A person standing in front of a black background

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Course outline:

Is this course right for you?

What is ASP.NET core ?

Models Views and controllers (MVC)?

Database setup

Registration login and security ?

Search Database ?

What is ASP.NET core?

* Microsoft uses C# to build its application.
* It have competitor such as JavaScript, PHP Laravel, Python Flask, Node.js Express.
* .Net – is Microsoft software Development platform since 2001.
* Active Service Pages (ASP) – Dynamic web pages which are connected to a database
* Core – its an Microsoft open source cross - platform used for developing software.
* .Net is unified platform to build anything in the software land.

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Where does C# fit into .net ?

* .Net is not a language.
* The .net framework consists of runtime engine and libraries for executing program in a compliant language.
* The .net framework is language neutral that supports ore than 20 languages that include C#, python, c++, c, Ruby, Java/Java++, fortan, etc.

Why do we need Asp.Net ?

* When Microsoft went from building form based applications to the web base application they needed ASP.
* ASP.NET was Microsoft’s answer in 2002 (end of Dot-com era ) to sun’s maturing Enterprise Java platform.
* ASP was somewhat similar to the php it runs a language which runs a dynamic website and the .net was somewhat similar to java that is compile in 1 platform and which can run on many other platforms and when you compile those two you get Active Server Pages and .net is the compiled environment. And so ASP.net is needed to making web pages in an web servers.

A Dynamic Asp.net Page

* An ASP.NET page is web page that contains a mix of HTML markup and dynamic ASP Markup something like C#, we call them Razor.

A screenshot of a computer program

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* Up there is the mix up of html and the C# called Razor, this is there mark up language which is used to make something that is Dynamic.

**Back End and Front End Options**

This platform runs in both backend and frontend its called full stack environment

* ASP.NET core is fullstack (DataBase, Business Logic, Html)
* It can be combined with popular front end services,
  + React, Angular, Vue
  + Mobile Apps.

**MVC, now I am now coding**

**MVC**

Model – classes (object)

View – a web pages using html.

Controller – connect models, business logic and web pages.

The MVC design pattern helps to enforce separation of concerns (meaning the file size is smaller, code is modular and can be run by multiple people) to help you avoid mixing presentations logic, business logic and data access logic together.

Model is like a class it determines that the program has question and answer, e.g a joke which will have question answer and the id number

Controller handles the logic of computer code, it tells them when to appear and which data to show

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Here lets go briefly what’s happening here,

1. the user send the request ([www.site.com/orders?date=today](http://www.site.com/orders?date=today)) which is then send to the router,
2. router then send the information to controller saying hey today we are going to look at the url at our date and we are looking for orders, router(name: “Orders”, url: “{orders}”)
3. Controller then send that information to the Model saying it has the route called Orders and it has a specific url,
4. Model then it creates the list of orders using the C# language, and get the orders for today, “Orders oList = Store.getOrders(today)”,
5. Then it check the database, with the sequel statement “(SELECT \* FROM orders WHERE DATE = ‘today’)”, it says lets check the orders for today,
6. Then Database will send it back to the Model and Model sends it back to the Controller and now the Controller have the list of data,
7. Then Controller send it to View, Get View(“showOrders.html”, oList) which says show me the list of html page and here is the data that goes with it,
8. Well then it Generate the list which is going to be in html format, and send it to the browser.

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1. And then we have the fully formed html page.

**View**

* View is an html and css (something similar),
* Usually gets its information from the list of the data from the controller.
* Dynamically combine data with html in a template.
* That dynamic language is known as Razor (ASP.NET)

**Other part of the page is Model**

**Model**

* A model is always data related,
* It consist of class / object with properties,
* Uses SQL statements,
* Supplies controllers with the list of objects.

**DataBase migration**

In the …………

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You can see that the mapping here is between the object table and the object class, ORM (Object Relation mapper ) is used to make an table for us which will map exactly to that class.

**DAO (Data Access Object )**

Dao is an more traditional way to make the table, where :

1. We have to manually create the table,
2. Here we traditionally manage the database access,
3. Here we write our own sql statements,
4. DBA’s (Database managers ) usually prefer DAO instead of ORM, reason:
   * They can have the clear vision of whats happening in the database.

**ORM ( Object Relation Mapper)**

Orm is usually preferred by the programmers because:

* It allows computer to generate the database tables based on the class defined in the application,
* You write SQL statements without writing it,
* Database is upgraded using migrations,
* Entity is the named called ORM which I am using, Entity Framework is Microsoft orm,
* Simple for basic applications.

In the code the folder called migration is used to create the tables in the code.

The end.