MODULE 3

Review – Web Services

Request Needs

- Reference to Back End
  - URL (end point)
- Method (or verb)
  - HttpGet – retrieve information
  - HttpPost – add information
  - HttpPut – update information
  - HttpDelete – delete information
- How to talk to the back end
  - Client

Client Needs – Postman

- Reference to Back End
  - URL (end point)
- Method (or verb)
  - HttpGet – retrieve information
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- How to talk to the back end
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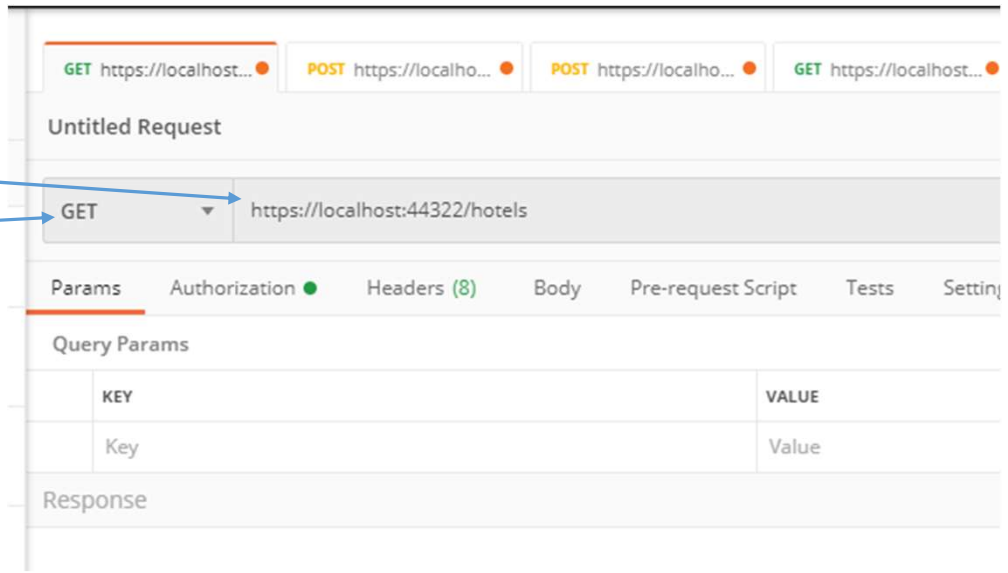


Client Needs – CLI

- Reference to Back End
  - URL (end point)
- Method (or verb)
  - HttpGet – retrieve information
  - HttpPost – add information
  - HttpPut – update information
  - HttpDelete – delete information
- How to talk to the back end
  - Client

```
private readonly string API_URL = "https://localhost:44322/";
private readonly RestClient client = new RestClient();

public List<Hotel> GetHotels()
        {
            RestRequest request = new RestRequest(API_URL + "hotels");
            IRestResponse<List<Hotel>> response = client.Get<List<Hotel>>(request);
            if (response.ResponseStatus != ResponseStatus.Completed)
            {
                Console.WriteLine("Error occurred - unable to reach server.");
            }
            else if (!response.IsSuccessful)
            {
                Console.WriteLine("Error occurred - received non-success response”);
            }
            else
            {
                return response.Data;
            }
            return null;
        }
```

Back End Needs – Process the Request

- Instantiate Controller
- Execute Action
- Return Data

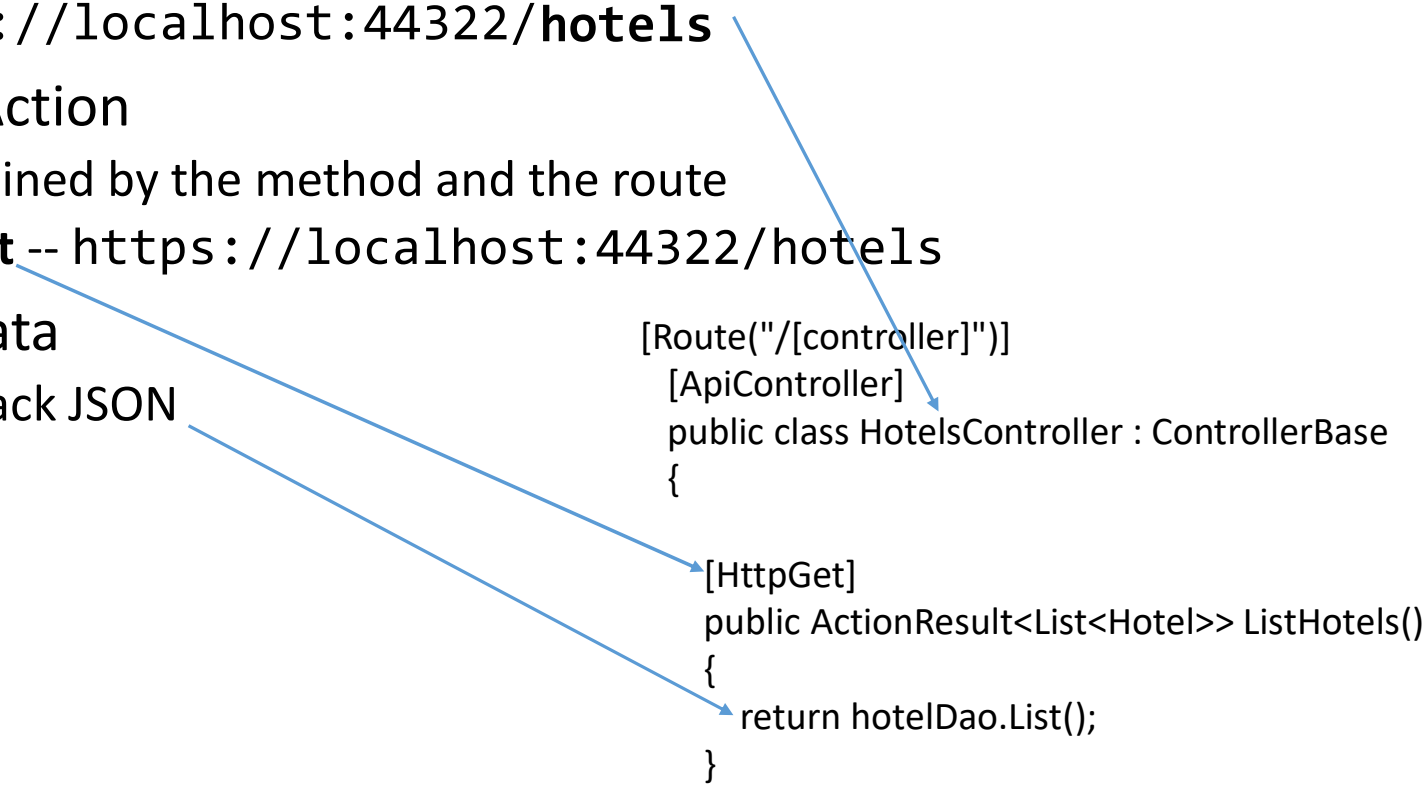
Back End Needs

- Instantiate Controller
  - `https://localhost:44322/`**`hotels`**
- Execute Action
  - Determined by the method and the route

  HttpGet -- `https://localhost:44322/hotels`
- Return Data
  - Send back JSON

Back End Needs

- Instantiate Controller
  - `https://localhost:44322/`**`hotels`**
- Execute Action
  - Determined by the method and the route
  - **HttpGet** -- `https://localhost:44322/hotels`
- Return Data
  - Send back JSON



What about a specific hotel?

Specific Hotel – CLI

```
private readonly string API_URL = "https://localhost:44322/";
private readonly RestClient client = new RestClient();

public Hotel GetHotel(int hotelId)
      {
          RestRequest request = new RestRequest(API_URL + "hotels");
          request.AddParameter(“id”,hotelId);
          IRestResponse<Hotel> response = client.Get<Hotel>(request);
          if (response.ResponseStatus != ResponseStatus.Completed)
          {
              Console.WriteLine("Error occurred - unable to reach server.");
          }
          else if (!response.IsSuccessful)
          {
              Console.WriteLine("Error occurred - received non-success response”);
          }
          else
          {
              return response.Data;
          }
          return null;
      }
```

Specific Hotel – Back End

```
[Route("/[controller]")]
  [ApiController]
  public class HotelsController : ControllerBase
  {

    [HttpGet]
    public ActionResult<List<Hotel>> ListHotels()
    {
       return hotelDao.List();
    }

    [HttpGet("{id}")]
    public ActionResult<Hotel> GetHotel(int id)
    {
       Hotel hotel = hotelDao.Get(id);

       if (hotel != null)
       {
          return hotel;
       }
       else
       {
          return NotFound();
       }
    }
```

Defines the route:
`https://localhost:44322/hotels/1`

LET'S CODE!