { get; set; }
40         [DataType(DataType.DateTime)]
41         6 references
42         public DateTime ROD { get; set; } = DateTime.Now;
43         2 references
44         public Roles? Role { get; set; }
45         12 references
46         public int RoleId { get; set; }
47         1 reference
48         public Facility? Facility { get; set; }
49         10 references
50         public int FacilityId { get; set; }
51     }
52 }
```

OHD.Models.Register
Use the dropdown to view and navigate to other items in this file.