



Logols Learning

WEEKEND WEB DEVELOPMENT BOOT CAMP

TRAINING: WEB API

REST

- ▶ Representational state transfer
- ▶ REST is protocol independent
- ▶ Architectural Style
 - ▶ Client-Server Communication
 - ▶ Stateless
 - ▶ Cacheable
 - ▶ Uniform Interface

HTTP

- ▶ Many REST services now use HTTP
- ▶ This is Hypertext Transfer Protocol
- ▶ What web pages use
- ▶ Request and Response
- ▶ Stateless
- ▶ Requests: GET, POST, PUT, DELETE

Controller

- ▶ The request initially goes to the controller
- ▶ Based upon the route a method is run.
- ▶ The JSON body of the request can be bound to a model.
- ▶ Whatever is returned from the method is returned in JSON.

Attributes

- ▶ Allow for declarations on classes, methods, or properties.
- ▶ Give special behavior or properties.
- ▶ [HttpGet], [HttpPost], [HttpPut], [HttpDelete]
- ▶ Example:

```
[HttpPost]
public void Post([FromBody]Answer answer)
{
    _service.Insert(answer);
}
```

Routing

- ▶ Tells ASP.Net which controller should receive the request
- ▶ Based on the pattern of the request
- ▶ Can be customized
- ▶ Default Route: “{controller}/{action}/{id}”

JSON

- ▶ JavaScript Object Notation
- ▶ How an Object is represented in JavaScript.

Example:

```
{  
  "studentID": 0  
  "firstName": "Kathy",  
  "lastName": "Smith"  
}
```


Binding

- ▶ Return value to JSON Data
- ▶ JSON in Request Body converted to Class
- ▶ Example:

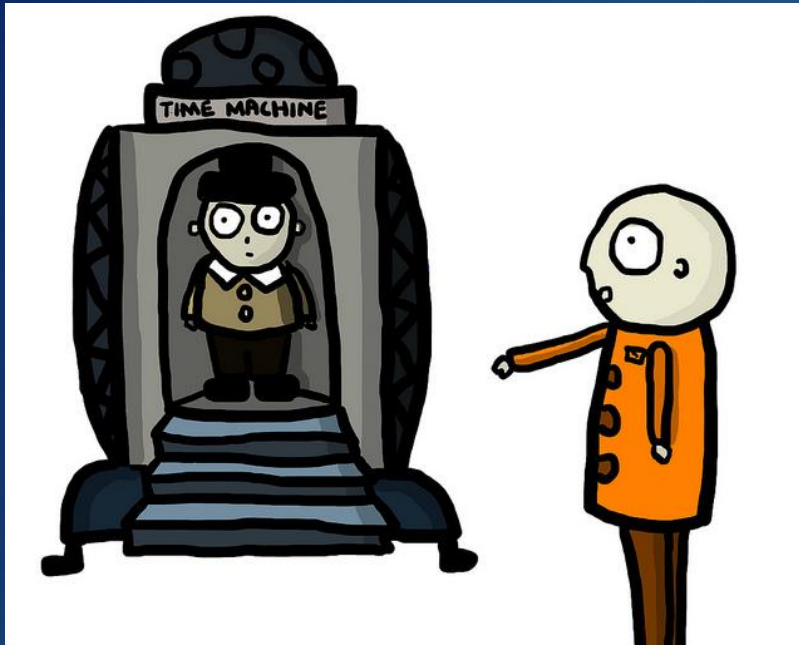
[HttpPost]

```
public void Post([FromBody]Answer answer)
{
    _service.Insert(answer);
}
```


CLI Commands

- ▶ mkdir – Create Directory
- ▶ cd – Change Directory
- ▶ Add project:
 - ▶ dotnet new classlib
 - ▶ dotnet new webapi
- ▶ Add reference:
 - ▶ dotnet add reference [path]/[name.csproj]
 - ▶ dotnet add package Dapper
 - ▶ dotnet add package MySql.Data

Postman

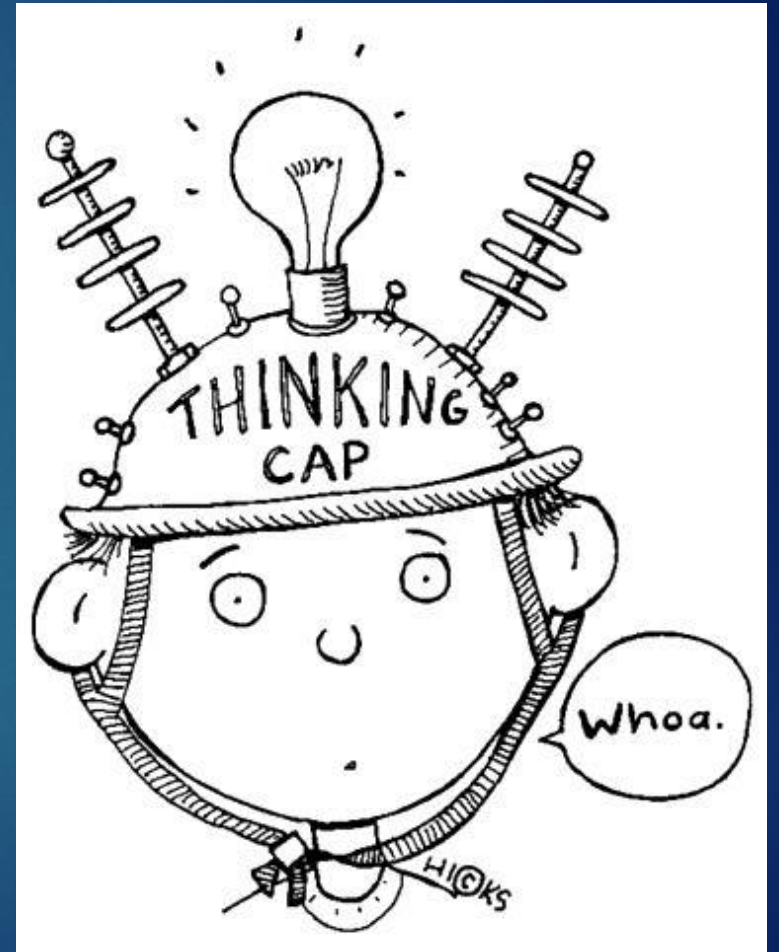


EXAMPLE

ASP.NET WEB API

ASSESSMENT

ASP.NET WEB API



Assignment

- ▶ A small internet has been brought back online. Everyone wants your status report.
- ▶ They also want to be able to insert, update, and delete data.
- ▶ Add a web api to get, insert, update, and delete person status.



QUICK REVIEW

WEB API



Not really a sign you'd want to see whilst driving through an eerily quiet neighbourhood...

Additional Resources

- ▶ Microsoft Page

- ▶ <https://www.asp.net/web-api>

- ▶ Microsoft Tutorial

- ▶ <https://docs.microsoft.com/en-us/aspnet/web-api/overview/getting-started-with-aspnet-web-api/tutorial-your-first-web-api>

- ▶ PluralSight

- ▶ <https://app.pluralsight.com/player?author=jon-flanders&name=aspnetwebapi-m1-introduction&mode=live&clip=0&course=aspnetwebapi>

Keep Practicing!

- ▶ Try creating different web api's.
- ▶ Use the different http actions.
- ▶ Hook it up to the database.