

Streams Assessment

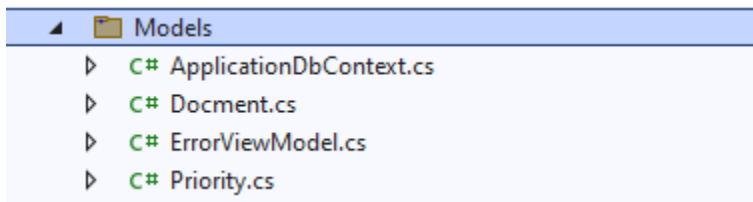
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MVC, which stands for Model-View-Controller, is a software architectural pattern commonly used in designing and developing interactive and dynamic web applications.

1) Model

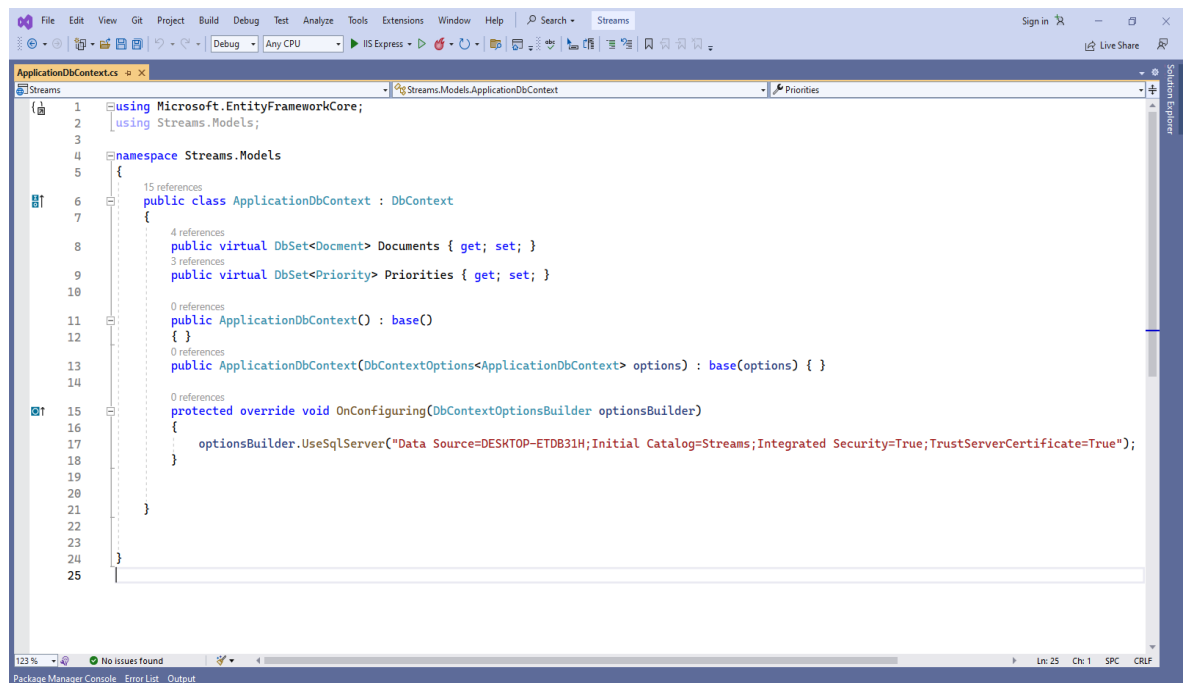
The Model represents the application's data and business logic. It encapsulates the data and the rules for manipulating that data.

Files that represent model in this project:-



A) ApplicationDbContext:

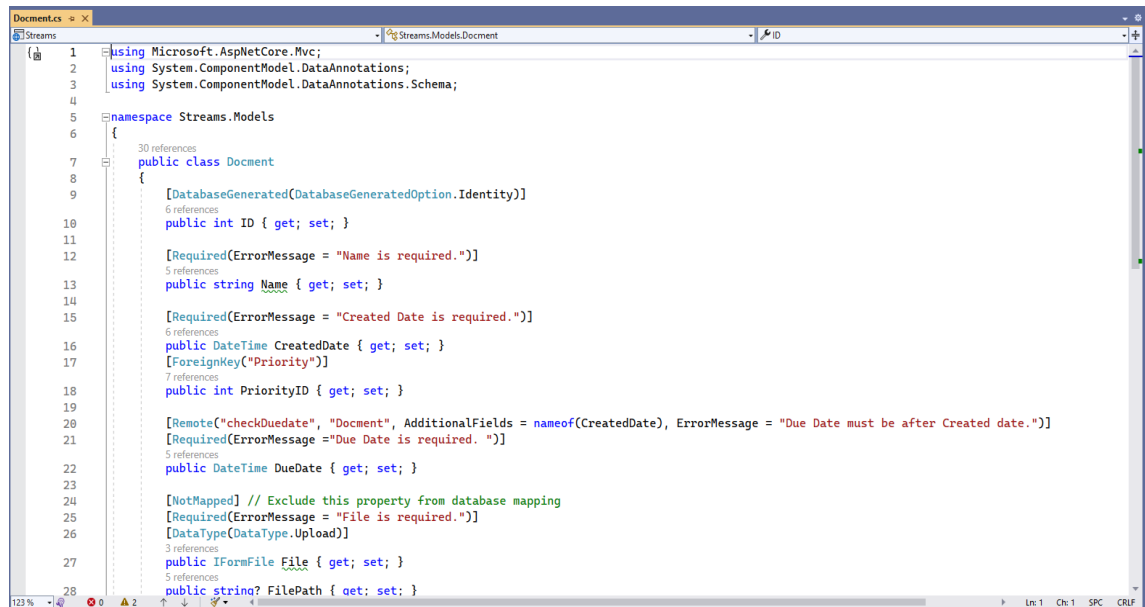
This code is a C# class that represents an Entity Framework Core DbContext, which is used for interacting with a database in a .NET application.



B) Document.cs:

This code defines a C# class named `Document` within the `Streams.Models` namespace, representing a model for documents in an ASP.NET Core MVC application.

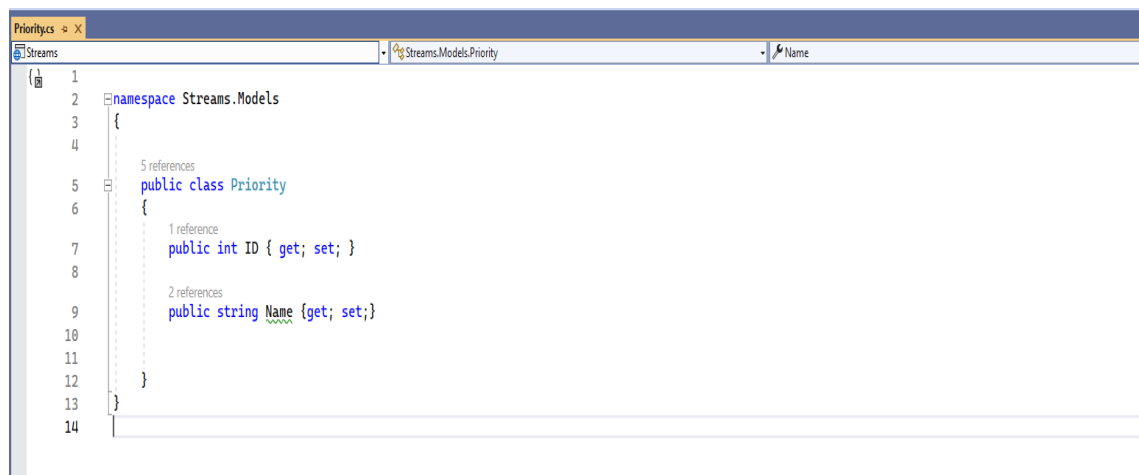
The Docment Class has relationship with Priority Class.

A screenshot of a Visual Studio code editor showing the `Document.cs` file. The file is part of the `Streams.Models` namespace. It defines a `Document` class with several properties and attributes. The properties include `ID` (int), `Name` (string), `CreatedDate` (DateTime), `PriorityID` (int), `DueDate` (DateTime), `File` (IFormFile), and `FilePath` (string). The class is decorated with various data annotations, including `[DatabaseGenerated(DatabaseGeneratedOption.Identity)]`, `[Required]`, `[Remote]`, `[NotMapped]`, and `[DataType(DataType.Upload)]`. The `PriorityID` property is marked with `[ForeignKey("Priority")]`, indicating a relationship with the `Priority` class.

```
1 using Microsoft.AspNetCore.Mvc;
2 using System.ComponentModel.DataAnnotations;
3 using System.ComponentModel.DataAnnotations.Schema;
4
5 namespace Streams.Models
6 {
7     public class Document
8     {
9         [DatabaseGenerated(DatabaseGeneratedOption.Identity)]
10         public int ID { get; set; }
11
12         [Required(ErrorMessage = "Name is required.")]
13         public string Name { get; set; }
14
15         [Required(ErrorMessage = "Created Date is required.")]
16         public DateTime CreatedDate { get; set; }
17         [ForeignKey("Priority")]
18         public int PriorityID { get; set; }
19
20         [Remote("checkDueDate", "Document", AdditionalFields = nameof(CreatedDate), ErrorMessage = "Due Date must be after Created date.")]
21         [Required(ErrorMessage = "Due Date is required. ")]
22         public DateTime DueDate { get; set; }
23
24         [NotMapped] // Exclude this property from database mapping
25         [Required(ErrorMessage = "File is required.")]
26         [DataType(DataType.Upload)]
27         public IFormFile File { get; set; }
28         public string? FilePath { get; set; }
29     }
30 }
```

C) Priority.cs:

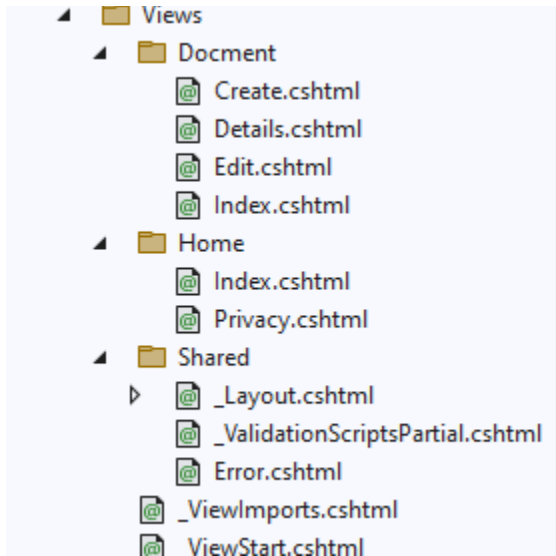
This code defines a C# class named `Priority` within the `Streams.Models` namespace, representing a model for priorities in an application.

A screenshot of a Visual Studio code editor showing the `Priority.cs` file. The file is part of the `Streams.Models` namespace. It defines a `Priority` class with two properties: `ID` (int) and `Name` (string). The class is decorated with data annotations, including `[Required]` and `[DataType(DataType.Upload)]`.

```
1 namespace Streams.Models
2 {
3     public class Priority
4     {
5         public int ID { get; set; }
6
7         public string Name { get; set; }
8     }
9 }
```

2) View

The View is responsible for presenting the data to the user and receiving user input.



Document Folder has 4 view pages each one represents a web page:

A) Create.cshtml:

```
Create.cshtml
1 @model Document
2
3 @{
4     SelectList PriorityItems = new SelectList(ViewData["PriorityList"] as List<Priority>, "ID", "Name");
5 }
6
7 <div class="container vh-auto">
8     <div class="card mx-auto mt-5" style="background-color: #f8f9fa; border-radius: 15px; box-shadow: 0 4px 8px rgba(0,0,0,0.1);">
9         <div class="card-body">
10             <h1 style="color: dodgerblue; font-family: lobster, 'Dancing Script'; font-weight: bold; text-align:center; padding-bottom:30px">Upload
11
12
13             <form method="post" action="/Document/SaveCreate" enctype="multipart/form-data" style="font-family: lobster, 'Dancing Script' ; font-weight:
14                 <div class="row mb-4">
15                     <div class="col-4">
16                         <label class="strg">Name</label>
17                     </div>
18                     <div class="col-8">
19                         <input asp-for="Name" class="form-control" />
20                         <span asp-validation-for="Name" class="text-danger"></span>
21                     </div>
22                 </div>
23
24                 <div class="row mb-4">
25                     <div class="col-4">
26                         <label asp-for="File" class="strg"></label>
27                     </div>
28                     <div class="col-8">
29                         <input asp-for="File" type="file" class="form-control" />
30                         <span asp-validation-for="File" class="text-danger"></span>
31                     </div>
32                 </div>
33                 <div class="row mb-4">
34                     <div class="col-4">
35
```

B)Details.cshtml:

```
Details.cshtml
1 @model Document
2 <div class="container vh-75">
3     <div class="card mx-auto mt-5" style="background-color: #f8f9fa; border-radius: 15px; box-shadow: 0 4px 8px rgba(0,0,0,0.1);">
4
5         <div class="card-body text-center">
6             <div class="mb-5 d-flex align-items-center">
7                 <div class="col-1">
8                     <a href="/Document/Index">
9                         
10                     </a>
11                 </div>
12                 <div class="col-9">
13                     <h1 style="color: dodgerblue; font-family: lobster, 'Dancing Script'; font-weight: bold;">File Details</h1>
14                 </div>
15             </div>
16
17             <div class="divmain">
18                 <strong class="strg">File Name :</strong>
19                 <p class="card-text">@Model.Name</p>
20             </div>
21
22             <div class="divmain">
23                 <strong class="strg">Created Date :</strong>
24                 <p class="card-text">@Model.CreatedDate</p>
25             </div>
26
27             <div class="divmain">
28                 <strong class="strg">Due Date :</strong>
29                 <p class="card-text">@Model.DueDate</p>
30             </div>
31
32             <div class="divmain">
33                 <strong class="strg">Priority :</strong>
34                 <p class="card-text">@Model.Priority.Name</p>
35             </div>
36
```

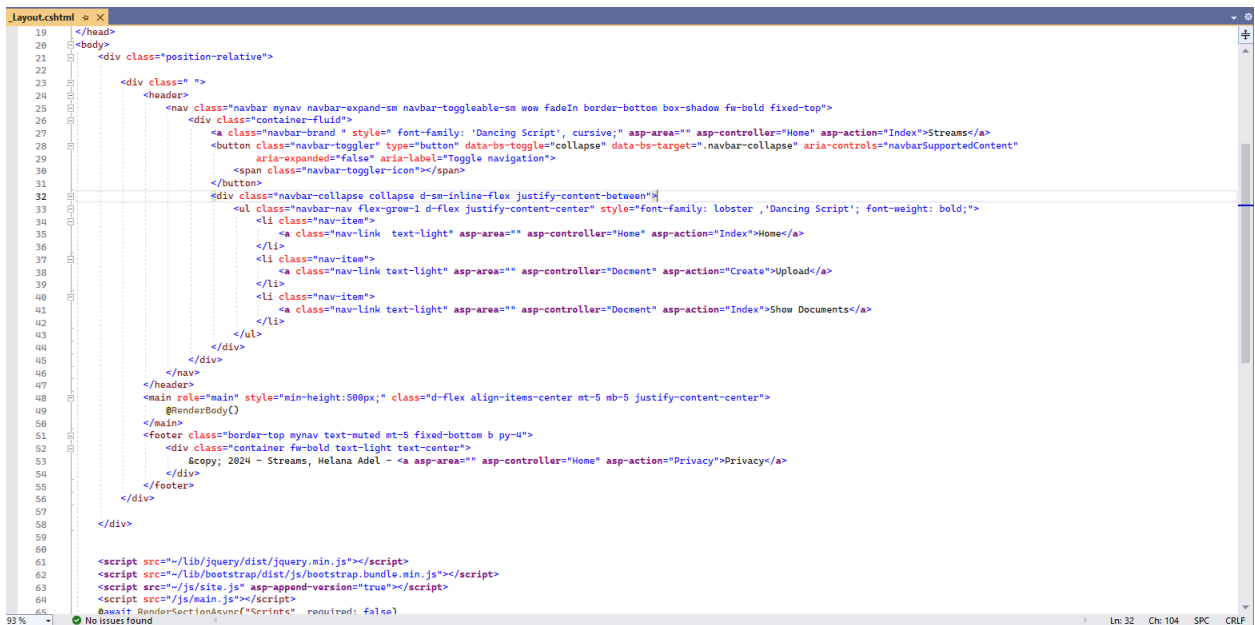
C) Edit.cshtml:

```
1 @model Document
2 @{
3     ViewData["Title"] = "Edit Document";
4
5     SelectList PriorityItems = new SelectList(ViewBag.PriorityList, "ID", "Name");
6 }
7
8 <div class="container vh-75">
9     <div class="card mx-auto mt-5" style="background-color: #f8f9fa; border-radius: 15px; box-shadow: 0 4px 8px rgba(0,0,0,0.1);">
10         <div class="card-body">
11             <h1 style="color: dodgerblue; font-family: lobster, 'Dancing Script'; font-weight: bold; text-align:center; padding-bottom:30px;">Edit D
12
13             <form method="post" action="/Document/SaveEdit/@Model.ID" class="mb-5" style="font-family: lobster, 'Dancing Script'; font-weight: bold;">
14                 <div class="row mb-4">
15                     <div class="col-4">
16                         <label class="strg">Name</label>
17                     </div>
18                     <div class="col-8">
19                         <input asp-for="Name" class="form-control" />
20                     </div>
21                 </div>
22
23                 <div class="row mb-4">
24                     <div class="col-4">
25                         <label class="strg">Created Date</label>
26                     </div>
27                     <div class="col-8">
28                         <input asp-for="CreateDate" class="form-control" />
29                     </div>
30                 </div>
31
32                 <div class="row mb-4">
33                     <div class="col-4">
34                         <label class="strg">File Path</label>
35                     </div>
```

D) Index.cshtml:

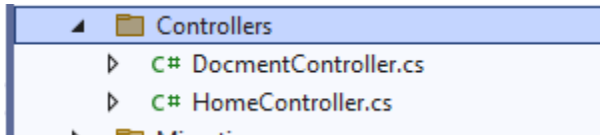
```
1 @model List<Document>
2
3 <div class="container mt-5 mb-5">
4     <table style="font-family: lobster, 'Dancing Script'; font-weight: bold;" class="table table-hover table-bordered w-100 m-auto">
5         <thead style="color: dodgerblue; text-align:center; font-size:1.5rem;">
6             <tr>
7                 <td>Name</td>
8                 <td>Created Date</td>
9                 <td>Priority</td>
10                <td>Due Date</td>
11                <td>Edit</td>
12                <td>Show</td>
13                <td>Delete</td>
14            </tr>
15        </thead>
16        <tbody>
17            @foreach (var item in Model)
18            {
19                <tr>
20                    <td>@item.Name</td>
21                    <td>@item.CreatedDate</td>
22                    <td>@item.Priority.Name</td>
23                    <td>@item.DueDate</td>
24
25                    <td><a href="/Document/Edit/@item.ID" class="btn btn-outline-warning py-2">Edit Document</a></td>
26                    <td><a href="/Document/Details/@item.ID" class="btn btn-outline-primary py-2">Show Details</a></td>
27                    <td><a href="/Document/Delete/@item.ID" class="btn btn-outline-danger py-2">Delete Document</a></td>
28                </tr>
29            }
30        </tbody>
31    </table>
32 </div>
```

A) Index.cshtml:



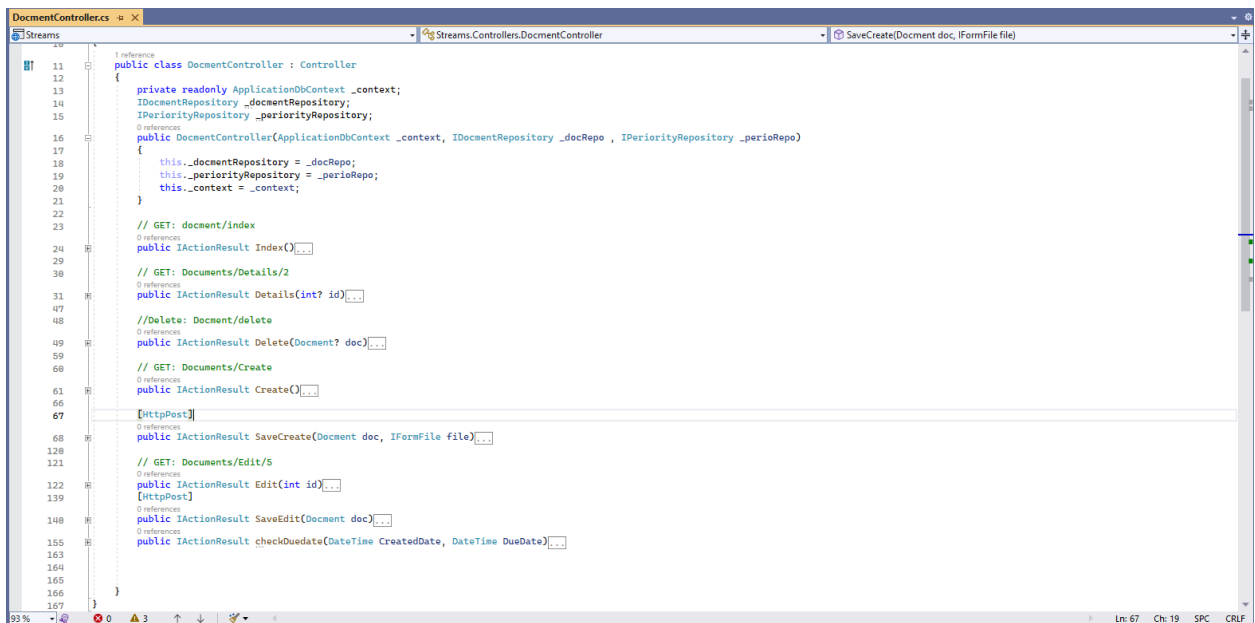
3) Controller

The Controller acts as an intermediary between the Model and the View. It receives user input from the View, processes it, and updates the Model and the View accordingly.

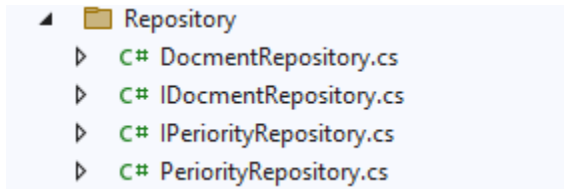


A) DocmentController.cs:

It contains the Action Methods(Index, Details, Delete, Create, SaveCreate, Edit, SaveEdit, checkDuedate)



* To Guide the Solid Principle, We make repository folder which contains interfaces like (**IDocumentRepository, IPerriorityRepository**) which contains the CRUD opertaions and (**DocumentRepository, PeriorityRepository**) that implement the two interfaces.



Thanks.