

DEPENDANCY INJECTION

Monday, 13 February 2023 4:12 pm

Also called inversion of contrl

Aesa system design kre ke ik component ko change krein to baqi component affect na ho.

It is a pattern. It is a generic pattern. It is used to make loosely coupled systems. It is used to remove dependencies between components. Is is a design pattern.



controller

```
StudentController
Public ViewResult GetAll()
{

StudentRepository repo= new StudentRespositorY();

Repo.GetAllStudent();
}
```



Repositories

```
StudentRepository
GetAllStudents() //return students data
from sql db
```

Our controller is highly dependant on repository. Assume we now use mongodb instead of sql db

```
StudentReposWithMongoDb
GetAllStudent();
```

Now we have to change code in controller also. Because we now are using mongo db with studentRepowithMongoDb
We want ke change controller me na krna pre

HOW TO ACHIEVE THIS??

Surely we will not use classes in controller. We will use interface

Interface me function name hote no implementation. Interface is implemented by some other class

To make interface

```
IStudentRepo
List<Student> GetAllStudents();
```

```
StudentRepository:IStudentRepo
GetAllStudents() //return students data
from sql db
```

```
StudentReposWithMongoDb:IStudentRepo
GetAllStudent();
```

>.NOW INT CONTROLLER LAYER

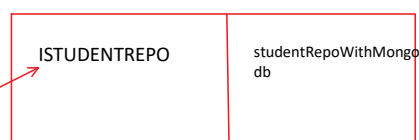
```
StudentController
Public ViewResult GetAll()
{
```

```
Repo.GetAllStudent();
}
```

Make reference of interface in controller
Now ab wo reference kis object ko point krrha
studentRepository of StudentReposWithMongoDb
Ye info hm alag jaga btae in program.cs file

Ke jahan jahan interface use ho wahan use
studentRepository of with mongodb wala

Ab hmne bta dya



NOW FRAMEWORK WILL USE STUDENTREPOWITHMONGODB

See when constructor
Of studentcontroller is called
To jis type ka object hmne
Program.cs me kaha hoga
Wo wala bnjaye ga
Whether mongo or sql
This is injection

```
StudentController
Private readonly IStudentRepo sRepo;
Public StudentController(IStudentRepo s)
{
    sRepo = s;
}
Public IActionResult GetAll()
{
    Repo.GetAllStudent();
}
```

Srepo is reference of interface. Uske andar wo
Wala object ana jis type ka hmne program.cs me btaya hoga

Make interface folder inside model folder

Builder.service.AddSingleton<IStudentRepo, StudentRepos>

Singleton means jitne request aye sbko sam object dena

Builder.services.AddTransient<----->

Addtransient means hr request pr naya object bne

Builder.Service.AddScoped<----->

Current session ke liye 1 object
Browser bnd krke again open kre to new object
Hr session ka apna object.

IMPLEMENT DEPENDANCE INJECTION IN YOUR PROJECT