Module – 4

1. Explain Dependency Injection.

* Dependency injection is the design pattern that helps us to create application which loosely coupled. Object should only have those dependencies that are required to complete tasks. The main advantages of DI is our application is loosely coupled and has provided greater maintainability, testability and also re-usability
* It is loosely coupled because dependency required by the class is injected from the outer word rather than created themselves directly win-in code.

1. Explain various types of Dependency Injection.

Three type of DI types

**Singleton:** inversion of Control (IoC) container will create and share a single instance of a service throughout

the application's lifetime.

**Transient:** The inversion of Control (IoC) container will create a new instance of the specified service

Type every time you ask for it.

**Scoped:** inversion of Control (IoC) container will create an instance of the specified service type once

Per request and will be shred in a single request.

1. Create an application to add a custom service which display data from database using Dependency Injection.
2. What is session? What is the default time for session?

Session is used for storing used data from a client . session timeout or uses the default value of 20 minutes.

1. How to change time of session?

ConfigureServices() to set up the memory session provider.

services.AddSession(options =>

{

options.IdleTimeout = TimeSpan.FromMinutes(30);

options.Cookie.IsEssential = true;

});

* app.UserSession();

1. What is Partial View in MVC? With example

A Partial View is a Razor markup file (.cshtml) without an that renders HTML output within another markup file (another view).

Partial view in ASP.NET MVC is special view which renders a portion of view content. It is just like a user control of a web form application. Partial can be reusable in multiple views. It helps us to reduce code duplication

<div>

@Html.Partial("PartialViewExample")

</div>

-

Public ActionResult PartialViewExample()

{

return PartialView();

}

1. What is query string? What are disadvantages of query string?

A querystring is a set of characters input to a computer or web browser and sent to a query program to recover specific information from a database.

**Disadvantages:**

1. There ia a limit to URL length of 255 characters.
2. Query string data is directly visible to user thus leading to security problem.
3. What is cookie? What are limitations for cookie?

Cookies are Key- Values pair collection where we can read ,write and delete using key. HTTP Cookies is some piece of data which is stored in the user’s browser.

* Most browser support cookies of up to 4096 bytes. Because small limit cookies are best used to store small amount od data, or better yet, an identifier such as a user ID.

1. Create an application to pass values from one view to another view using query string -tempdata example
2. what is the difference between Temp data, View, and View Bag?
3. Temp data: - pass data from one controller to another controller. Usually, TempData object will be stored in a session object.
4. View data: - pass data from one controller to corresponding view. The ViewData is dynamically resolved at runtime, as a result. ViewData is of [Dictionary](https://www.tutorialsteacher.com/csharp/csharp-dictionary) type (Dictionary <TKet,TValue>).

* Element are stored as KeyValuePair(TKey,TValue) object.
* Value can be null or dublicate.

1. View bag: - view Bag is able to set and get value dynamically.

* ViewBag doesn’t have typecasting and null checks.

1. What is the use of Areas in MVC?

Area allows us to partition the large application into smaller units where each unit contains a separate MVC folder structure , same as the default MVC folder.

1. Create an application to implement various validations using Javascript, jQuery and DataAnnotation.
2. What is difference between javascript and jquery?

JavaScript is an independent language and can exit on its own. jQuery is a JavaScript library.

jQuery is still dependent on JavaScript as it has to be converted to JavaScript for the browser in-built JavaScript engine to interpret and run it.

1. What is difference between Linq and Entity Framework?

| **INQ to SQL** | **Entity Framework** |
| --- | --- |
| It only works with SQL Server database | It can work with various databases like Oracle, DB2, MySQL, SQL Server, etc. |
| It has not to support for complex types | It has support for complex types |
| It cannot generate database from model | It can generate database from model |
| It allows only one-to-one mapping between the entity classes and the relational tables/views | It allows one-to-one, one-to-many, many-to-many mappings between the entity classes and relational tables/views |
| It can be used for rapid application development only with SQL Server | It can be used for rapid application development with RDBMS like SQL Server, Oracle, PostgreSQL, etc. |

1. Create One Registration Page for Student Registration Model Class and When Student Click on Submit Button, Details of student must be display on same page. Fields: First Name, Last Name, Email id, Mobile, Gender, City, Address, Course (Dropdown list), Fees, Tax (Label with Text 12.50%), Total Fees.
2. Create View Model for CRUD Operation in Country, State and City Table with validation using EF.
3. Create Multiple Image Upload Example, Image Display after Upload. (Use Database table for save data like image name, size, type, URL)
4. Write a program to perform join on two Lists.
5. Demonstrate ModelBinding in .Net Core 1) Bind only 1 property. 2) Exclude 1 property from Binding.
6. Explain various Tag Helpers and its use.

Tag helper enable server – side code to participate in creating and rendering HTML elements in Razor files. There are many built-in Tag Helper for common tasks, such as creating forms, links, loading assets etc.

1. Create an application to perform CRUD operation using Tag Helpers.