LogoIs 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
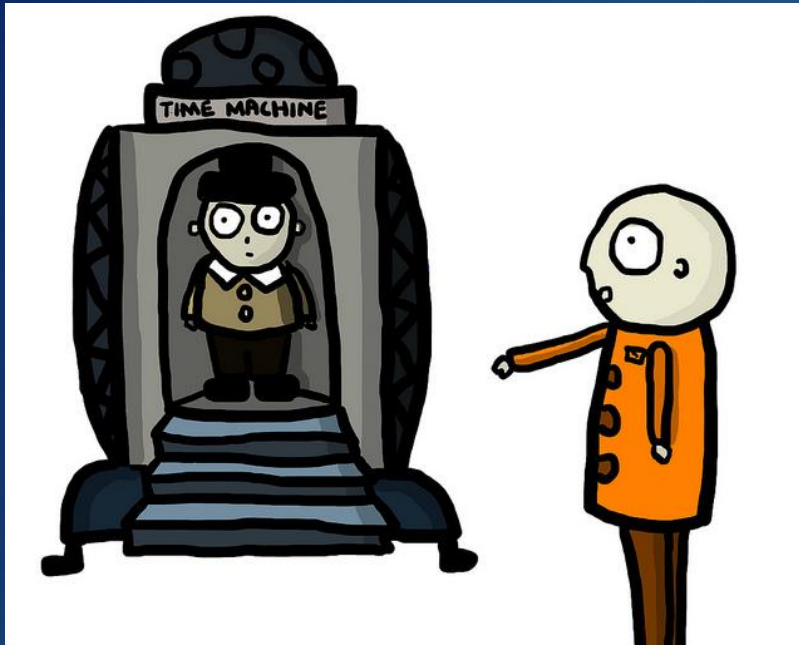- JSON in Request Body converted to Class
- Example:

```
[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
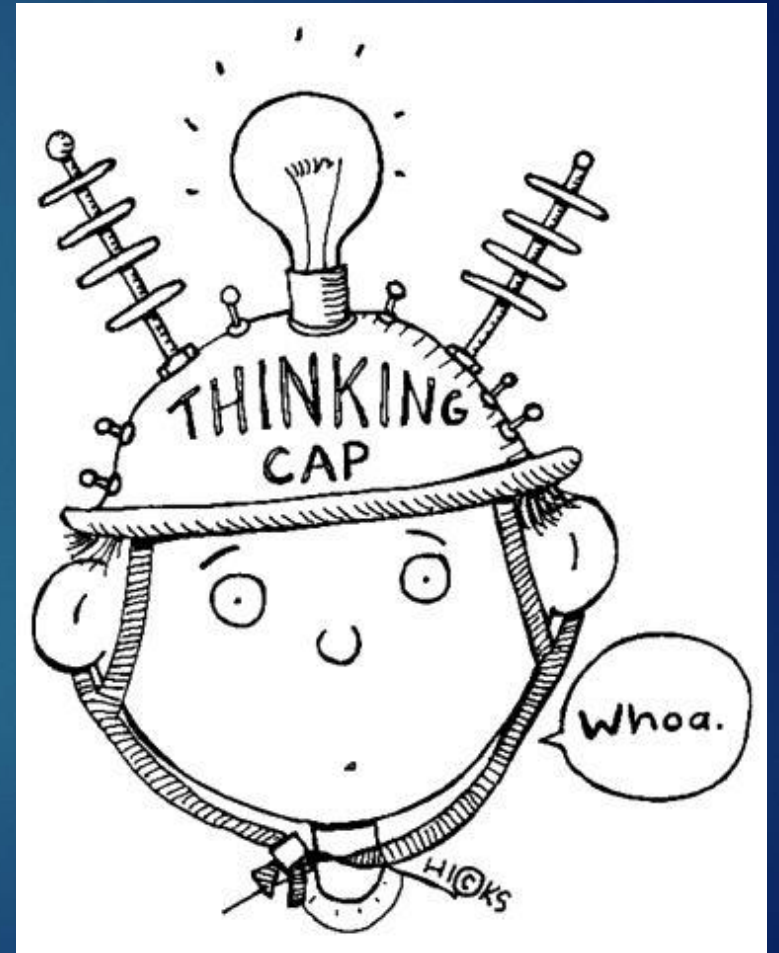 - dotnet add package MySql.Data

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.