BOOK CONTROLLER:

```
using LibraryManagementSystem.Interface;
using LibraryManagementSystem.Model;
using Microsoft.AspNetCore.Cors;
using Microsoft.AspNetCore.Http;
using Microsoft.AspNetCore.Mvc;
using System;
using System.Collections.Generic;
using System.Linq;
using System.Threading.Tasks;

namespace LibraryManagementSystem.Controllers
{
    [EnableCors("AllowOrigin")]
    [Route("api/[controller]")]
    [ApiController]
    public class BookController : ControllerBase
    {
        private readonly IBook _iBook;
        public BookController(IBook iBook)
        {
            _iBook = iBook;
        }
        // GET: api/<BookController>
        [HttpGet("")]
        public async Task<IEnumerable<Book>> GetBookAsync()
        {
            var details = await _iBook.GetBookAsync();
            return details;
        }
        // GET api/<BookController>/5
        [HttpGet("{bookId}")]
        [ActionName("GetBook")]
        public async Task<IActionResult> GetBook([FromRoute] int bookId)
        {
            var detail = await _iBook.GetBook(bookId);
            if (detail != null)
            {
                return Ok(detail);
            }
            return NotFound("Not Found");
        }
        // POST api/<BookController>
        [HttpPost("")]
        public async Task<IActionResult> AddBook([FromBody] Book book)
        {
            await _iBook.AddBook(book);
            return CreatedAtAction(nameof(GetBook), new { bookId = book.BookId }, book);
        }
        // PUT api/<BookController>/5
        [HttpPut("")]
        public async Task<IActionResult> UpdateBookAsync([FromBody] Book book)
        {
            var detail = await _iBook.UpdateBookAsync(book);
            if (detail != null)
            {
                return Ok(detail);
            }
            else
            {
                return NotFound("Not found");
            }
        }
        // DELETE api/<BookController>/5
        [HttpDelete("{customerId}")]
        public async Task<IActionResult> DeleteBookAsync([FromRoute] int bookId)
        {
            await _iBook.DeleteBookAsync(bookId);
            return Ok();
        }

    }
}
```

BOOK STATUS CONTROLLER:

```
using LibraryManagementSystem.Interface;
using LibraryManagementSystem.Model;
using Microsoft.AspNetCore.Cors;
using Microsoft.AspNetCore.Mvc;
using System;
using System.Collections.Generic;
using System.Linq;
using System.Threading.Tasks;

// For more information on enabling Web API for empty projects, visit
https://go.microsoft.com/fwlink/?LinkID=397860

namespace LibraryManagementSystem.Controllers
{
    [EnableCors("AllowOrigin")]
    [Route("api/[controller]")]
    [ApiController]
    public class BookStatusController : ControllerBase
    {
        private readonly IBookStatus _bookStatus;

        public BookStatusController(IBookStatus bookStatus)
        {
            _bookStatus = bookStatus;
        }
        // GET: api/<BookStatusController>
        [HttpGet]
        public async Task<IEnumerable<BookStatus>> Get()
        {
            return await _bookStatus.GetBookStatus();
        }

        // GET api/<BookStatusController>/5
        [HttpGet("{id}")]
        public async Task<IActionResult> Get(int id)
        {
            BookStatus bookStatus = await _bookStatus.GetBookStatus(id);
            if (bookStatus == null)
            {
                return NotFound("Not found the bookStatus");
            }
            return Ok(bookStatus);
        }

        // POST api/<BookStatusController>
        [HttpPost]
        public async Task<IActionResult> Post([FromBody] BookStatus bookStatus)
        {
            await _bookStatus.AddBookStatus(bookStatus);
            return Ok("Successfully added");
        }
        // PUT api/<BookStatusController>/5
        [HttpPut]
        public async Task<IActionResult> Put([FromBody] BookStatus bookStatus)
        {
            BookStatus bookStatus1 = await _bookStatus.UpdateBookStatus(bookStatus);
            if (bookStatus1 == null)
            {
                return NotFound("Not found");
            }
            return Ok(bookStatus1);
        }

        // DELETE api/<BookStatusController>/5
        [HttpDelete("{id}")]
        public async Task<IActionResult> Delete(int id)
        {
            await _bookStatus.DeleteBookStatus(id);
            return Ok("Successfully deleted");
        }
    }
}
```

DESIGNATION CONTROLLER:

```
using LibraryManagementSystem.Interface;
using LibraryManagementSystem.Model;
using Microsoft.AspNetCore.Cors;
using Microsoft.AspNetCore.Mvc;
using System;
using System.Collections.Generic;
using System.Linq;
using System.Threading.Tasks;

// For more information on enabling Web API for empty projects, visit
https://go.microsoft.com/fwlink/?LinkID=397860

namespace LibraryManagementSystem.Controllers
{
    [EnableCors("AllowOrigin")]
    [Route("api/[controller]")]
    [ApiController]
    public class DesignationController : ControllerBase
    {
        private readonly IDesignation _designation;

        public DesignationController(IDesignation designation)
        {
            _designation = designation;
        }
        // GET: api/<DesignationController>
        [HttpGet]
        public async Task<IEnumerable<Designation>> Get()
        {
            return await _designation.GetDesignations();
        }

        // GET api/<DesignationController>/5
        [HttpGet("{id}")]
        public async Task<IActionResult> Get(int id)
        {
            Designation designation = await _designation.GetDesignation(id);
            if (designation == null)
            {
                return NotFound("Not found");
            }
            return Ok(designation);
        }

        // POST api/<DesignationController>
        [HttpPost]
        public async Task<IActionResult> Post([FromBody] Designation designation)
        {
            await _designation.AddDesignation(designation);
            return Ok("Successfully added");
        }

        // PUT api/<DesignationController>/5
        [HttpPut]
        public async Task<IActionResult> Put([FromBody] Designation designation)
        {
            Designation designation1 = await _designation.UpdateDesignation(designation);
            if (designation1 == null)
            {
                return NotFound("Not found");
            }
            return Ok(designation1);
        }

        // DELETE api/<DesignationController>/5
        [HttpDelete("{id}")]
        public async Task<IActionResult> Delete(int id)
        {
            await _designation.DeleteDesignation(id);
            return Ok("Successfully deleted");
        }
    }
}
```

EBOOK CONTROLLER:

```
using LibraryManagementSystem.Interface;
using LibraryManagementSystem.Model;
using Microsoft.AspNetCore.Cors;
using Microsoft.AspNetCore.Mvc;
using System;
using System.Collections.Generic;
using System.Linq;
using System.Threading.Tasks;

// For more information on enabling Web API for empty projects, visit
https://go.microsoft.com/fwlink/?LinkID=397860

namespace LibraryManagementSystem.Controllers
{
    [EnableCors("AllowOrigin")]
    [Route("api/[controller]")]
    [ApiController]
    public class EBookController : ControllerBase
    {
        private readonly IEBook _eBook;

        public EBookController(IEBook eBook)
        {
            _eBook = eBook;
        }
        // GET: api/<EBookController>
        [HttpGet]
        public async Task<IEnumerable<EBook>> Get()
        {
            return await _eBook.GetEbookAsync();
        }

        // GET api/<EBookController>/5
        [HttpGet("{id}")]
        public async Task<IActionResult> Get(int id)
        {
            EBook eBook = await _eBook.GetEbook(id);
            if (eBook == null)
            {
                return NotFound("Not found the EBook");
            }
            return Ok(eBook);
        }

        // POST api/<EBookController>
        [HttpPost]
        public async Task<IActionResult> Post([FromBody] EBook eBook)
        {
            await _eBook.AddEbook(eBook);
            return Ok("Successfully added");
        }

        // PUT api/<EBookController>/5
        [HttpPut]
        public async Task<IActionResult> Put([FromBody] EBook eBook)
        {
            EBook eBook1 = await _eBook.UpdateEbookAsync(eBook);
            if (eBook1 == null)
            {
                return NotFound("Not found");
            }
            return Ok(eBook1);
        }

        // DELETE api/<EBookController>/5
        [HttpDelete("{id}")]
        public async Task<IActionResult> Delete(int id)
        {
            await _eBook.DeleteEbookAsync(id);
            return Ok("Successfully deleted");
        }
    }
}
```

FACULTY CONTROLLER:

```
using LibraryManagementSystem.Interface;
using LibraryManagementSystem.Model;
using Microsoft.AspNetCore.Cors;
using Microsoft.AspNetCore.Mvc;
using System;
using System.Collections.Generic;
using System.Linq;
using System.Threading.Tasks;

// For more information on enabling Web API for empty projects, visit
https://go.microsoft.com/fwlink/?LinkID=397860
```

```csharp
namespace LibraryManagementSystem.Controllers
{
    [EnableCors("AllowOrigin")]
    [Route("api/[controller]")]
    [ApiController]
    public class FacultyController : ControllerBase
    {
        private readonly IFaculty _faculty;

        public FacultyController(IFaculty faculty)
        {
            _faculty = faculty;
        }
        // GET: api/<FacultyController>
        [HttpGet]
        public async Task<IEnumerable<Faculty>> Get()
        {
            return await _faculty.GetFacultys();
        }
        // GET api/<FacultyController>/5
        [HttpGet("{id}")]
        public async Task<IActionResult> Get(int id)
        {
            Faculty faculty = await _faculty.GetFaculty(id);
            if (faculty == null)
            {
                return NotFound("Not found");
            }
            return Ok(faculty);
        }

        // POST api/<FacultyController>
        [HttpPost]
        public async Task<IActionResult> Post([FromBody] Faculty faculty)
        {
            await _faculty.AddFaculty(faculty);
            return Ok("Successfully added");
        }

        // PUT api/<FacultyController>/5
        [HttpPut]
        public async Task<IActionResult> Put( [FromBody] Faculty faculty)
        {
            Faculty faculty1 = await _faculty.UpdateFaculty(faculty);
            if (faculty1 == null)
            {
                return NotFound("Not found");
            }
            return Ok(faculty1);
        }

        // DELETE api/<FacultyController>/5
        [HttpDelete("{id}")]
        public async Task<IActionResult> Delete(int id)
        {
            await _faculty.DeleteFaculty(id);
            return Ok("Successfully deleted");
        }
    }
}
```

STUDENT CONTROLLER:

```
using LibraryManagementSystem.Interface;
using LibraryManagementSystem.Model;
using Microsoft.AspNetCore.Cors;
using Microsoft.AspNetCore.Mvc;
using System;
using System.Collections.Generic;
using System.Linq;
using System.Threading.Tasks;

// For more information on enabling Web API for empty projects, visit
https://go.microsoft.com/fwlink/?LinkID=397860

namespace LibraryManagementSystem.Controllers
{
    [EnableCors("AllowOrigin")]
    [Route("api/[controller]")]
    [ApiController]
    public class StudentController : ControllerBase
    {
        private readonly IStudent _iStudent;
        public StudentController(IStudent student)
        {
            _iStudent = student;
        }

        // GET: api/<StudentController>
        [HttpGet]
        public async Task<IEnumerable<Student>>  Get()
        {
            return await _iStudent.GetStudents();
        }

        // GET api/<StudentController>/5
        [HttpGet("{id}")]
        public async Task<IActionResult> Get(int id)
        {
            Student student = await _iStudent.GetStudent(id);
            if (student == null)
            {
                return NotFound("Not found");
            }
            return Ok(student);
        }

        // POST api/<StudentController>
        [HttpPost]
        public async Task<IActionResult> Post([FromBody] Student student)
        {
            await _iStudent.AddStudent(student);
            return Ok("Successfully added");
        }

        // PUT api/<StudentController>/5
        [HttpPut]
        public async Task<IActionResult> Put([FromBody] Student student)
        {
            Student student1 = await _iStudent.UpdateStudent(student);
            if (student1 == null)
            {
                return NotFound("Not found");
            }
            return Ok(student);
        }

        // DELETE api/<StudentController>/5
        [HttpDelete("{id}")]
        public async Task<IActionResult> Delete(int id)
        {
            await _iStudent.DeleteStudent(id);
            return Ok("Successfully deleted");
        }
    }
}
```

SUPPLIER CONTROLLER:

```
using LibraryManagementSystem.Interface;
using LibraryManagementSystem.Model;
using LibraryManagementSystem.Repository;
using Microsoft.AspNetCore.Cors;
using Microsoft.AspNetCore.Mvc;
using System;
using System.Collections.Generic;
using System.Linq;
using System.Threading.Tasks;

// For more information on enabling Web API for empty projects, visit
https://go.microsoft.com/fwlink/?LinkID=397860

namespace LibraryManagementSystem.Controllers
{
    [EnableCors("AllowOrigin")]
    [Route("api/[controller]")]
    [ApiController]
    public class SupplierController : ControllerBase
    {
        private readonly ISupplier _iSupplier;

        public SupplierController(ISupplier supplier)
        {
            _iSupplier = supplier;
        }
        // GET: api/<SupplierController>
        [HttpGet]
        public async Task<IEnumerable<Supplier>> Get()
        {
            return await _iSupplier.GetSuppliers();
        }

        // GET api/<SupplierController>/5
        [HttpGet("{id}")]
        public async Task<IActionResult> Get(int id)
        {
            Supplier supplier = await _iSupplier.GetSupplier(id);
            if(supplier==null)
            {
                return NotFound("Not found");
            }
            return Ok(supplier);
        }

        // POST api/<SupplierController>
        [HttpPost]
        public async Task<IActionResult> Post([FromBody] Supplier supplier)
        {
            await _iSupplier.AddSupplier(supplier);
            return Ok("Successfully added");
        }

        // PUT api/<SupplierController>/5
        [HttpPut]
        public async Task<IActionResult> Put([FromBody] Supplier supplier)
        {
            Supplier suplier = await _iSupplier.UpdateSupplierDetail(supplier);
            if(supplier==null)
            {
                return NotFound("Not found");
            }
            return Ok(suplier);
        }

        // DELETE api/<SupplierController>/5
        [HttpDelete("{id}")]
        public async Task<IActionResult> Delete(int id)
        {
            await _iSupplier.DeleteSupplier(id);
            return Ok("Successfully deleted");
        }
    }
}
```

INTERFACE :

IBOOK INTERFACE :

```
using LibraryManagementSystem.Model;
using System;
using System.Collections.Generic;
using System.Linq;
using System.Threading.Tasks;

namespace LibraryManagementSystem.Interface
{
    public interface IBook
    {
        Task<IEnumerable<Book>> GetBookAsync();
        Task<Book> GetBook(int bookid);
        Task AddBook(Book book);
        Task<Book> UpdateBookAsync(Book book);
        Task DeleteBookAsync(int bookId);
    }
}
```

IBOOKSTATUS INTERFACE:

```
using LibraryManagementSystem.Model;
using System;
using System.Collections.Generic;
using System.Linq;
using System.Threading.Tasks;

namespace LibraryManagementSystem.Interface
{
    public interface IBookStatus
    {
        Task<IEnumerable<BookStatus>> GetBookStatus();
        Task<BookStatus> GetBookStatus(int bookStatusId);
        Task AddBookStatus(BookStatus bookStatus);
        Task<BookStatus> UpdateBookStatus(BookStatus bookStatus);
        Task DeleteBookStatus(int bookStatusId);
    }
}
```

IDESGINATION:

```
using LibraryManagementSystem.Model;
using System;
using System.Collections.Generic;
using System.Linq;
using System.Threading.Tasks;

namespace LibraryManagementSystem.Interface
{
    public interface IDesignation
    {
        Task<IEnumerable<Designation>> GetDesignations();
        Task<Designation> GetDesignation(int designationId);
        Task AddDesignation(Designation designation);
        Task<Designation> UpdateDesignation(Designation designation);
        Task DeleteDesignation(int designationId);
    }
}
```

IEBOOK:

```
using LibraryManagementSystem.Model;
using System;
using System.Collections.Generic;
using System.Linq;
using System.Threading.Tasks;

namespace LibraryManagementSystem.Interface
{
    public interface IEBook
    {
        Task<IEnumerable<EBook>> GetEbookAsync();
        Task<EBook> GetEbook(int eBookId);
        Task AddEbook(EBook eBook);
        Task<EBook> UpdateEbookAsync(EBook eBook);
        Task DeleteEbookAsync(int eBookId);
    }
}
```

IFACULTY:

```
using LibraryManagementSystem.Model;
using System;
using System.Collections.Generic;
using System.Linq;
using System.Threading.Tasks;

namespace LibraryManagementSystem.Interface
{
    public interface IFaculty
    {
        Task<IEnumerable<Faculty>> GetFacultys();
        Task AddFaculty(Faculty faculty);
        Task<Faculty> UpdateFaculty(Faculty faculty);
        Task DeleteFaculty(int id);
        Task<Faculty> GetFaculty(int id);
    }
}
```

ISTUDENT:

```
using LibraryManagementSystem.Model;
using System;
using System.Collections.Generic;
using System.Linq;
using System.Threading.Tasks;

namespace LibraryManagementSystem.Interface
{
    public interface IStudent
    {
        Task<IEnumerable<Student>> GetStudents();
        Task<Student> GetStudent(int studentId);
        Task AddStudent(Student student);
        Task<Student> UpdateStudent(Student student);
        Task DeleteStudent(int studentId);
    }
}
```

ISUPPLIER:

```
using LibraryManagementSystem.Model;
using System;
using System.Collections.Generic;
using System.Linq;
using System.Threading.Tasks;

namespace LibraryManagementSystem.Interface
{
    public interface ISupplier
    {
        Task<IEnumerable<Supplier>> GetSuppliers();
        Task<Supplier> GetSupplier(int supplierId);
        Task AddSupplier(Supplier supplier);
        Task<Supplier> UpdateSupplierDetail(Supplier supplier);
        Task DeleteSupplier(int supplierId);
    }
}
```

DB CONTEXT:

```
using LibraryManagementSystem.Model;
using Microsoft.EntityFrameworkCore;
using System;
using System.Collections.Generic;
using System.Linq;
using System.Threading.Tasks;

namespace LibraryManagementSystem.DBContext
{
    public class LibraryDBContext : DbContext
    {
        public LibraryDBContext() {}
        public LibraryDBContext(DbContextOptions<LibraryDBContext> dbContextOptions) :
base(dbContextOptions) {}
        public DbSet<Book> Books { get; set; }
        public DbSet<BookStatus> BookStatus { get; set; }
        public DbSet<Designation> Designations { get; set; }
        public DbSet<EBook> EBooks { get; set; }
        public DbSet<Faculty> Faculties { get; set; }
        public DbSet<Student> Students { get; set; }
        public DbSet<Supplier> Suppliers { get; set; }

    }
}
```

MODEL:

BOOK:

```
using System;
using System.Collections.Generic;
using System.ComponentModel.DataAnnotations;
using System.ComponentModel.DataAnnotations.Schema;
using System.Linq;
using System.Threading.Tasks;

namespace LibraryManagementSystem.Model
{
    public class Book
    {
        [Key]
        [DatabaseGenerated(DatabaseGeneratedOption.Identity)]
        public int BookId { get; set; }
        public string BookName { get; set; }
        public string ISBN { get; set; }
        public string Description { get; set; }
        public string Publisher { get; set; }
        public string Author { get; set; }
        public string Location { get; set; }
        public int Quantity { get; set; }
        public int Issued { get; set; }
        [ForeignKey("BookStatusId")]
        public BookStatus BookStatus { get; set; }
        public int BookStatusId { get; set; }

    }
}
```

BOOK STATUS:

```
using System;
using System.Collections.Generic;
using System.ComponentModel.DataAnnotations;
using System.ComponentModel.DataAnnotations.Schema;
using System.Linq;
using System.Threading.Tasks;

namespace LibraryManagementSystem.Model
{
    public class BookStatus
    {
        [Key]
        [DatabaseGenerated(DatabaseGeneratedOption.Identity)]
        public int BookStatusId { get; set; }
        [MaxLength(50)]
        public string Status { get; set; }
    }
}
```

DESIGNATION:

```
using System;
using System.Collections.Generic;
using System.ComponentModel.DataAnnotations;
using System.ComponentModel.DataAnnotations.Schema;
using System.Linq;
using System.Threading.Tasks;
using Microsoft.EntityFrameworkCore;
using Microsoft.EntityFrameworkCore.SqlServer;

namespace LibraryManagementSystem.Model
{
    public class Designation
    {
        [Key]
        [DatabaseGenerated(DatabaseGeneratedOption.Identity)]
        public int DesignationId { get; set; }
        [MaxLength(50)]
        public string DesignationName { get; set; }
    }
}
```

EBOOK:

```
using Microsoft.AspNetCore.Http;
using System;
using System.Collections.Generic;
using System.ComponentModel.DataAnnotations;
using System.ComponentModel.DataAnnotations.Schema;
using System.Linq;
using System.Threading.Tasks;

namespace LibraryManagementSystem.Model
{
    public class EBook
    {
        [Key]
        [DatabaseGenerated(DatabaseGeneratedOption.Identity)]
        public int EBookId { get; set; }
        public string EBookName { get; set; }
        public string ISBN { get; set; }
        public string Description { get; set; }
        public string Publisher { get; set; }
        public string Author { get; set; }
        //public IFormFile File { get; set; }
    }
}
```

FACULTY:

```
using System;
using System.Collections.Generic;
using System.ComponentModel.DataAnnotations;
using System.ComponentModel.DataAnnotations.Schema;
using System.Linq;
using System.Threading.Tasks;

namespace LibraryManagementSystem.Model
{
    public class Faculty
    {
        [Key]
        public int FacultyId { get; set; }
        public string FacultyName { get; set; }
        public string FacultyEmail { get; set; }
        [MaxLength(50)]
        public string FacultyPhone { get; set; }
        public string FacultyAddress { get; set; }
        public string DesignationName { get; set; }
    }
}
```

STUDENT:

```
using System;
using System.Collections.Generic;
using System.ComponentModel.DataAnnotations;
using System.ComponentModel.DataAnnotations.Schema;
using System.Linq;
using System.Threading.Tasks;

namespace LibraryManagementSystem.Model
{
    public class Student
    {
        [Key]
        [DatabaseGenerated(DatabaseGeneratedOption.Identity)]
        public int StudentId { get; set; }
        public string StudentName { get; set; }
        public string StudentEmail { get; set; }
        public string FatherName { get; set; }
        [MaxLength(50)]
        public string Password { get; set; }
        [MaxLength(50)]
        public string Phone { get; set; }
        public string Address { get; set; }
        [MaxLength(50)]
        public string Class { get; set; }
        public int RollNo { get; set; }

    }
}
```

SUPPLIER:

```
using System;
using System.Collections.Generic;
using System.ComponentModel.DataAnnotations;
using System.ComponentModel.DataAnnotations.Schema;
using System.Linq;
using System.Threading.Tasks;

namespace LibraryManagementSystem.Model
{
    public class Supplier
    {
        [Key]
        [DatabaseGenerated(DatabaseGeneratedOption.Identity)]
        public int SupplierId { get; set; }

        public string SupplierName { get; set; }

        public int PurchaseNumber { get; set; }
    }
}
```

REPOSITORY:

BOOK REPOSITORY:

```
using LibraryManagementSystem.DBContext;
using LibraryManagementSystem.Interface;
using LibraryManagementSystem.Model;
using Microsoft.EntityFrameworkCore;
using System;
using System.Collections.Generic;
using System.Linq;
using System.Threading.Tasks;

namespace LibraryManagementSystem.Repository
{
    public class BookRepository:IBook
    {
        private LibraryDBContext _context;
        public BookRepository(LibraryDBContext context)
        {
            _context = context;
        }
        public async Task AddBook(Book book)
        {
            await _context.Books.AddAsync(book);
            await _context.SaveChangesAsync();
        }
        public async Task DeleteBookAsync(int bookId)
        {
            Book bk = new Book()
            {
                BookId = bookId
            };
            _context.Books.Remove(bk);
            await _context.SaveChangesAsync();
        }
        public async Task<Book> GetBook(int bookid)
        {
            var book = await _context.Books.FindAsync(bookid);
            return book;
        }
        public async Task<IEnumerable<Book>> GetBookAsync()
        {
            var records = await _context.Books.ToListAsync();
            return records;
        }
        public async Task<Book> UpdateBookAsync(Book book)
        {
            var bk = new Book()
            {
                BookId = book.BookId,
                BookName = book.BookName,
                ISBN = book.ISBN,
                Description = book.Description,
                Publisher = book.Publisher,
                Author = book.Author,
                Location = book.Location,
                Quantity = book.Quantity,
                Issued = book.Issued,
                BookStatus = book.BookStatus
            };
            _context.Books.Update(bk);
            await _context.SaveChangesAsync();
            return bk;
        }

    }
}
```

BOOK STATUS REPOSITORY:

```
using LibraryManagementSystem.DBContext;
using LibraryManagementSystem.Interface;
using LibraryManagementSystem.Model;
using Microsoft.EntityFrameworkCore;
using System;
using System.Collections.Generic;
using System.Linq;
using System.Threading.Tasks;

namespace LibraryManagementSystem.Repository
{
    public class BookStatusRespository : IBookStatus
    {
        private readonly LibraryDBContext _libraryDBContext;

        public BookStatusRespository(LibraryDBContext libraryDBContext)
        {
            _libraryDBContext = libraryDBContext;
        }
        public async Task AddBookStatus(BookStatus bookStatus)
        {
            await _libraryDBContext.BookStatus.AddAsync(bookStatus);
            await _libraryDBContext.SaveChangesAsync();
        }

        public async Task DeleteBookStatus(int bookStatusId)
        {
            BookStatus bookStatus = new BookStatus()
            {
                BookStatusId = bookStatusId
            };
            _libraryDBContext.BookStatus.Remove(bookStatus);
            await _libraryDBContext.SaveChangesAsync();
        }

        public async Task<IEnumerable<BookStatus>> GetBookStatus()
        {
            return await _libraryDBContext.BookStatus.ToListAsync();
        }

        public async Task<BookStatus> GetBookStatus(int bookStatusId)
        {
            return await _libraryDBContext.BookStatus.FindAsync(bookStatusId);
        }

        public async Task<BookStatus> UpdateBookStatus(BookStatus bookStatus)
        {

            _libraryDBContext.BookStatus.Update(bookStatus);
            await _libraryDBContext.SaveChangesAsync();
            return bookStatus;
        }
    }
}
```

DESIGNATION REPOSITORY:

```
using LibraryManagementSystem.DBContext;
using LibraryManagementSystem.Interface;
using LibraryManagementSystem.Model;
using Microsoft.EntityFrameworkCore;
using System;
using System.Collections.Generic;
using System.Linq;
using System.Threading.Tasks;

namespace LibraryManagementSystem.Repository
{
    public class DesignationRepository : IDesignation
    {
        private readonly LibraryDBContext _libraryDBContext;

        public DesignationRepository(LibraryDBContext libraryDBContext)
        {
            _libraryDBContext = libraryDBContext;
        }
        public async Task AddDesignation(Designation designation)
        {
            await _libraryDBContext.Designations.AddAsync(designation);
            await _libraryDBContext.SaveChangesAsync();
        }

        public async Task DeleteDesignation(int designationId)
        {
            Designation designation = new Designation()
            {
                DesignationId = designationId
            };
            _libraryDBContext.Designations.Remove(designation);
            await _libraryDBContext.SaveChangesAsync();
        }
        public async Task<Designation> GetDesignation(int designationId)
        {
            return await _libraryDBContext.Designations.FindAsync(designationId);
        }

        public async Task<IEnumerable<Designation>> GetDesignations()
        {
            return await _libraryDBContext.Designations.ToListAsync();
        }

        public async Task<Designation> UpdateDesignation(Designation designation)
        {
            _libraryDBContext.Designations.Update(designation);
            await _libraryDBContext.SaveChangesAsync();
            return designation;
        }
    }
}
```

EBOOK REPOSITORY:

```
using LibraryManagementSystem.DBContext;
using LibraryManagementSystem.Interface;
using LibraryManagementSystem.Model;
using Microsoft.EntityFrameworkCore;
using System;
using System.Collections.Generic;
using System.Linq;
using System.Threading.Tasks;

namespace LibraryManagementSystem.Repository
{
    public class EBookRespository : IEBook
    {
        private readonly LibraryDBContext _libraryDBContext;

        public EBookRespository(LibraryDBContext libraryDBContext)
        {
            _libraryDBContext = libraryDBContext;
        }
        public async Task AddEbook(EBook eBook)
        {
            await _libraryDBContext.EBooks.AddAsync(eBook);
            await _libraryDBContext.SaveChangesAsync();
        }

        public async Task DeleteEbookAsync(int eBookId)
        {
            EBook eBook = new EBook()
            {
                EBookId = eBookId
            };
            _libraryDBContext.EBooks.Remove(eBook);
            await _libraryDBContext.SaveChangesAsync();
        }

        public async Task<EBook> GetEbook(int eBookId)
        {
            return await _libraryDBContext.EBooks.FindAsync(eBookId);
        }

        public async Task<IEnumerable<EBook>> GetEbookAsync()
        {
            return await _libraryDBContext.EBooks.ToListAsync();
        }

        public async Task<EBook> UpdateEbookAsync(EBook eBook)
        {
            _libraryDBContext.EBooks.Update(eBook);
            await _libraryDBContext.SaveChangesAsync();
            return eBook;
        }
    }
}
```

FACULTY REPOSITORY:

```
using LibraryManagementSystem.DBContext;
using LibraryManagementSystem.Interface;
using LibraryManagementSystem.Model;
using Microsoft.EntityFrameworkCore;
using System;
using System.Collections.Generic;
using System.Linq;
using System.Threading.Tasks;

namespace LibraryManagementSystem.Repository
{
    public class FacultyRepository : IFaculty
    {
        private readonly LibraryDBContext _libraryDBContext;

        public FacultyRepository(LibraryDBContext libraryDBContext)
        {
            _libraryDBContext = libraryDBContext;
        }
        public async Task AddFaculty(Faculty faculty)
        {
            await _libraryDBContext.Faculties.AddAsync(faculty);
            await _libraryDBContext.SaveChangesAsync();
        }

        public async Task DeleteFaculty(int facultyId)
        {
            Faculty faculty = new Faculty()
            {
                FacultyId = facultyId
            };
            _libraryDBContext.Faculties.Remove(faculty);
            await _libraryDBContext.SaveChangesAsync();
        }

        public async Task<Faculty> GetFaculty(int facultyId)
        {
            return await _libraryDBContext.Faculties.FindAsync(facultyId);
        }

        public async Task<IEnumerable<Faculty>> GetFacultys()
        {
            return await _libraryDBContext.Faculties.ToListAsync();
        }

        public async Task<Faculty> UpdateFaculty(Faculty faculty)
        {
            _libraryDBContext.Faculties.Update(faculty);
            await _libraryDBContext.SaveChangesAsync();
            return faculty;
        }
    }
}
```

STUDENT REPOSITORY:

```
using LibraryManagementSystem.DBContext;
using LibraryManagementSystem.Interface;
using LibraryManagementSystem.Model;
using Microsoft.EntityFrameworkCore;
using System;
using System.Collections.Generic;
using System.Linq;
using System.Threading.Tasks;

namespace LibraryManagementSystem.Repository
{
    public class StudentRepository : IStudent
    {
        private readonly LibraryDBContext _libraryDBContext;

        public StudentRepository(LibraryDBContext libraryDBContext)
        {
            _libraryDBContext = libraryDBContext;
        }
        public async Task AddStudent(Student student)
        {
            await _libraryDBContext.Students.AddAsync(student);
            await _libraryDBContext.SaveChangesAsync();
        }

        public async Task DeleteStudent(int studentId)
        {
            Student student = new Student()
            {
                StudentId = studentId
            };
            _libraryDBContext.Students.Remove(student);
            await _libraryDBContext.SaveChangesAsync();
        }

        public async Task<Student> GetStudent(int studentId)
        {
            return await _libraryDBContext.Students.FindAsync(studentId);
        }

        public async Task<IEnumerable<Student>> GetStudents()
        {
            return await _libraryDBContext.Students.ToListAsync();
        }

        public async Task<Student> UpdateStudent(Student student)
        {
            _libraryDBContext.Students.Update(student);
            await _libraryDBContext.SaveChangesAsync();
            return student;
        }
    }
}
```

SUPPLIER REPOSITORY:

```
using LibraryManagementSystem.DBContext;
using LibraryManagementSystem.Interface;
using LibraryManagementSystem.Model;
using Microsoft.EntityFrameworkCore;
using System;
using System.Collections.Generic;
using System.Linq;
using System.Threading.Tasks;

namespace LibraryManagementSystem.Repository
{
    public class SupplierRepository : ISupplier
    {
        private readonly LibraryDBContext _libraryDBContext;

        public SupplierRepository(LibraryDBContext libraryDBContext)
        {
            _libraryDBContext = libraryDBContext;
        }
        public async Task AddSupplier(Supplier supplier)
        {
            await _libraryDBContext.Suppliers.AddAsync(supplier);
            await _libraryDBContext.SaveChangesAsync();
        }

        public async Task DeleteSupplier(int supplierId)
        {
            Supplier supplier = new Supplier()
            {
                SupplierId = supplierId
            };
            _libraryDBContext.Suppliers.Remove(supplier);
            await _libraryDBContext.SaveChangesAsync();
        }

        public async Task<Supplier> GetSupplier(int supplierId)
        {
            return await _libraryDBContext.Suppliers.FindAsync(supplierId);
        }

        public async Task<IEnumerable<Supplier>> GetSuppliers()
        {
            return await _libraryDBContext.Suppliers.ToListAsync();

        }

        public async Task<Supplier> UpdateSupplierDetail(Supplier supplier)
        {
            _libraryDBContext.Suppliers.Update(supplier);
            await _libraryDBContext.SaveChangesAsync();
            return supplier;
        }
    }
}
```

APP SETTINGS :

```
{
  "Logging": {
    "LogLevel": {
      "Default": "Information",
      "Microsoft": "Warning",
      "Microsoft.Hosting.Lifetime": "Information"
    }
  },
  "ConnectionStrings": {
    "ConnString": "Data Source =MINDJAN387; Initial Catalog =LibraryManagementSystem; User
ID=sa;Password=pass@word1"
  },
  "AllowedHosts": "*"
}
```

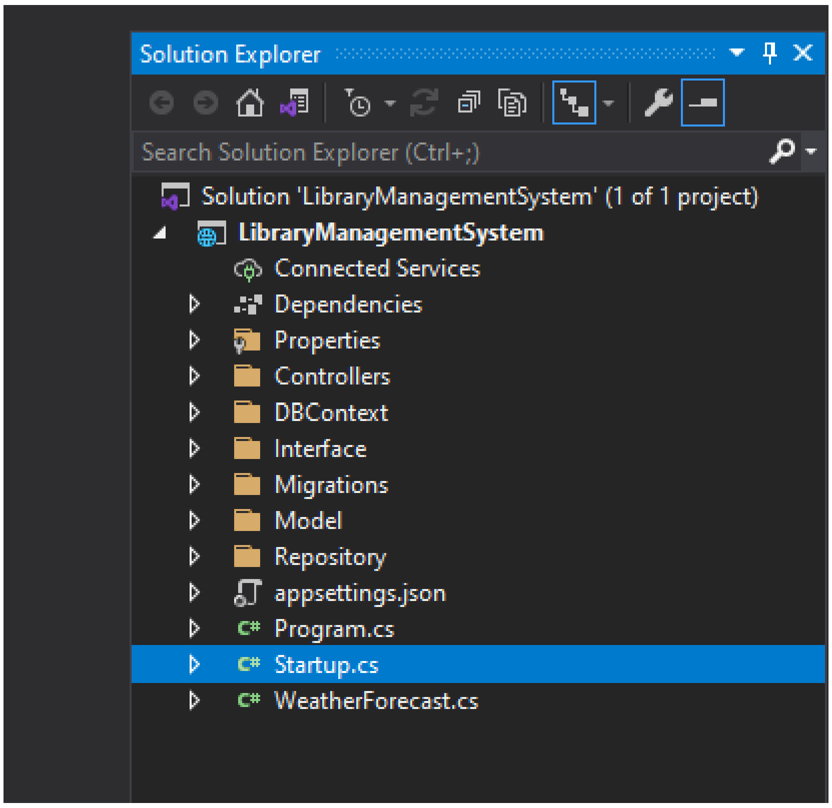
PROGRAM.CS:

```
using Microsoft.AspNetCore.Hosting;
using Microsoft.Extensions.Configuration;
using Microsoft.Extensions.Hosting;
using Microsoft.Extensions.Logging;
using System;
using System.Collections.Generic;
using System.Linq;
using System.Threading.Tasks;

namespace LibraryManagementSystem
{
    public class Program
    {
        public static void Main(string[] args)
        {
            CreateHostBuilder(args).Build().Run();
        }

        public static IHostBuilder CreateHostBuilder(string[] args) =>
            Host.CreateDefaultBuilder(args)
                .ConfigureWebHostDefaults(webBuilder =>
                {
                    webBuilder.UseStartup<Startup>();
                });
    }
}
```

STARTUP.CS

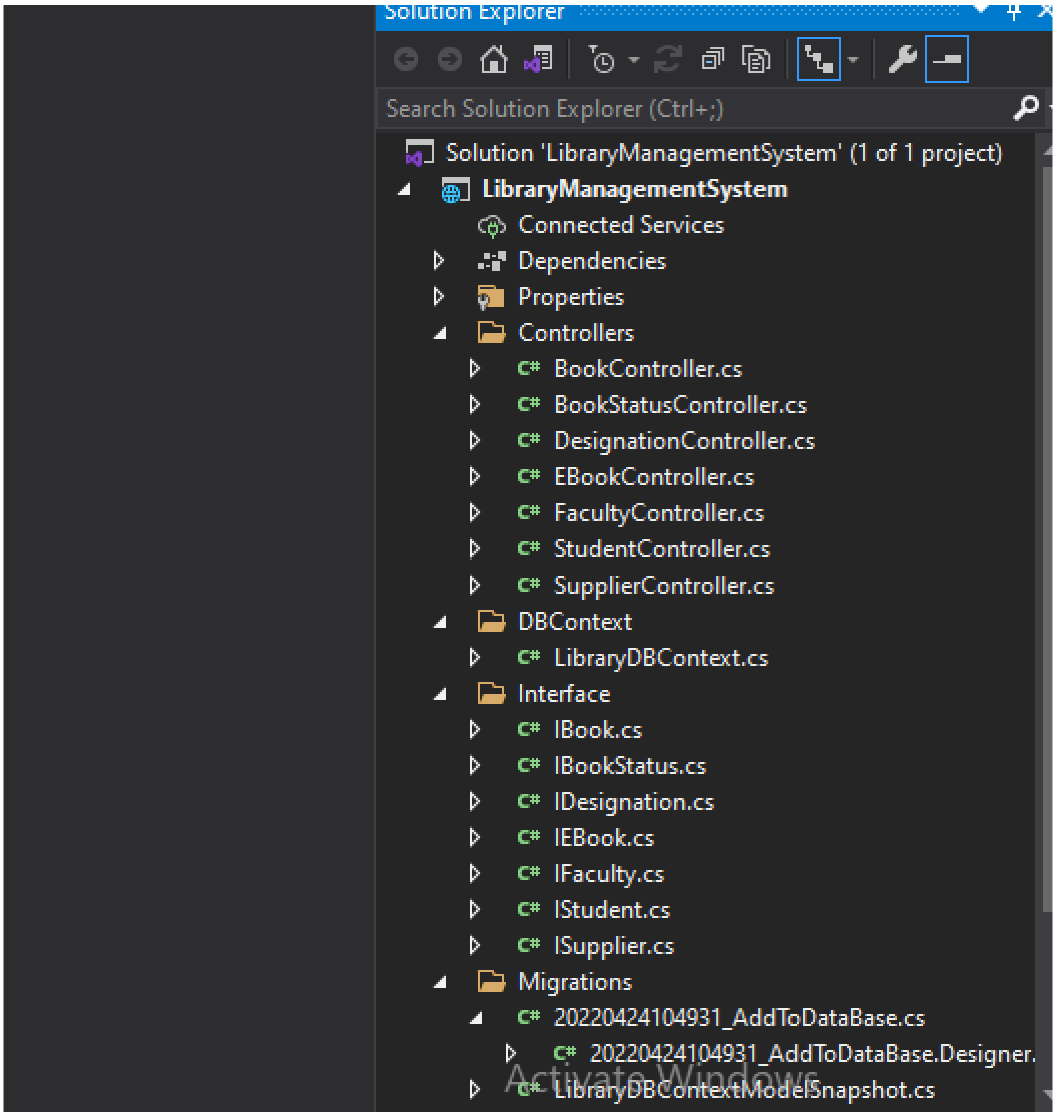
```
using LibraryManagementSystem.DBContext;
using LibraryManagementSystem.Interface;
using LibraryManagementSystem.Repository;
using Microsoft.AspNetCore.Builder;
using Microsoft.AspNetCore.Hosting;
using Microsoft.AspNetCore.HttpsPolicy;
using Microsoft.AspNetCore.Mvc;
using Microsoft.EntityFrameworkCore;
using Microsoft.Extensions.Configuration;
using Microsoft.Extensions.DependencyInjection;
using Microsoft.Extensions.Hosting;
using Microsoft.Extensions.Logging;
using Microsoft.OpenApi.Models;

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

namespace LibraryManagementSystem
{
    public class Startup
    {
        public Startup(IConfiguration configuration)
        {
            Configuration = configuration;
        }

        public IConfiguration Configuration { get; }

        // This method gets called by the runtime. Use this method to add services to the
container.
        public void ConfigureServices(IServiceCollection services)
        {
            //services.AddCors();
            services.AddControllers();
            services.AddDbContext<LibraryDBContext>(options =>
options.UseSqlServer(Configuration.GetConnectionString("ConnString")));
            services.AddCors(options =>
            {
                options.AddPolicy("AllowOrigin",builder=>
                {
                    builder.AllowAnyOrigin().AllowAnyMethod().AllowAnyHeader();
                });
            });
            services.AddSwaggerGen(c =>
            {
                c.SwaggerDoc("v1", new OpenApiInfo { Title = "LibraryManagementSystem",
Version = "v1" });
            });
            services.AddTransient<ISupplier, SupplierRepository>();
            services.AddTransient<IStudent, StudentRepository>();
            services.AddTransient<IBook, BookRepository>();
            services.AddTransient<IFaculty, FacultyRepository>();
            services.AddTransient<IEBook, EBookRespository>();
            services.AddTransient<IDesignation, DesignationRepository>();
            services.AddTransient<IBookStatus, BookStatusRespository>();
        }

        // This method gets called by the runtime. Use this method to configure the HTTP
request pipeline.
        public void Configure(IApplicationBuilder app, IWebHostEnvironment env)
        {
            if (env.IsDevelopment())
            {
                app.UseDeveloperExceptionPage();
                app.UseSwagger();
                app.UseSwaggerUI(c => c.SwaggerEndpoint("/swagger/v1/swagger.json",
"LibraryManagementSystem v1"));
            }

            app.UseHttpsRedirection();

            app.UseRouting();

            // with a named pocili
            app.UseCors("AllowOrigin");
            app.UseAuthorization();

            app.UseEndpoints(endpoints =>
            {
                endpoints.MapControllers();
            });
        }
    }
}
```

FOLDER STRUCTURE:



```
Solution 'LibraryManagementSystem' (1 of 1 project)
  LibraryManagementSystem
    Connected Services
    Dependencies
    Properties
    Controllers
    DBContext
    Interface
    Migrations
    Model
    Repository
    appsettings.json
    Program.cs
    Startup.cs
    WeatherForecast.cs
```

SUB FOLDER STRUCTURE:

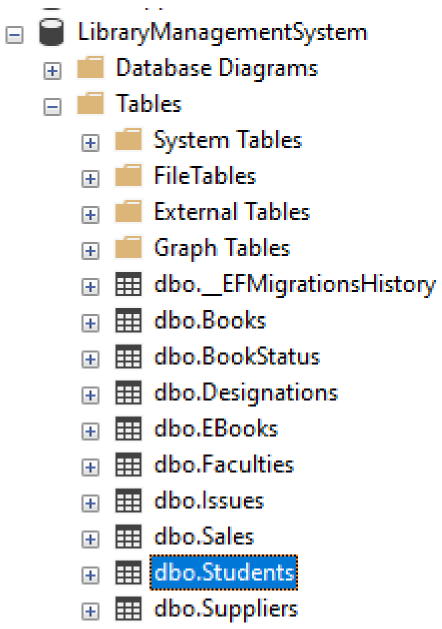


Solution Explorer

Search Solution Explorer (Ctrl+;)

```
Solution 'LibraryManagementSystem' (1 of 1 project)
  LibraryManagementSystem
    Connected Services
    Dependencies
    Properties
    Controllers
      BookController.cs
      BookStatusController.cs
      DesignationController.cs
      EBookController.cs
      FacultyController.cs
      StudentController.cs
      SupplierController.cs
    DBContext
      LibraryDBContext.cs
    Interface
      IBook.cs
      IBookStatus.cs
      IDesignation.cs
      IEBook.cs
      IFaculty.cs
      IStudent.cs
      ISupplier.cs
    Migrations
      20220424104931_AddToDataBase.cs
        20220424104931_AddToDataBase.Designer.
      LibraryDBContextModelSnapshot.cs
```

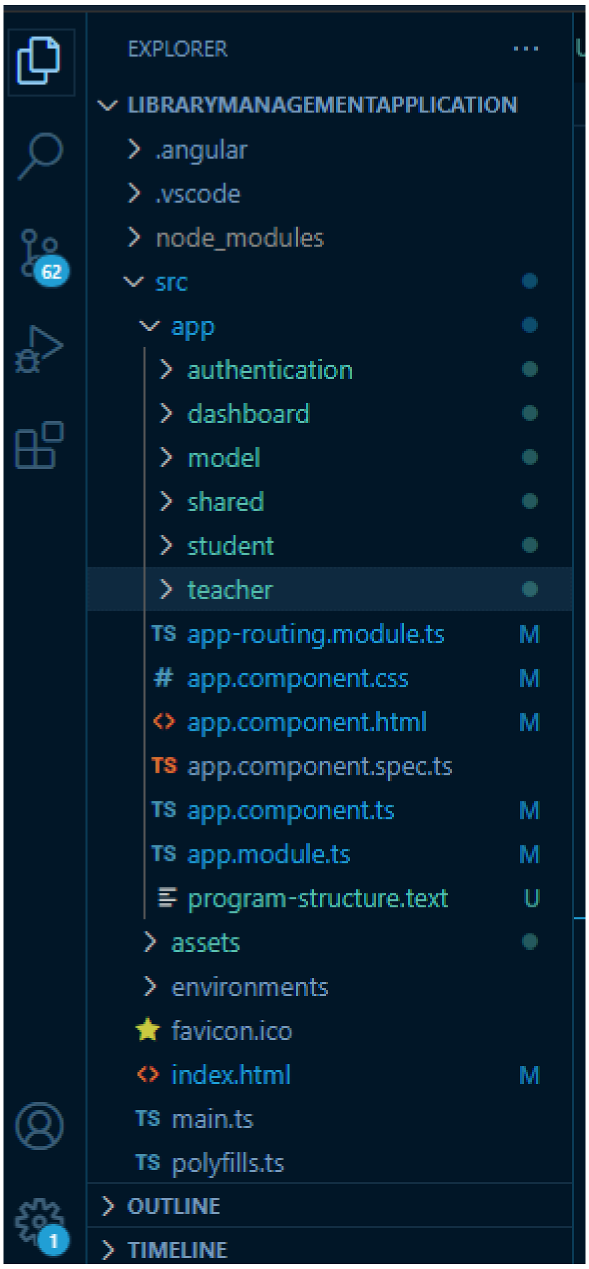
SQL DATABASE :



```
LibraryManagementSystem
  Database Diagrams
  Tables
    System Tables
    FileTables
    External Tables
    Graph Tables
    dbo.__EFMigrationsHistory
    dbo.Books
    dbo.BookStatus
    dbo.Designations
    dbo.EBooks
    dbo.Faculties
    dbo.Issues
    dbo.Sales
    dbo.Students
    dbo.Suppliers
```

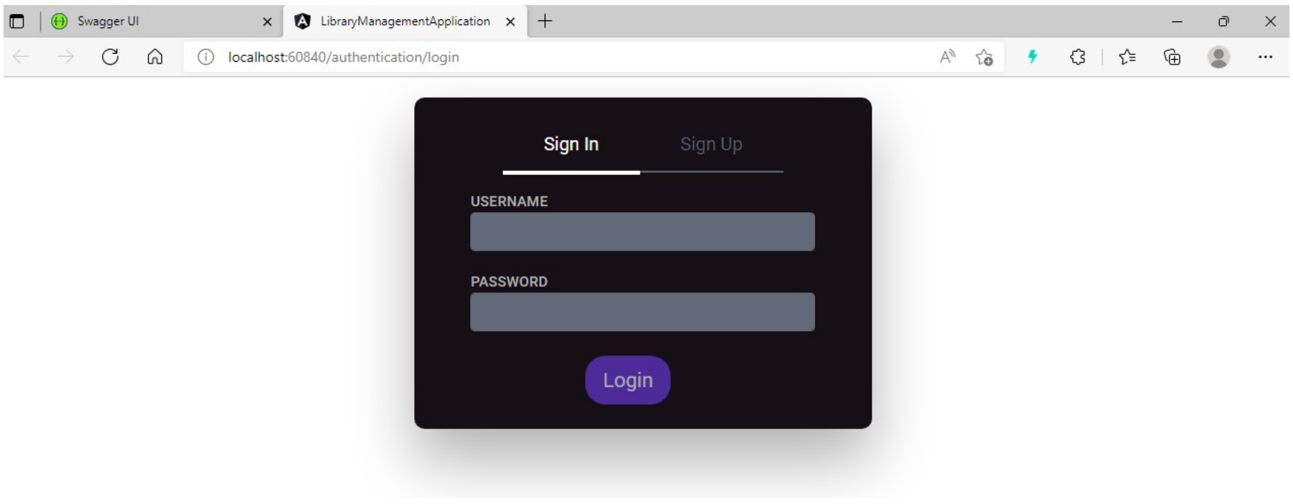
ANGULAR CODE :

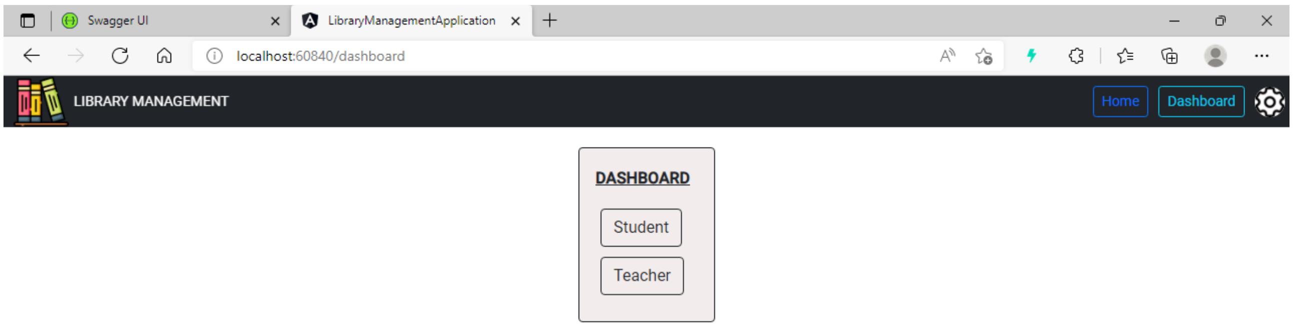
FOLDER STRUCTURE:

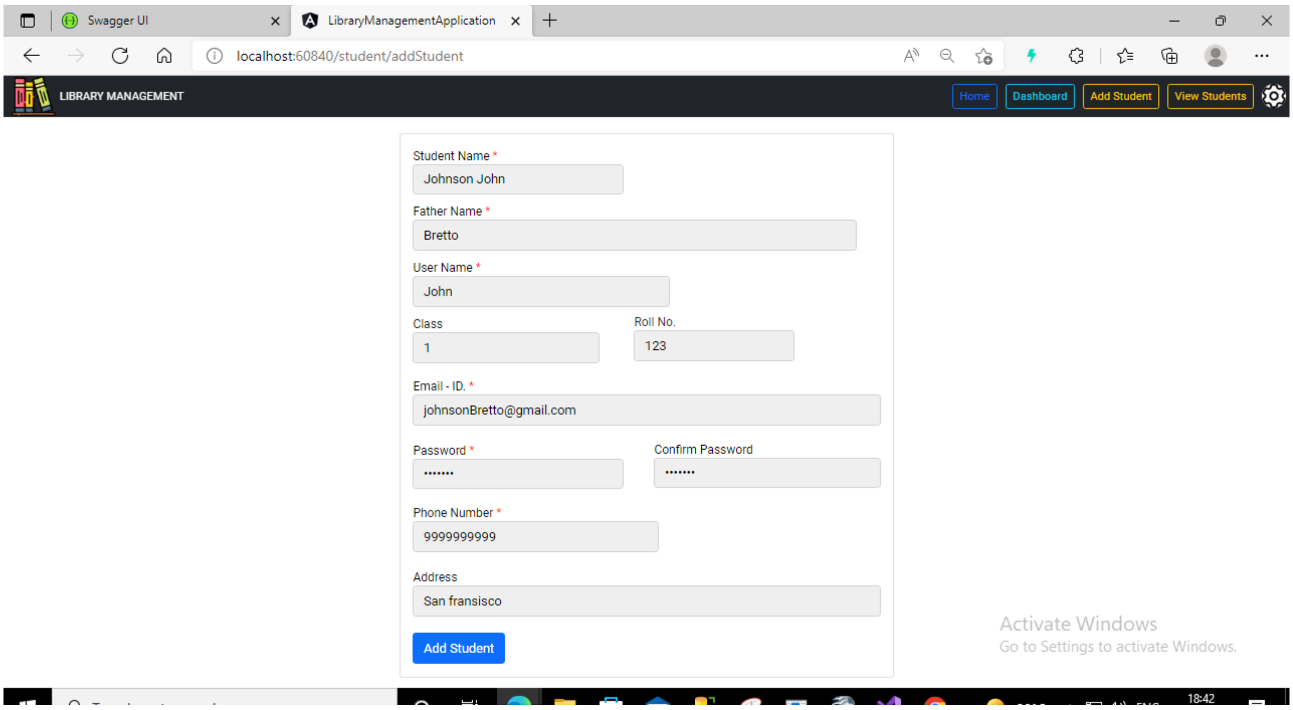


```
EXPLORER
LIBRARYMANAGEMENTAPPLICATION
  > .angular
  > .vscode
  > node_modules
  v src
    v app
      > authentication
      > dashboard
      > model
      > shared
      > student
      > teacher
      app-routing.module.ts          M
      app.component.css              M
      app.component.html             M
      app.component.spec.ts
      app.component.ts               M
      app.module.ts                  M
      program-structure.text         U
    > assets
    > environments
    favicon.ico
    index.html                       M
    main.ts
    polyfills.ts
> OUTLINE
> TIMELINE
```

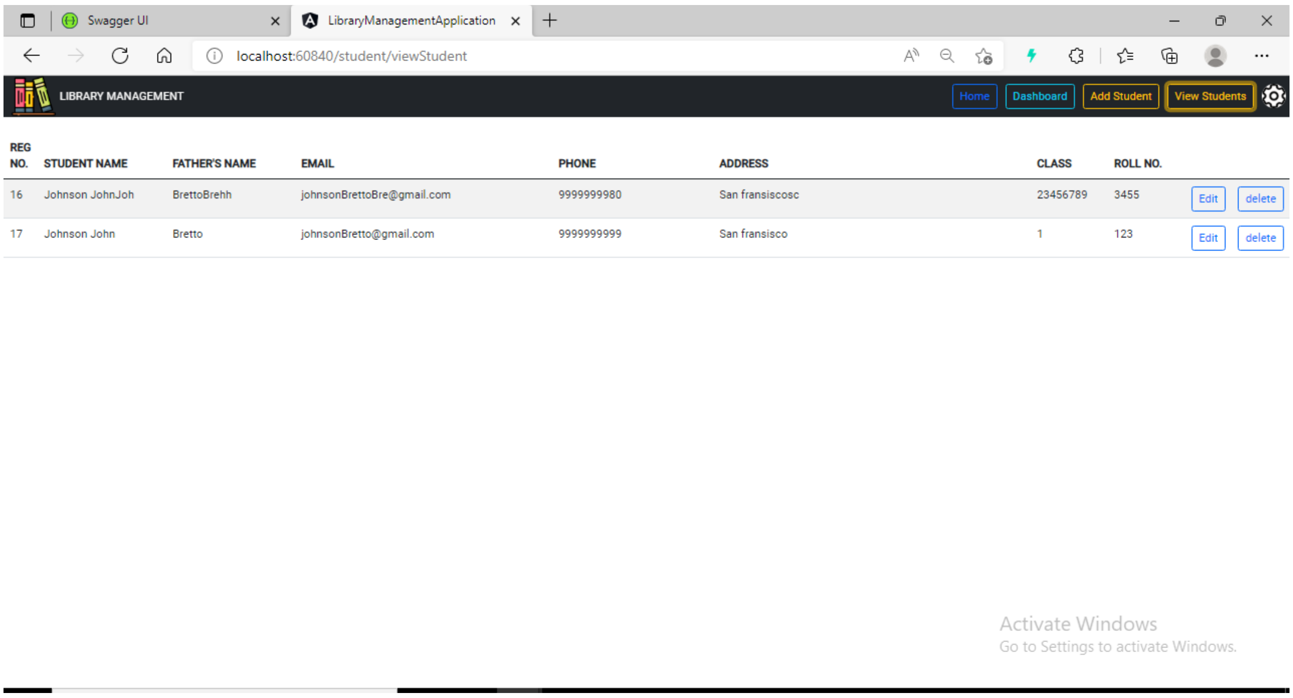
OUTPUT :


Swagger UI
LibraryManagementApplication
localhost:60840/authentication/login
Sign In
Sign Up
USERNAME
PASSWORD
Login

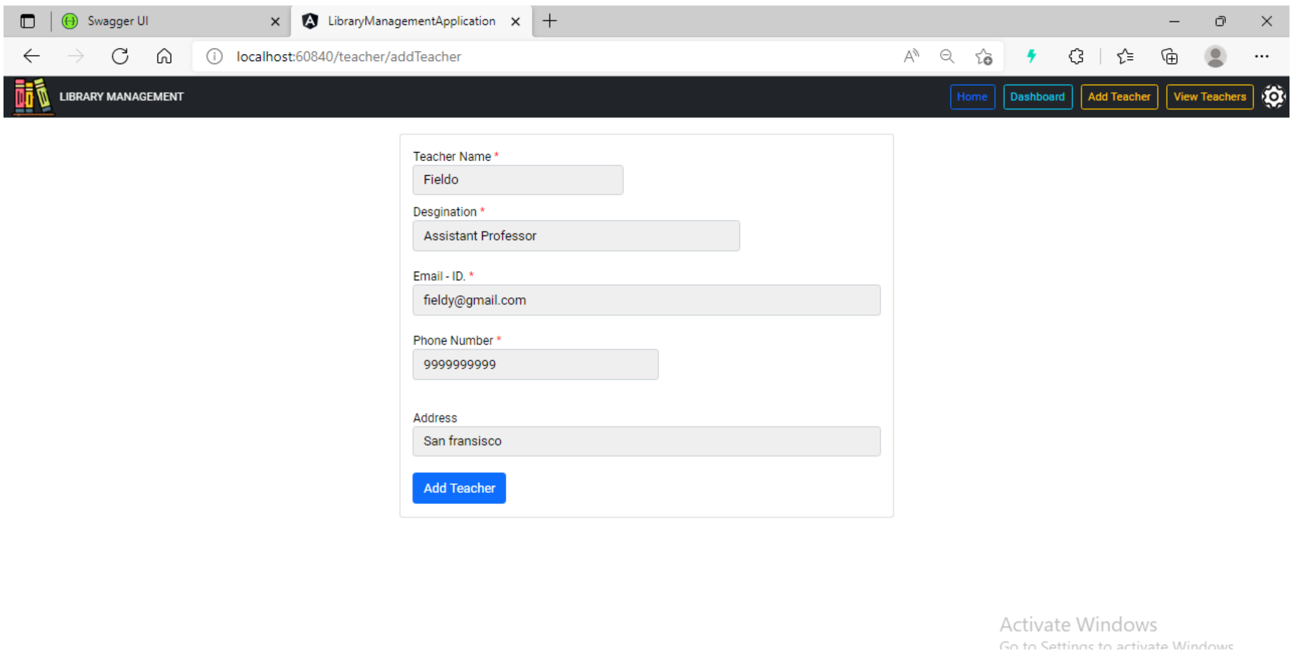



Swagger UI
LibraryManagementApplication
localhost:60840/student/addStudent
LIBRARY MANAGEMENT
Home
Dashboard
Add Student
View Students
Add Student
Activate Windows
Go to Settings to activate Windows.
18:42

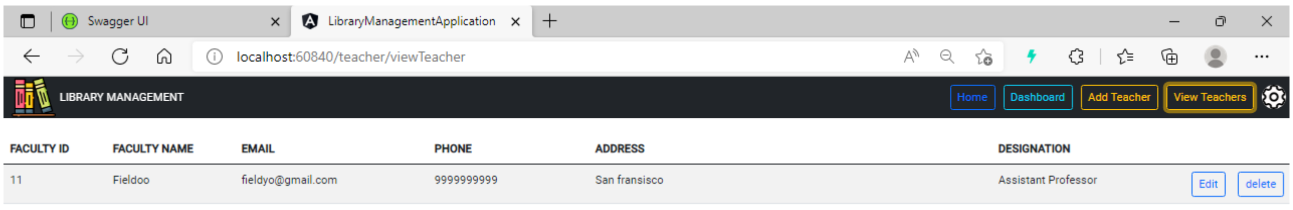
Student Name *
Johnson John
Father Name *
Bretto
User Name *
John
Class
1
Roll No.
123
Email - ID. *
johnsonBretto@gmail.com
Password *
•••••••
Confirm Password
•••••••
Phone Number *
9999999999
Address
San fransisco


Swagger UI
LibraryManagementApplication
localhost:60840/student/viewStudent
LIBRARY MANAGEMENT
Home
Dashboard
Add Student
View Students
Activate Windows
Go to Settings to activate Windows.

REG NO.	STUDENT NAME	FATHER'S NAME	EMAIL	PHONE	ADDRESS	CLASS	ROLL NO.		
16	Johnson JohnJoh	BrettoBrehh	johnsonBrettoBre@gmail.com	9999999980	San fransiscosc	23456789	3455	Edit	delete
17	Johnson John	Bretto	johnsonBretto@gmail.com	9999999999	San fransisco	1	123	Edit	delete


Swagger UI
LibraryManagementApplication
localhost:60840/teacher/addTeacher
LIBRARY MANAGEMENT
Home
Dashboard
Add Teacher
View Teachers
Add Teacher
Activate Windows
Go to Settings to activate Windows.

Teacher Name *	Fieldo
Desgination *	Assistant Professor
Email - ID. *	fieldy@gmail.com
Phone Number *	9999999999
Address	San fransisco



FACULTY ID	FACULTY NAME	EMAIL	PHONE	ADDRESS	DESIGNATION		
11	Fieldoo	fieldyo@gmail.com	9999999999	San fransisco	Assistant Professor	Edit	delete

ANGULAR CODES:

AUTHENTICATION:

```css
/* You can add global styles to this file, and also import other style files */
body{
 background-color: #fdfdfd;;
}

input.form-control,input.form-control:focus{
 background-color: #636b7b;
 /* #636b7b */
 color: #fff;
 border: 1px solid #636b7b;

}

input.form-control:focus{
 box-shadow: none;
}

button[type=submit].btn{
 border-radius: 20px;
 background-color: #6c3ae2;
 color:rgb(255, 255, 255);
 font-weight: 400;
}

div.form-group label:not(.text-danger){
 color: #b4b3b3;
 font-weight: 500;
}

div.form-group.required>label:first-child:after{
 content:'*';
 color: rgb(105, 46, 46);
 padding-left: 5px;
}

#toast-container > div {
 opacity:1;
}

.wrapper {
 display: flex;
 align-items: center;
 flex-direction: column;
 justify-content: center;
 width: 100%;
 padding: 20px;
}
```

```css
.wrapped-div {
 -webkit-border-radius: 10px 10px 10px 10px;
 border-radius: 10px 10px 10px 10px;
 background: #161016;
 /* 2e3137 */
 padding: 30px;
 width: 90%;
 max-width: 450px;
 position: relative;
 padding: 0px;
 -webkit-box-shadow: 0 30px 60px 0 rgba(0,0,0,0.3);
 box-shadow: 0 30px 60px 0 rgba(0,0,0,0.3);
}

form{
 margin: 0px 16px;
}

div.form-group input.invalid{
border: 1px solid #dc3545;
}
div.form-group label:first-child{
text-transform: uppercase;
font-size: 0.9rem;
}
```

LOGIN COMPONENT.HTML:

```html
<form #form='ngForm' class="mb-4" autocomplete="off" (submit)="onSubmit(form)">
 <div class="form-group">
  <label>Username</label>
  <input class="form-control" #UserName="ngModel" name="UserName"
[(ngModel)]="formModel.UserName" required>
 </div>
 <div class="form-group" style="margin-top: 20px;">
  <label>Password</label>
  <input type="password" class="form-control" #Password="ngModel" name="Password"
[(ngModel)]="formModel.Password" required>
 </div>
 <div class="form-row">
  <div class="form-group col-md-4 offset-md-4 mt-4">
   <button type="submit" class="btn btn-lg btn-block"
[disabled]="form.invalid">Login</button>
  </div>
 </div>
</form>
```

LOGIN COMPONENT.TS:

```
import { ToastrService } from 'ngx-toastr';
import { UserService } from './../../shared/user.service';
import { Component, OnInit } from '@angular/core';
import { NgForm } from '@angular/forms';
import { Router } from '@angular/router';

@Component({
 selector: 'app-login',
 templateUrl: './login.component.html',
 styleUrls: ['./login.component.css']
})
export class LoginComponent implements OnInit {

 formModel = {
  UserName: '',
  Password: ''
 }
 constructor(private service: UserService, private router: Router, private toastr: 
ToastrService) { }

 ngOnInit() {
  if (localStorage.getItem('token') != null)
   this.router.navigateByUrl('/home');
 }

 onSubmit(form: NgForm) {
  this.service.login(form.value).subscribe(
   (res: any) => {
    localStorage.setItem('token', res.token);
    this.router.navigateByUrl('/home');
   },
   err => {
    if (err.status == 400)
     this.toastr.error('Incorrect username or password.', 'Authentication 
failed.');
    else
     console.log(err);
   }
  );
 }
}
```

AUTHENTICATION COMPONENT:

```css
/* Tabs */
/* You can add global styles to this file, and also import other style files */
body{
 background-color: #fdfdfd;;
}

input.form-control,input.form-control:focus{
 background-color: #636b7b;
 /* #636b7b */
 color: #fff;
 border: 1px solid #636b7b;

}

input.form-control:focus{
 box-shadow: none;
}

button[type=submit].btn{
 border-radius: 20px;
 background-color: #6c3ae2;
 color:rgb(255, 255, 255);
 font-weight: 400;
}

div.form-group label:not(.text-danger){
 color: #b4b3b3;
 font-weight: 500;
}

div.form-group.required>label:first-child:after{
 content:'*';
 color: rgb(105, 46, 46);
 padding-left: 5px;
}

#toast-container > div {
 opacity:1;
}

.wrapper {
 display: flex;
 align-items: center;
 flex-direction: column;
 justify-content: center;
 width: 100%;
 padding: 20px;
}
```

```css
.wrapped-div {
 -webkit-border-radius: 10px 10px 10px 10px;
 border-radius: 10px 10px 10px 10px;
 background: #161016;
 /* 2e3137 */
 padding: 30px;
 width: 90%;
 max-width: 450px;
 position: relative;
 padding: 0px;
 -webkit-box-shadow: 0 30px 60px 0 rgba(0,0,0,0.3);
 box-shadow: 0 30px 60px 0 rgba(0,0,0,0.3);
}

form{
 margin: 0px 16px;
}

div.form-group input.invalid{
 border: 1px solid #dc3545;
}

div.form-group label:first-child{
 text-transform: uppercase;
 font-size: 0.9rem;
}

.tab-header{
 text-align: center;
}

.tab-header h2.active {
 color: #fff;
 border-bottom: 4px solid #fff;
}

.tab-header h2 {
 text-align: center;
 font-size: 18px;
 font-weight: 400;
 display:inline-block;
 padding: 30px 40px 10px 40px;
 cursor: pointer;
 color: #545d6a;
 border-bottom: 2px solid #545d6a;
}

.tab-header h2:focus {
  outline: none;
}
```

```
html, body { height: 100%; }
body { margin: 0; font-family: Roboto, "Helvetica Neue", sans-serif; }
```

AUTHENTICATION COMPONENT.HTML:

```
<div class="wrapper">
 <div class="wrapped-div">
  <div class="tab-header">
   <h2 routerLink='/authentication/login' routerLinkActive='active'>Sign In</h2>
   <h2 routerLink='/authentication/registration' routerLinkActive='active'>Sign
Up</h2>
  </div>
  <div class="row">
   <div class="col-md-10 offset-md-1">
    <router-outlet> </router-outlet>
   </div>
  </div>
 </div>
</div>
```

AUTHENTICATION COMPONENT.TS:

```
import { Component, OnInit } from '@angular/core';

@Component({
 selector: 'app-authentication',
 templateUrl: './authentication.component.html',
 styleUrls: ['./authentication.component.css']
})
export class AuthenticationComponent implements OnInit {

 constructor() { }

 ngOnInit(): void {
 }

}
```

DASHBOARD:

DASHBOARD.CSS:

```
#main-navbar {
 margin-bottom: 20px;
}

#library-logo {
 margin-left: 10px;
 margin-top: -10px;
 margin-bottom: -10px;
```

```css
 width: 55px;
 height: auto;
}

#logo-title {
 color: white;
 position: fixed;
 margin-left: 70px;
}

#setting-logo {
 margin-left: 10px;
 margin-top: -5px;
 margin-bottom: -5px;
 width: 30px;
 height: auto;
 background-color: rgb(255, 253, 253);
 border-radius: 20px;
 margin-right: 5px;
}

#dashboard-button {
 margin-left: 10px;
}

#books-button {
 margin-left: 10px;
}


/* CONTAINER */

#dashboard-title {
 text-decoration: underline;
 font-weight: bold;
}

#dashboard-student-button {
 display: block;
 margin-bottom: 10px;
 margin-left: 5px;
}

#dashboard-teacher-button {
 margin-bottom: 10px;
 margin-left: 5px;
}
```

DASHBOARD.HTML:
```
<nav class="navbar sticky-top navbar navbar-dark bg-dark" id="main-navbar">
 <img src="assets/img/bookshelf.png" id="library-logo">
 <label id="logo-title" > LIBRARY MANAGEMENT </label>

 <div class="navbar-right">

  <!-- HOME BUTTON -->
  <button type="button" class="btn btn-outline-primary btn-sm" id="home-button">
   Home
  </button>

  <!-- DASHBOARD BUTTON -->
  <button type="button" class="btn btn-outline-info btn-sm"
      id="dashboard-button" (click)="goToPage1('dashboard')">
   Dashboard
  </button>

  <!-- SETTING ICON -->
  <a href="#"> <img src="assets/img/setting.png" id="setting-logo"> </a>
 </div>
</nav>

<div class="container" style="width: 10rem;">
 <div class="card border-dark" style="background-color: rgb(243, 236, 236);">
  <div class="card-body">

   <h3 id="dashboard-title"> DASHBOARD </h3>

   <button type="button" class="btn btn-outline-dark"
       id="dashboard-student-button" routerLink="student"
       (click)="goToPage2('student/viewStudent')">
    Student
   </button>

   <button type="button" class="btn btn-outline-dark"
       id="dashboard-teacher-button" routerLink="teacher"
       (click)="goToPage3('teacher/viewTeacher')">
    Teacher
   </button>

  </div>
 </div>
</div>
<router-outlet> </router-outlet>
```

DASHBOARD.TS:

```
import { Component, OnInit } from '@angular/core';
import { Router } from '@angular/router';

@Component({
 selector: 'app-dashboard',
 templateUrl: './dashboard.component.html',
 styleUrls: ['./dashboard.component.css']
})
export class DashboardComponent implements OnInit {

 constructor(private router: Router) { }

 ngOnInit(): void {
 }

 goToPage1(pageName: string):void {
  this.router.navigate([`${pageName}`])
 }

 goToPage2(pageName: string):void {
  this.router.navigate([`${pageName}`])
 }

 goToPage3(pageName: string):void {
  this.router.navigate([`${pageName}`])
 }
}
```

ROUTING PAGE:

```
import { NgModule } from '@angular/core';
import { RouterModule, Routes } from '@angular/router';
import { AuthenticationComponent } from
'./authentication/authentication.component';
import { StudentComponent } from './student/student.component';
import { LoginComponent } from './authentication/login/login.component';
import { RegistrationComponent } from
'./authentication/registration/registration.component';
import { AddStudentDetailsComponent } from './student/add-student-details/add-
student-details.component';
import { AddTeacherDetailsComponent } from './teacher/add-teacher-details/add-
teacher-details.component';
import { TeacherComponent } from './teacher/teacher.component';
import { ViewStudentDetailsComponent } from './student/view-student-details/view-
student-details.component';
import { ViewTeacherDetailsComponent } from './teacher/view-teacher-details/view-
teacher-details.component';
import { DashboardComponent } from './dashboard/dashboard.component';
```

```
const routes: Routes = [
 {path: 'student', component: StudentComponent},
 {path:'',redirectTo:'/authentication/login',pathMatch:'full'},
 {
  path: 'authentication', component: AuthenticationComponent,
   children: [
     { path: 'registration', component: RegistrationComponent },
     { path: 'login', component: LoginComponent }
   ]
 },
 {
  path: 'student', component: StudentComponent,
   children: [
     {path: 'addStudent', component: AddStudentDetailsComponent},
     {path: 'viewStudent', component: ViewStudentDetailsComponent},
     {path: 'dashboard', component: DashboardComponent},
   ]
 },
 {
  path: 'teacher', component: TeacherComponent,
   children: [
     {path: 'addTeacher', component: AddTeacherDetailsComponent},
     {path: 'viewTeacher', component: ViewTeacherDetailsComponent},
   ]
 },
 {
  path: 'dashboard', component: DashboardComponent,
 },
];

@NgModule({
 imports: [RouterModule.forRoot(routes)],
 exports: [RouterModule],
})
export class AppRoutingModule { }
```

APP MODULE:

```
import { NgModule } from '@angular/core';
import { BrowserModule } from '@angular/platform-browser';

import { AppRoutingModule } from './app-routing.module';
import { AppComponent } from './app.component';
import { ToastrModule } from 'ngx-toastr';
import { FormsModule } from '@angular/forms';
import { HttpClientModule } from '@angular/common/http';
import { ReactiveFormsModule } from '@angular/forms';
import { LoginComponent } from './authentication/login/login.component';
import { RegistrationComponent } from
```

```
'./authentication/registration/registration.component';
import { HTTP_INTERCEPTORS } from '@angular/common/http';
import { UserService } from './shared/user.service';
import { BrowserAnimationsModule } from '@angular/platform-browser/animations';


import {A11yModule} from '@angular/cdk/a11y';
import {CdkAccordionModule} from '@angular/cdk/accordion';
import {ClipboardModule} from '@angular/cdk/clipboard';
import {DragDropModule} from '@angular/cdk/drag-drop';
import {PortalModule} from '@angular/cdk/portal';
import {ScrollingModule} from '@angular/cdk/scrolling';
import {CdkStepperModule} from '@angular/cdk/stepper';
import {CdkTableModule} from '@angular/cdk/table';
import {CdkTreeModule} from '@angular/cdk/tree';
import {MatAutocompleteModule} from '@angular/material/autocomplete';
import {MatBadgeModule} from '@angular/material/badge';
import {MatBottomSheetModule} from '@angular/material/bottom-sheet';
import {MatButtonModule} from '@angular/material/button';
import {MatButtonToggleModule} from '@angular/material/button-toggle';
import {MatCardModule} from '@angular/material/card';
import {MatCheckboxModule} from '@angular/material/checkbox';
import {MatChipsModule} from '@angular/material/chips';
import {MatStepperModule} from '@angular/material/stepper';
import {MatDatepickerModule} from '@angular/material/datepicker';
import {MatDialogModule} from '@angular/material/dialog';
import {MatDividerModule} from '@angular/material/divider';
import {MatExpansionModule} from '@angular/material/expansion';
import {MatGridListModule} from '@angular/material/grid-list';
import {MatIconModule} from '@angular/material/icon';
import {MatInputModule} from '@angular/material/input';
import {MatListModule} from '@angular/material/list';
import {MatMenuModule} from '@angular/material/menu';
import {MatNativeDateModule, MatRippleModule} from '@angular/material/core';
import {MatPaginatorModule} from '@angular/material/paginator';
import {MatProgressBarModule} from '@angular/material/progress-bar';
import {MatProgressSpinnerModule} from '@angular/material/progress-spinner';
import {MatRadioModule} from '@angular/material/radio';
import {MatSelectModule} from '@angular/material/select';
import {MatSidenavModule} from '@angular/material/sidenav';
import {MatSliderModule} from '@angular/material/slider';
import {MatSlideToggleModule} from '@angular/material/slide-toggle';
import {MatSnackBarModule} from '@angular/material/snack-bar';
import {MatSortModule} from '@angular/material/sort';
import {MatTableModule} from '@angular/material/table';
import {MatTabsModule} from '@angular/material/tabs';
import {MatToolbarModule} from '@angular/material/toolbar';
import {MatTooltipModule} from '@angular/material/tooltip';
import {MatTreeModule} from '@angular/material/tree';
import {OverlayModule} from '@angular/cdk/overlay';
import { AddStudentDetailsComponent } from './student/add-student-details/add-
```

```
student-details.component';
import { AuthenticationComponent } from
'./authentication/authentication.component';
import { StudentComponent } from './student/student.component';
import { AddTeacherDetailsComponent } from './teacher/add-teacher-details/add-
teacher-details.component';
import { TeacherComponent } from './teacher/teacher.component';
import { ViewStudentDetailsComponent } from './student/view-student-details/view-
student-details.component';
import { ViewTeacherDetailsComponent } from './teacher/view-teacher-details/view-
teacher-details.component';
import { DashboardComponent } from './dashboard/dashboard.component';
import { RouterModule } from '@angular/router';
import { StudentService } from './shared/student.service';
import { TeacherService } from './shared/teacher.service';
import { EditStudentDetailsComponent } from './student/edit-student-details/edit-
student-details.component';
import { MatFormFieldModule } from '@angular/material/form-field';
import { EditTeacherDetailsComponent } from './teacher/edit-teacher-details/edit-
teacher-details.component';

@NgModule({
 declarations: [
   AppComponent,
   LoginComponent,
   RegistrationComponent,
   AddStudentDetailsComponent,
   AuthenticationComponent,
   StudentComponent,
   AddTeacherDetailsComponent,
   TeacherComponent,
   ViewStudentDetailsComponent,
   ViewTeacherDetailsComponent,
   DashboardComponent,
   EditStudentDetailsComponent,
   EditTeacherDetailsComponent
 ],
 imports: [
   BrowserModule,
   AppRoutingModule,
   ToastrModule.forRoot({
     progressBar: true
   }),
   A11yModule,
   FormsModule,
   HttpClientModule,
   ReactiveFormsModule,
   BrowserAnimationsModule,
   CdkAccordionModule,
   ClipboardModule,
   CdkStepperModule,
    CdkTableModule,
    CdkTreeModule,
    DragDropModule,
    MatAutocompleteModule,
    MatBadgeModule,
    MatBottomSheetModule,
    MatButtonModule,
    MatButtonToggleModule,
    MatCardModule,
    MatCheckboxModule,
    MatChipsModule,
    MatStepperModule,
    MatDatepickerModule,
    MatDialogModule,
    MatDividerModule,
    MatExpansionModule,
    MatFormFieldModule,
    MatGridListModule,
    MatIconModule,
    MatInputModule,
    MatListModule,
    MatMenuModule,
    MatNativeDateModule,
    MatPaginatorModule,
    MatProgressBarModule,
    MatProgressSpinnerModule,
    MatRadioModule,
    MatRippleModule,
    MatSelectModule,
    MatSidenavModule,
    MatSliderModule,
    MatSlideToggleModule,
    MatSnackBarModule,
    MatSortModule,
    MatTableModule,
    MatTabsModule,
    MatToolbarModule,
    MatTooltipModule,
    MatTreeModule,
    OverlayModule,
    PortalModule,
    RouterModule,
    ScrollingModule,
  ],
  providers: [UserService,StudentService, TeacherService],
  bootstrap: [AppComponent]
})
export class AppModule { }
```

MODEL:

STUDENT MODEL:

```
export class Student {
 constructor(
  public id: number = 0,
  public StudentName: string = "",
  public FatherName: string = "",
  public Address: string = "",
  public UserName: string = "",
  public Class: string = "",
  public RollNo: number = 0,
  public Phone: string = "",
  public StudentEmail: string = "",
  public Password: string = "",
  public ConfirmPassword: string = "",
 ){}
}
```

TEACHER MODEL:

```
export class Teacher {
 constructor(
  public FacultyId: number = 0,
  public FacultyName: string = "",
  public FacultyPhone: string = "",
  public FacultyEmail: string = "",
  public FacultyAddress: string = "",
  public DesignationName: string = ""
 ){}
}
```

SHARED SERVICE:

STUDENT-SERVICE:

```
import { HttpClient } from '@angular/common/http';
import { Injectable } from '@angular/core';
import { Observable } from 'rxjs';

@Injectable({
 providedIn: 'root'
})
export class StudentService {

 readonly APIUrl = "https://localhost:44324/api";

 constructor(private http: HttpClient) { }

 getStudentList():Observable<any[]>{
  return this.http.get<any>(this.APIUrl + '/Student');
 }

 addStudentList(val:any) {
  return this.http.post(this.APIUrl + '/Student', val, {responseType: 'text'});
 }

 updateStudentList(val:any) {
  return this.http.put(this.APIUrl + '/Student', val, {responseType: 'text'});
 }

 deleteStudentList(val:any) {
  return this.http.delete(this.APIUrl + '/Student/'+ val, {responseType: 'text'});
 }
}
```

TEACHER-SERVICE:

```
import { HttpClient } from '@angular/common/http';
import { Injectable } from '@angular/core';
import { Observable } from 'rxjs';

@Injectable({
 providedIn: 'root'
})
export class TeacherService {

 readonly APIUrl = "https://localhost:44324/api";

 constructor(private http: HttpClient) { }

 getTeacherList():Observable<any[]>{
  return this.http.get<any>(this.APIUrl + '/Faculty');
 }

 addTeacher(val:any) {
  return this.http.post(this.APIUrl + '/Faculty', val, {responseType: 'text'});
 }

 updateTeacher(val:any) {
  return this.http.put(this.APIUrl + '/Faculty', val);
 }

 deleteTeacher(val:any) {
  return this.http.delete(this.APIUrl + '/Faculty/'+ val, {responseType: 'text'});
 }
}
```

USER-SERVICE:

```
import { Injectable } from '@angular/core';
import { FormBuilder, Validators, FormGroup } from '@angular/forms';
import { HttpClient, HttpHeaders } from "@angular/common/http";

@Injectable({
 providedIn: 'root'
})
export class UserService {

 constructor(private fb: FormBuilder, private http: HttpClient) { }
 readonly BaseURI = 'http://localhost:54277/api';

 formModel = this.fb.group({
   UserName: ['', Validators.required],
   Email: ['', Validators.email],
   FullName: [''],
   Passwords: this.fb.group({
     Password: ['', [Validators.required, Validators.minLength(4)]],
     ConfirmPassword: ['', Validators.required]
   }, { validator: this.comparePasswords })

 });

 comparePasswords(fb: FormGroup) {
   // let confirmPswrdCtrl = fb.get('ConfirmPassword');
   // //passwordMismatch
   // //confirmPswrdCtrl.errors={passwordMismatch:true}
   // if (confirmPswrdCtrl.errors == null || 'passwordMismatch' in
confirmPswrdCtrl.errors) {
   //   if (fb.get('Password').value != confirmPswrdCtrl.value)
   //     confirmPswrdCtrl.setErrors({ passwordMismatch: true });
   //   else
   //     confirmPswrdCtrl.setErrors(null);
   // }
 }

 register() {
   var body = {
     UserName: this.formModel.value.UserName,
     Email: this.formModel.value.Email,
     FullName: this.formModel.value.FullName,
     Password: this.formModel.value.Passwords.Password
   };
   return this.http.post(this.BaseURI + '/ApplicationUser/Register', body);
 }

 login(formData: any) {
   return this.http.post(this.BaseURI + '/ApplicationUser/Login', formData);
 }
 getUserProfile() {
  return this.http.get(this.BaseURI + '/UserProfile');
 }
}
```

STUDENT COMPONENT:

ADD-STUDENT-DETAILS.CSS:

```
#container {
 margin-top: 20px;
}

#studentNameLabel {
 color: black;
}

#studentName {
 width: 45%;
 background-color: rgb(240, 239, 239);
 color: black;
}

#emailIDLabel {
 color: black;
}

#studentEmail {
 background-color: rgb(240, 239, 239);
 color: black;
}

#phoneNumberLabel {
 color: black;
}

#phone {
 background-color: rgb(240, 239, 239);
 color: black;
 width: 52.5%;
}

#passwordLabel {
 color: black;
}

#password {
 background-color: rgb(240, 239, 239);
 color: black;
```

```css
 width: 45%;
}

#confirmPasswordDiv {
 margin: -81px 0px 0px 300px;
}

#confirmPasswordLabel {
 color: black;
}

#confirmPassword {
 background-color: rgb(240, 239, 239);
 color: black;
 width: 100%;
}


#addressLabel {
 color: black;
}

#address {
 width: 100%;
 background-color: rgb(240, 239, 239);
 color: black;
}

#userNameLabel {
 color: black;
}

#userName {
 width: 55%;
 background-color: rgb(240, 239, 239);
 color: black;
}

#userNameDiv {
 margin-top: 10px;
}

#classLabel {
 color: black;
}

#class {
 width: 40%;
 background-color: rgb(240, 239, 239);
 color: black;
}
```

```
#classDiv {
 margin-top: 10px;
}

#rollNoLabel {
 color: black;
}

#rollNo {
 width: 65%;
 background-color: rgb(240, 239, 239);
 color: black;
}

#rollNoDiv {
 margin: -62px 0px 0px 275px;
}

#fatherNameLabel {
 color: black;
}

#fatherName {
 width: 95%;
 background-color: rgb(240, 239, 239);
 color: black;
}

#fatherNameDiv {
 margin-top: 10px;
}
```

ADD-STUDENT-DETAILS.HTML:

```
<div class="container" style="width: 40rem;">
 <div class="card">
  <div class="card-body">

   <form #studentForm="ngForm" (ngSubmit)="onSubmit()" novalidate id="form-start">

    <!-- STUDENT NAME -->
    <div class="form-group" id="studentNameDiv">

     <label for="studentName" id="studentNameLabel">
      <h4 style="margin-bottom: -10px;">
       Student Name
       <span style="color: red;"> * </span>
      </h4>
     </label>

     <input
      required
      [(ngModel)] = "studentModel.StudentName"
      name="studentName"
      type="text"
      id="studentName"
      class="form-control"
      #studentName="ngModel"
      minlength="5"
      pattern="[A-za-z\s]+"
      [class.is-invalid]="studentName.touched && !studentName.valid">

      <div *ngIf="(studentName.errors && studentName.touched)
              ||
            (studentName.errors && studentName.valid)">
       <small class="text-danger" *ngIf="studentName?.errors?.['required']">
Student name is required </small>
       <small class=text-danger *ngIf="studentName?.errors?.['pattern']"> Only
alphabets are allowed </small>
       <small class=text-danger *ngIf="studentName?.errors?.['minlength']"> Minimum
length should be 5 </small>
      </div>
    </div>

    <!-- FATHER"S NAME -->
    <div class="form-group" id="fatherNameDiv">
     <label for="fatherName" id="fatherNameLabel">
      <h4 style="margin-bottom: -10px;">
       Father Name
       <span style="color: red;"> * </span>
      </h4>
     </label>
     <input
      required
      [(ngModel)] = "studentModel.FatherName"
      name="fatherName"
      type="text"
      id="fatherName"
      class="form-control"
      #fatherName="ngModel"
      minlength="5"
      pattern="[A-za-z\s]+"
      [class.is-invalid]="fatherName.touched && !fatherName.valid">
    </div>

     <!-- USERNAME -->
     <div class="form-group" id="userNameDiv">
     <label for="userName" id="studentNameLabel">
      <h4 style="margin-bottom: -10px;"> User Name
       <span style="color: red;"> * </span>
      </h4>
     </label>

     <input
      required
      [(ngModel)] = "studentModel.UserName"
      name="userName"
      type="text"
      id="userName"
      class="form-control"
      #userName="ngModel"
      minlength="5"
      pattern="[A-za-z\s]+"
      [class.is-invalid]="userName.touched && !userName.valid">
    </div>

    <!-- CLASS -->
    <div class="form-group" id="classDiv">
     <label for="class" id="classLabel">
      <h4 style="margin-bottom: -10px;">
       Class
      </h4>
     </label>

     <input
      required
      [(ngModel)] = "studentModel.Class"
      type="text"
      name="class"
      id="class"
      value="class"
      #class="ngModel"
      class="form-control">
    </div>

    <!-- ROLL NO -->
    <div class="form-group" id="rollNoDiv">

     <label for="rollNo" id="rollNOLabel">
      <h4 style="margin-bottom: -10px;">
       Roll No.
      </h4>
     </label>

     <input
      required
      [(ngModel)] = "studentModel.RollNo"
      type="text"
```

```
        name="rollNo"
        id="rollNo"
        value="rollNo"
        #rollNo="ngModel"
        class="form-control"
        pattern="[0-9]">
    </div>

    <!-- EMAIL-ID -->
    <div class="form-group" id="emailIDDiv">
      <label for="studentEmail" id="emailIDLabel">
        <h4 style="margin-bottom: -10px; margin-top: 20px;">
          Email - ID.
          <span style="color: red;"> * </span>
        </h4>
      </label>
        <input
          [(ngModel)] = "studentModel.StudentEmail"
          type="text"
          name="studentEmail"
          id="studentEmail"
          value="studentEmail"
          #studentEmail="ngModel"
          class="form-control"
          [class.is-invalid]="studentEmail.touched && !studentEmail.valid">
          &nbsp;
    </div>

    <!-- PASSWORD & CONFIRM PASSWORD -->
    <div id="passwordDiv">

      <label for="password" id="passwordLabel">
        <h4 style="margin-bottom: -10px;">
          Password
          <span style="color: red;"> * </span>
        </h4>
      </label>

      <input
        [(ngModel)] = "studentModel.Password"
        type="password"
        name="password"
        id="password"
        value="password"
        #password="ngModel"
        class="form-control"
        [class.is-invalid]="password.touched && !password.valid">
        &nbsp;
    </div>

    <div id="confirmPasswordDiv">
```

```
          <label for="confirmPassword" id="confirmPasswordLabel">
            <h4 style="margin-bottom: -10px;"> Confirm Password </h4> </label>
          <input
            [(ngModel)] = "studentModel.ConfirmPassword"
            type="password"
            name="confirmPassword"
            id="confirmPassword"
            value="confirmPassword"
            #confirmPassword="ngModel"
            class="form-control">
            &nbsp;
        </div>

        <!-- PHONE NUMBER -->
        <div class="form-group" id="phoneNumberDiv">
          <label for="phone" id="phoneNumberLabel">
            <h4 style="margin-bottom: -10px;">
              Phone Number
              <span style="color: red;"> * </span>
            </h4>
          </label>

          <input
            required
            [(ngModel)] = "studentModel.Phone"
            type="text"
            name="phone"
            id="phone"
            value="phone"
            #phone="ngModel"
            class="form-control"
            [class.is-invalid]="phone.touched && !phone.valid">

            <!-- pattern="[0-9]{10}"
            <div *ngIf="phone.errors && (phone.touched || phone.valid)">
              <small class="text-danger" *ngIf="phone?.errors?.['required']"> Phone 
number is required </small>
              <small class=text-danger *ngIf="phone?.errors?.['pattern']"> Enter 10 
digits </small>
            </div> -->
            &nbsp;
        </div>

        <!-- ADDRESS -->
        <div class="form-group">
          <div id="addressDiv">
            <label for="address" id="addressLabel"> <h4 style="margin-bottom: -10px;"> 
Address </h4> </label>
            <input
              [(ngModel)] = "studentModel.Address"
              type="text"
```

```
       name="address"
       id="address"
       value="address"
       #streetAddress="ngModel"
       class="form-control">
       &nbsp;
     </div>
    </div>

    <div>
     <button class="btn btn-primary" type="submit">
      Add Student
     </button>
    </div>

   </form>
  </div>
 </div>
</div>
```

```
<!-- [disabled]="studentForm.invalid" -->
 <!-- <div class="form-group" id="idDiv">
     <label for="id" id="idLabel"> Id </label>
     <input
      required
      [(ngModel)] = "userModel.id"
      name="id"
      type="number"
      min="0"
      max="100"
      id="id"
      class="form-control"
      #id="ngModel"
      [class.is-invalid]="id.touched && !id.valid">
     </div>

    <div class="form-group" id="costOfVaccineDiv">
     <label for="costOfVaccine" id="costOfVaccineLabel"> Cost Of Vaccine </label>
     <input
      required
      [(ngModel)] = "userModel.CostOfVaccine"
      name="costOfVaccine"
      type="number"
      min="100"
      max="10000"
      id="costOfVaccine"
      class="form-control"
      #costOfVaccine="ngModel"
      [class.is-invalid]="costOfVaccine.touched && !costOfVaccine.valid">

     <div *ngIf="costOfVaccine.touched && !costOfVaccine.valid">
      <small class="text-danger" *ngIf="costOfVaccine?.errors?.['required']"> Cost 
of vaccine is required. </small>
      <small class="text-danger" *ngIf="costOfVaccine?.errors?.['min']"> Minimum 
amount should be 100 </small>
     </div>
    </div>

    <pre> </pre>
    <pre> </pre> -->

<!--
 <div class="form-group" id="gender">
     <label for="gender" id="genderLabel"> Gender </label>

     <div class="form-control">
      <input
       [(ngModel)] = "userModel.Gender"
       type="radio"
       name="radio-button"
       id="male"
       value="male"
       #male="ngModel">
       &nbsp;
      <label for="male" class="radio-inline"> Male </label>

      &nbsp;

      <input
       [(ngModel)] = "userModel.Gender"
       type="radio"
       name="radio-button"
       id="female"
       value="female"
       #female="ngModel">
       &nbsp;
      <label for="female" class="radio-inline"> Female </label>
      </div>
    </div>

    <div class="form-group" id="typeDiv">
     <label for="type" id="typeLabel"> Type </label>

     <div class="form-control">
      <select (blur)="validateTopic(type.value)"
          (change)="validateTopic(type.value)"
          [(ngModel)] = "userModel.ChooseType" name="type" #type="ngModel"
          [class.is-invalid]="topicHasError && type.touched">
```

```
              <option value="default"> -- </option>
              <option *ngFor="let topic of topics"> {{ topic }} </option>

            </select>
            <small class="text-danger" [class.d-none]="!topicHasError || type.untouched">
              Please choose a type
            </small>
          </div>
        </div>

        <pre> </pre>


            <div id="pincodeDiv">
              <label for="state" id="pincode"> <h4 style="margin-bottom: -10px;"> Pincode
</h4> </label>
              <input
                required
                [(ngModel)] = "userModel.Pincode"
                type="number"
                name="pincode"
                id="pincode"
                value="pincode"
                #pincode="ngModel"
                class="form-control"
                pattern="[0-9]{6}"
                [class.is-invalid] = "pincode.touched && !pincode.valid">

              <div *ngIf = "pincode.errors && (pincode.touched || pincode.valid)">
                <small class="text-danger" *ngIf="pincode?.errors?.['required']"> Pincode
is required </small>
                <small class=text-danger *ngIf="pincode?.errors?.['pattern']"> Enter six
digits </small>
              </div>
            </div>

            <pre> </pre>

            <div id="cityDiv">
              <label for="city" id="cityLabel"> <h4 style="margin-bottom: -10px;"> City
</h4> </label>
              <input
                [(ngModel)] = "userModel.City"
                type="text"
                name="city"
                id="city"
                value="city"
                #city="ngModel"
                class="form-control">
                &nbsp;
```

```
      </div>

      <div id="stateDiv">
       <label for="state" id="stateLabel"> <h4 style="margin-bottom: -10px;">
State </h4> </label>
       <input
        [(ngModel)] = "userModel.State"
        type="text"
        name="state"
        id="state"
        value="state"
        #state="ngModel"
        class="form-control">
        &nbsp;
      </div>

      <div id="countryDiv">
       <label for="country" id="countryLabel"> <h4 style="margin-bottom: -10px;">
Country </h4> </label>
       <input
        [(ngModel)] = "userModel.Country"
        type="text"
        name="country"
        id="country"
        value="country"
        #country="ngModel"
        class="form-control">
        &nbsp;
      </div>
     </div>
-->
```

ADD-STUDENT-DETAILS.TS:

```
import { Component, OnInit, ViewChild } from '@angular/core';
import { FormGroupDirective, NgForm } from '@angular/forms';
import { ToastrService } from 'ngx-toastr';
import { Student } from 'src/app/model/Student';
import { StudentService } from 'src/app/shared/student.service';

@Component({
 selector: 'app-add-student-details',
 templateUrl: './add-student-details.component.html',
 styleUrls: ['./add-student-details.component.css']
})
export class AddStudentDetailsComponent implements OnInit {

 constructor(private service: StudentService, private toastr: ToastrService) { }

 ngOnInit(): void {
 }

 formDirective!: FormGroupDirective;

 @ViewChild('studentForm') studentForm!: NgForm;

 // studentModel = new Student(0,'','','','','',0,0,'','','')
 studentModel = new Student(0,'Johnson John','Bretto','San fransisco',

'John','1',123,'9999999999','johnsonBretto@gmail.com','johnson','johnson')

 onSubmit(){
  this.service.addStudentList(this.studentModel).subscribe(data=> {
    this.toastr.success('Added Successfully','Success');
    this.studentForm.reset();
   })
 }
}
```

EDIT-STUDENT-DETAILS.CSS;

```
<div class = "form-group row">

   <label class="col-sm-2 col-form-label"> <h2> Student Id </h2> </label>
   <div class="col-sm-10">
    <input type="text" class="form-control" [(ngModel)]="studentId"
    placeholder = "Student Id" disabled>
   </div>

   <label class="col-sm-2 col-form-label"> <h2> Student Name </h2> </label>
   <div class="col-sm-10">
     <input type="text" class="form-control" [(ngModel)]="studentName"
     placeholder = "Enter Student Name">
   </div>

   <label class="col-sm-2 col-form-label"> <h2> Father Name </h2> </label>
   <div class="col-sm-10">
    <input type="text" class="form-control" [(ngModel)]="fatherName"
    placeholder = "Enter Father Name">
   </div>

   <label class="col-sm-2 col-form-label"> <h2> Student Email </h2> </label>
   <div class="col-sm-10">
    <input type="text" class="form-control" [(ngModel)]="studentEmail"
    placeholder = "Enter Student Email">
   </div>

   <label class="col-sm-2 col-form-label"> <h2> Phone Number </h2> </label>
   <div class="col-sm-10">
    <input type="text" class="form-control" [(ngModel)]="phone"
```

```html
     placeholder = "Enter Phone Number">
   </div>

   <label class="col-sm-2 col-form-label"> <h2> Password </h2> </label>
   <div class="col-sm-10">
     <input type="password" class="form-control" [(ngModel)]="password"
     placeholder = "Enter Password" disabled>
   </div>

   <label class="col-sm-2 col-form-label"> <h2> Address </h2> </label>
   <div class="col-sm-10">
    <input type="text" class="form-control" [(ngModel)]="address"
    placeholder = "Enter Address">
   </div>

   <label class="col-sm-2 col-form-label"> <h2> Class </h2> </label>
   <div class="col-sm-10">
    <input type="text" class="form-control" [(ngModel)]="class"
    placeholder = "Enter Class">
   </div>

   <label class="col-sm-2 col-form-label"> <h2> Roll Number </h2> </label>
   <div class="col-sm-10">
    <input type="number" class="form-control" [(ngModel)]="rollNo"
    placeholder = "Enter RollNo.">
   </div>
</div>

<button (click) = "updateStudent()" class="btn btn-primary">
 Update
</button>
```

EDIT-STUDENT-DETAILS.TS;

```typescript
import { Component, Input, OnInit } from '@angular/core';
import { ToastrService } from 'ngx-toastr';
import { StudentService } from 'src/app/shared/student.service';

@Component({
 selector: 'app-edit-student-details',
 templateUrl: './edit-student-details.component.html',
 styleUrls: ['./edit-student-details.component.css']
})
export class EditStudentDetailsComponent implements OnInit {

 constructor(private service: StudentService, private toastr: ToastrService) { }

 @Input() student: any;

 studentId!: number;
 studentName!: string;
 fatherName!: string;
 studentEmail!: string;
 phone!: string;
 address!: string;
 class!: string;
 rollNo!: number;
 password!: string;

 StudentList:any = [];

 ngOnInit(): void {
  this.studentId = this.student.studentId;
  this.studentName = this.student.studentName;
  this.fatherName = this.student.fatherName;
  this.password = this.student.password;
  this.studentEmail = this.student.studentEmail;
  this.phone = this.student.phone;
  this.address = this.student.address;
  this.class = this.student.class;
  this.rollNo = this.student.rollNo;
 }

 refreshStudentList() {
  this.service.getStudentList().subscribe(data => {
   this.StudentList = data;
  });
 }

 updateStudent() {
   var val = { studentId:this.studentId,
         studentName:this.studentName,
         fatherName:this.fatherName,
         studentEmail:this.studentEmail,
         phone:this.phone,
         password:this.password,
         address:this.address,
         class:this.class,
         rollNo:this.rollNo,}
   this.service.updateStudentList(val).subscribe
   (res=>{
    this.toastr.success('Updated Successfully','Success');
   })
 }
}
```

VIEW-STUDENT-DETAILS.HTML:

```
<div class="modal fade" id="exampleModal" tabindex="-1" role="dialog" aria-
labelledby="exampleModalLabel" aria-hidden="true">
 <div class="modal-dialog modal-dialog-cetnered modal-xl" role="document">
  <div class="modal-content">
   <div class="modal-header">
    <h2 class="modal-title" id="exampleModalLabel">{{ModalTitle}}</h2>
     <button type="button" aria-label="close" data-bs-dismiss="modal"
         class="close" (click)= "closeClick()">
       <span aria-hidden="true">&times;</span>
     </button>
   </div>
   <div class="modal-body">
    <app-edit-student-details [student]="student" *ngIf="ActivateEditStudentComp">
</app-edit-student-details>
   </div>
  </div>
 </div>
</div>

<table class = "table table-striped">
 <thead>
   <tr>
     <th style="width: 2%;"> REG NO. </th>
     <th style="width: 10%;"> STUDENT NAME  </th>
     <th style="width: 10%;"> FATHER'S NAME </th>
     <th style="width: 20%;"> EMAIL </th>
     <th style="width: 12.5%;"> PHONE </th>
     <th> ADDRESS </th>
     <th style="width: 6%;"> CLASS </th>
     <th style="width: 6%;"> ROLL NO. </th>
   </tr>
 </thead>
 <tbody>
   <tr *ngFor="let dataItem of StudentDetails">

     <td>{{dataItem.studentId}}</td>
     <td>{{dataItem.studentName}}</td>
     <td>{{dataItem.fatherName}}</td>
     <td>{{dataItem.studentEmail}}</td>
     <td>{{dataItem.phone}}</td>
     <td>{{dataItem.address}}</td>
     <td>{{dataItem.class}}</td>
     <td>{{dataItem.rollNo}}</td>

     <td style="width: 3%;">
      <button type="button" (click)= "editClick(dataItem)" data-bs-toggle="modal"
          data-bs-target="#exampleModal"
          data-bs-backdrop="static" data-bs-keyboard="false"
          class="btn btn-outline-primary btn-sm">
       Edit
```

```
        </button>
      </td>

      <td style="width: 3%;">
       <button type="button" (click)= "deleteClick(dataItem)"
           class="btn btn-outline-primary btn-sm">
         delete
        </button>
      </td>

    </tr>
  </tbody>
</table>
```

VIEW-STUDENT-DETAILS.TS:

```
import { Component, OnInit } from '@angular/core';
import { StudentService } from 'src/app/shared/student.service';
import { ToastrService } from 'ngx-toastr';

@Component({
  selector: 'app-view-student-details',
  templateUrl: './view-student-details.component.html',
  styleUrls: ['./view-student-details.component.css']
})
export class ViewStudentDetailsComponent implements OnInit {

  constructor(private service: StudentService, private toastr: ToastrService) { }

  StudentDetails:any = [];
  ModalTitle! : string;

  ActivateEditStudentComp:boolean = false;
  student: any;


  ngOnInit(): void {
    this.refreshStudentList();
  }

  refreshStudentList() {
    this.service.getStudentList().subscribe(data => {
      this.StudentDetails = data;
    });
  }

  closeClick() {
    this.ActivateEditStudentComp = false;
    this.refreshStudentList();
  }
  editClick(item: any) {
    this.student = item;
    this.ModalTitle = "Edit Student Details";
    this.ActivateEditStudentComp = true;
  }

  deleteClick(item: any){
    if(confirm("Are you sure?")) {
      this.service.deleteStudentList(item.studentId).subscribe(
        data => {
          if('Successfully Deleted') {
            this.toastr.success('Deleted Successfully!', 'Success');
            this.refreshStudentList();
          }
        }
      )
    }
  }
}
```

STUDENT-COMPONENT.CSS:

```
#main-navbar {
  margin-bottom: 20px;
}

#library-logo {
  margin-left: 10px;
  margin-top: -10px;
  margin-bottom: -10px;
  width: 55px;
  height: auto;
}

#logo-title {
  color: white;
  position: fixed;
  margin-left: 70px;
}

#setting-logo {
  margin-left: 10px;
  margin-top: -5px;
  margin-bottom: -5px;
  width: 30px;
  height: auto;
  background-color: rgb(255, 253, 253);
  border-radius: 20px;
  margin-right: 5px;
}
```

```
#dashboard-button {
 margin-left: 10px;
}

#books-button {
 margin-left: 10px;
}

#addStudent-button {
 margin-left: 10px;
}

#viewStudent-button {
 margin-left: 10px;
}
```

STUDENT.COMPONENT.HTML:

```
<nav class="navbar sticky-top navbar navbar-dark bg-dark" id="main-navbar">

 <img src="assets/img/bookshelf.png" id="library-logo">
 <label id="logo-title" > LIBRARY MANAGEMENT </label>

 <div class="navbar-right">

  <!-- HOME BUTTON -->
  <button type="button" class="btn btn-outline-primary btn-sm" id="home-button">
   Home
  </button>

  <!-- DASHBOARD BUTTON -->
  <button type="button" class="btn btn-outline-info btn-sm"
      id="dashboard-button" (click)="goToPage('dashboard')">
   Dashboard
  </button>

  <!-- ADD STUDENT BUTTON -->
  <button type="button" class="btn btn-outline-warning btn-sm"
      id="addStudent-button" routerLink="addStudent">
   Add Student
  </button>

  <!-- VIEW STUDENT BUTTON -->
  <button type="button" class="btn btn-outline-warning btn-sm"
      id="viewStudent-button" routerLink="viewStudent">
   View Students
  </button>
  <!-- SETTING ICON -->
  <a href="#"> <img src="assets/img/setting.png" id="setting-logo"> </a>
 </div>
</nav>

<router-outlet> </router-outlet>
```

STUDENT.COMPONENT.TS:

```
import { Component, OnInit } from '@angular/core';
import { Router } from '@angular/router';

@Component({
 selector: 'app-student',
 templateUrl: './student.component.html',
 styleUrls: ['./student.component.css']
})
export class StudentComponent implements OnInit {

 constructor(private router:Router) { }

 ngOnInit(): void {
 }

 goToPage(pageName: string):void {
  this.router.navigate([`${pageName}`])
 }
}
```