

ClinicHome.cs

```
namespace ClinicApp
{
    internal class ClinicHome
    {
        DoctorData doctorData;

        public ClinicHome()
        {
            doctorData = new DoctorData();
        }

        void DisplayAdminMenu()
        {
            Console.WriteLine("1. Add Doctor");
            Console.WriteLine("2. Modify Doctor's Phone No.");
            Console.WriteLine("3. Modify Doctor's Experiece");
            Console.WriteLine("4. Show all doctors");
            Console.WriteLine("5. Delete Doctor Profile");
            Console.WriteLine("0. Exit");
            Console.WriteLine("Enter Your Choice:");
        }

        void StartAdminActivities()
        {
            int choice;
            do
            {
                DisplayAdminMenu();
                choice = Convert.ToInt32(Console.ReadLine());
                switch (choice)
                {
                    case 0:
                        Console.WriteLine("Get Well Soon");
                        break;
                    case 1:
                        doctorData.Add();
                        break;
                    case 2:
                        DoctorPhoneUpdate();
                        break;
                    case 3:
                        DoctorExperienceUpdate();
                        break;
                    case 4:
                        ShowAllDoctors();
                        break;
                    case 5:
                        RemoveDoctor();
                        break;
                    default:
                        Console.WriteLine("Invalid choice. Try again");
                        break;
                }
            } while (choice != 0);
        }

        private void DoctorPhoneUpdate()
        {
            var id = GetDoctorIdFromUser();
            Console.WriteLine("Please enter the new phone number");
            long doctorNumber = Convert.ToInt64(Console.ReadLine());
            Doctors doctor = new Doctors();
            doctor.DoctorNumber = doctorNumber;
            doctor.Id = id;
            var result = doctorData.UpdateNum(id, doctor, "num");
            if (result != null)
                Console.WriteLine("Updation Complete");
        }
    }
}
```

```

    }

    private void DoctorExperienceUpdate()
    {
        var id = GetDoctorIdFromUser();
        Console.WriteLine("Please enter the doctor's new experience in years");
        int doctorExperience = Convert.ToInt32(Console.ReadLine());
        Doctors doctor = new Doctors();
        doctor.DoctorExperience = doctorExperience;
        doctor.Id = id;
        var result = doctorData.UpdateExp(id, doctor, "exp");
        if (result != null)
            Console.WriteLine("Updation Complete");
    }

    private void ShowAllDoctors()
    {
        Console.WriteLine("*****");
        var doctors = doctorData.GetDoctors();
        foreach (var item in doctors)
        {
            Console.WriteLine(item);
            Console.WriteLine("-----");
        }
        Console.WriteLine("*****");
    }

    private void RemoveDoctor()
    {
        int id = GetDoctorIdFromUser();
        if (doctorData.Delete(id) != null)
            Console.WriteLine("Doctor deleted");
    }

    int GetDoctorIdFromUser()
    {
        int id;
        Console.WriteLine("Please enter the doctor id");
        id = Convert.ToInt32(Console.ReadLine());
        return id;
    }

    static void Main(string[] args)
    {
        Console.WriteLine("Welcome To The Nirvana Clinic");
        ClinicHome home = new ClinicHome();
        home.StartAdminActivities();
    }
}

```

Doctots.cs

```
using System;
using System.Collections.Generic;
using System.Diagnostics;
using System.Linq;
using System.Text;
using System.Threading.Tasks;

namespace ClinicApp
{
    internal class Doctors
    {
        public int Id { get; set; }
        public string Name { get; set; }
        public long DoctorNumber { get; set; }
        public string DoctorSpeciality { get; set; }
        public int DoctorExperience { get; set; }

        public Doctors() {
            DoctorNumber = 0;
            DoctorExperience = 0;
        }
        public Doctors(int id, string name, long doctorNumber, string doctorSpeciality, int
doctorExperience)
        {
            Id = id;
            Name = name;
            DoctorNumber = doctorNumber;
            DoctorSpeciality = doctorSpeciality;
            DoctorExperience = doctorExperience;
        }

        public override string ToString()
        {
            return $"Doctor Id : {Id}\nDoctor Name : {Name}\nDoctor's Phone No.:
{DoctorNumber}\nDoctor's Speciality : {DoctorSpeciality}" +
                $"\nDoctor's Experience : {DoctorExperience}";
        }
    }
}
```

DoctorData.cs

```
using System;
using System.Collections.Generic;
using System.Linq;
using System.Text;
using System.Threading.Tasks;

namespace ClinicApp
{
    internal class DoctorData
    {
        List<Doctors> doctors;

        public DoctorData() {
            doctors = new List<Doctors>();
        }

        int GetNewId()
        {
            if (doctors.Count == 0)
                return 1;
            int id = doctors[doctors.Count - 1].Id;
            return ++id;
        }

        void TakeDoctorDetails(Doctors doctor)
        {
            Console.WriteLine("Please enter doctor's name");
            doctor.Name = Console.ReadLine();
            thispoint:
            Console.WriteLine("Please enter doctor's phone no.");
            doctor.DoctorNumber = Convert.ToInt64(Console.ReadLine());
            string numberString = doctor.DoctorNumber.ToString();
            int numberOfDigits = numberString.Length;
            if (numberOfDigits != 10)
            {
                Console.WriteLine("Please enter a valid number");
                goto thispoint;
            }
            Console.WriteLine("Please enter doctor's speciality");
            doctor.DoctorSpeciality = Console.ReadLine();
            Console.WriteLine("Please enter doctor's experience in years");
            doctor.DoctorExperience = Convert.ToInt32(Console.ReadLine());
        }

        public Doctors Add()
        {
            int id = GetNewId();
            Doctors doctor = new Doctors();
            doctor.Id = id;
            TakeDoctorDetails(doctor);
            doctors.Add(doctor);
            return doctor;
        }

        public List<Doctors> GetDoctors()
        {
            return doctors;
        }

        public Doctors GetDoctorById(int id)
        {
            for (int i = 0; i < doctors.Count; i++)
            {
                if (doctors[i].Id == id)
                    return doctors[i];
            }
        }
    }
}
```

```

        return null;
    }
    public Doctors UpdateNum(int id, Doctors doctor, string choice)
    {
        Doctors clinicDoctor = GetDoctorById(id);
        if (clinicDoctor != null)
        {
            string numberString = doctor.DoctorNumber.ToString();
            int numberOfDigits = numberString.Length;
            if (choice == "num")
            {
                if (numberOfDigits == 10)
                {
                    clinicDoctor.DoctorNumber = doctor.DoctorNumber;
                    return clinicDoctor;
                }
            }
            else
            {
                Console.WriteLine("Invalid choice");
            }
        }
        Console.WriteLine("Could not update");
        return null;
    }

    public Doctors UpdateExp(int id, Doctors doctor, string choice)
    {
        Doctors clinicDoctor = GetDoctorById(id);
        if (clinicDoctor != null)
        {
            if (choice == "exp")
            {
                if (doctor.DoctorExperience > 0)
                {
                    clinicDoctor.DoctorExperience = doctor.DoctorExperience;
                    return clinicDoctor;
                }
            }
            else
            {
                Console.WriteLine("Invalid choice");
            }
        }
        Console.WriteLine("Could not update");
        return null;
    }

    public Doctors Delete(int id)
    {
        Doctors clinicDoctor = GetDoctorById(id);
        if (clinicDoctor != null)
        {
            doctors.Remove(clinicDoctor);
            return clinicDoctor;
        }
        return null;
    }
}
}

```

Output:-

```

D:\Hexaware FSD\Clinic\Clinic
Welcome To The Nirvana Clinic
1. Add Doctor
2. Modify Doctor's Phone No.
3. Modify Doctor's Experiece
4. Show all doctors
5. Delete Doctor Profile
0. Exit
1
Please enter doctor's name
Vishesh
Please enter doctor's phone no.
1234567890
Please enter doctor's speciality
ENT
Please enter doctor's experience in years
6
1. Add Doctor
2. Modify Doctor's Phone No.
3. Modify Doctor's Experiece
4. Show all doctors
5. Delete Doctor Profile
0. Exit

D:\Hexaware FSD\Clinic\Clinic
Please enter doctor's experience in years
3
1. Add Doctor
2. Modify Doctor's Phone No.
3. Modify Doctor's Experiece
4. Show all doctors
5. Delete Doctor Profile
0. Exit
4
*****
Doctor Id : 1
Doctor Name : Vishesh
Doctor's Phone No.: 1234567890
Doctor's Speciality : ENT
Doctor's Experience : 6
-----
Doctor Id : 2
Doctor Name : Akash
Doctor's Phone No.: 2314567890
Doctor's Speciality : Dentist
Doctor's Experience : 3
-----
*****
1. Add Doctor
2. Modify Doctor's Phone No.
3. Modify Doctor's Experiece
4. Show all doctors
5. Delete Doctor Profile
0. Exit

```

```
D:\Hexaware FSD\Clinic\Clinic x + v
-----
*****
1. Add Doctor
2. Modify Doctor's Phone No.
3. Modify Doctor's Experience
4. Show all doctors
5. Delete Doctor Profile
0. Exit
2
Please enter the doctor id
1
Please enter the new phone number
8770208095
Updation Complete
1. Add Doctor
2. Modify Doctor's Phone No.
3. Modify Doctor's Experience
4. Show all doctors
5. Delete Doctor Profile
0. Exit
4
*****
Doctor Id : 1
Doctor Name : Vishesh
Doctor's Phone No.: 8770208095
Doctor's Speciality : ENT
Doctor's Experience : 6
-----
Doctor Id : 2
Doctor Name : Akash
Doctor's Phone No.: 2314567890
Doctor's Speciality : Dentist
Doctor's Experience : 3
-----
*****
1. Add Doctor
2. Modify Doctor's Phone No.
3. Modify Doctor's Experience
4. Show all doctors
5. Delete Doctor Profile
0. Exit
```

```
D:\Hexaware FSD\Clinic\Clinic x + v
-----
*****
1. Add Doctor
2. Modify Doctor's Phone No.
3. Modify Doctor's Experience
4. Show all doctors
5. Delete Doctor Profile
0. Exit
3
Please enter the doctor id
2
Please enter the doctor's new experience in years
4
Updation Complete
1. Add Doctor
2. Modify Doctor's Phone No.
3. Modify Doctor's Experience
4. Show all doctors
5. Delete Doctor Profile
0. Exit
4
*****
Doctor Id : 1
Doctor Name : Vishesh
Doctor's Phone No.: 8770208095
Doctor's Speciality : ENT
Doctor's Experience : 6
-----
Doctor Id : 2
Doctor Name : Akash
Doctor's Phone No.: 2314567890
Doctor's Speciality : Dentist
Doctor's Experience : 4
-----
*****
1. Add Doctor
2. Modify Doctor's Phone No.
3. Modify Doctor's Experience
4. Show all doctors
5. Delete Doctor Profile
0. Exit
|
```

```
D:\Hexaware FSD\Clinic\Clinic  × + ~
Doctor's Speciality : ENT
Doctor's Experience : 6
-----
Doctor Id : 2
Doctor Name : Akash
Doctor's Phone No.: 2314567890
Doctor's Speciality : Dentist
Doctor's Experience : 4
-----
*****
1. Add Doctor
2. Modify Doctor's Phone No.
3. Modify Doctor's Experience
4. Show all doctors
5. Delete Doctor Profile
0. Exit
5
Please enter the doctor id
2
Doctor deleted
1. Add Doctor
2. Modify Doctor's Phone No.
3. Modify Doctor's Experience
4. Show all doctors
5. Delete Doctor Profile
0. Exit
4
*****
Doctor Id : 1
Doctor Name : Vishesh
Doctor's Phone No.: 8770208095
Doctor's Speciality : ENT
Doctor's Experience : 6
-----
*****
1. Add Doctor
2. Modify Doctor's Phone No.
3. Modify Doctor's Experience
4. Show all doctors
5. Delete Doctor Profile
0. Exit
|
```

```
Microsoft Visual Studio Debug  × + ~
Doctor's Phone No.: 2314567890
Doctor's Speciality : Dentist
Doctor's Experience : 4
-----
*****
1. Add Doctor
2. Modify Doctor's Phone No.
3. Modify Doctor's Experience
4. Show all doctors
5. Delete Doctor Profile
0. Exit
5
Please enter the doctor id
2
Doctor deleted
1. Add Doctor
2. Modify Doctor's Phone No.
3. Modify Doctor's Experience
4. Show all doctors
5. Delete Doctor Profile
0. Exit
4
*****
Doctor Id : 1
Doctor Name : Vishesh
Doctor's Phone No.: 8770208095
Doctor's Speciality : ENT
Doctor's Experience : 6
-----
*****
1. Add Doctor
2. Modify Doctor's Phone No.
3. Modify Doctor's Experience
4. Show all doctors
5. Delete Doctor Profile
0. Exit
0
Get Well Soon

D:\Hexaware FSD\Clinic\ClinicSolution\ClinicApp\bin\Debug\net6.0\ClinicApp.exe (process 12708) exited with code 0.
To automatically close the console when debugging stops, enable Tools->Options->Debugging->Automatically close the console when debugging stops.
Press any key to close this window . . .
```