ASP.NET MVC

NAMESPACES (SELF-READING)

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Namespaces

- A namespace is the address of a type

- A mechanism to **uniquely** identify a type by requiring a full address rather than just a short name

    - For example, `IActionFilter` interface of the `System.Web.Mvc` namespace is different from `System.Web.Http.Filters` namespace

- When a namespace is defined
    - Classes are **grouped** into logical entities
    - Names are **unique** with a logical entities

- A program can contain multiple namespaces

Namespaces in ASP.NET

- System.Diagnostics
  - Classes for **debugging and logging**
  - Debug.WriteLine() writes to Output window

- Microsoft.AspNetCore.Mvc
  - Classes that implement the **MVC** pattern

- Microsoft.Data
  - Classes that implement the **ADO.NET architecture**

- System.Linq
  - Classes to support Language Integrated Query (**LINQ**)
  - **Retrieve data** from different sources and formats

- System.Data.Linq
  - LINQ classes that handle **Relational data only**

Using Namespaces

Import the required namespaces with keyword using to access their functionalities

```csharp
using System.Diagnostics;
using Microsoft.AspNetCore.Mvc;
using Microsoft.Extensions.Logging;
using ADO.NETWorkshop.Models;

namespace NUSISS.Sample.Controllers
{
    public class HomeController : Controller
    {
        // class implementation
    }
}
```

Declaring Namespaces

A new application should have its **own namespace**, which should be **unique** to avoid **name collision**

```
namespace NUSISS.Sample.Controllers {
    public class HomeController : Controller {
        // class implementation
    }
}
```

```
namespace NUSISS.Sample.Models {
    public class Course {
        public int Id { get; set; }
        public string Code { get; set; }
        public string Name { get; set; }
        public string Description { get; set; }
        public string ManagerName { get; set; }
    }
}
```

In this example

- The **root namespace** is **"NUSISS.Sample"**
- **Sub-namespaces** are **"Controllers"** and **"Models"**