**Integration of database into c#**

First we have our “connection string” that has all the necessary information for our application to connect to our database:

Server=myServerAddress;Database=myDataBase;Trusted\_Connection=True;

"Server=WIN-DNH1G34J36A;Database=Students;Trusted\_Conntection=True"

Let’s store our connection string in a field.

private static readonly string \_connectionString = "Server=WIN-DNH1G34J36A;Database=Students;Trusted\_Connection=True”;

Now we are gonna connect to our database using SqlConnetion and send info(model) to our view(razor page).

public IActionResult Index()

{

List<Student> students = new List<Student>();

using (SqlConnection conn=new SqlConnection(\_connectionString))

{

SqlCommand command = new SqlCommand("select \* from students", conn);

conn.Open();

var reader = command.ExecuteReader();

while (reader.Read()) //as long as theres code to read

{

// in Models we have got a student class🡪

Student student = new Student();

student.id = (int)reader["student\_id"];

student.gpa = (int)reader["gpa"];

student.name = reader["name"].ToString();

student.major = reader["major"].ToString();

students.Add(student);

}

}

return View(students);

}

In our view we receive the model…

@model List<MVCPractise.Models.Student>

@{

ViewData["Title"] = "Home Page";

}

<div class="text-center">

<ul>

@foreach(Student student in Model )

{

<li>ID:@student.id Name:@student.name Major:@student.major Gpa:@student.gpa</li>

}

</ul>

</div>

First we create a SqlConnection object, then we open the connetion by using Open() method. After that, we need a command and then we use our SqlCommand reader to read our databse record by record.

**Using statement**

Using statement is used to create a scope for a resource and once the scope ends it is going to dispose of that object (database and etc.)

If the type implements IDisposable, it automatically disposes that type.

public class SomeDisposableType : IDisposable

{

...implmentation details...

}

If it inherits from IDisposable then it will have Dispose() method to clean up

SomeDisposableType t = new SomeDisposableType();

try {

OperateOnType(t);

}

finally {

if (t != null) {

((IDisposable)t).Dispose();

}

}

This is the same as🡪

using (SomeDisposableType u = new SomeDisposableType()) {

OperateOnType(u);

}

Using calls Dispose() after the using-block is left, even if the code throws an exception. So you usually use using for classes that require cleaning up after them. In our example above(database) it will close our database and SqlDataReader as well.

**Route**

A route is a URL pattern that is mapped to a handler called a controller

app.UseEndpoints(endpoints =>

{

endpoints.MapControllerRoute(

name: "default",

pattern: "{controller=Home}/{action=Index}/{id?}");

});

For instance, if we have a products controller and action message inside it that takes name and num parameters then it will be:

Products/message?name&num

**ViewBag**

ViewBag is a way to pass data from the controller to the view.

ViewBag.propName=”Hey”;

To display these properties in view, you would need to use the same property names.