
Coding Bootcamp 4

Exercise 3 – C# Stream

You are developing a blogging application and you want to build a class that has a method that takes a list of the type `List<BlogPost>` as input and returns that list in JSON format (string).

First make the following decisions:

1. Will your converter class / method will be a static class / method?
2. Will you use normal strings or a `StringBuilder` to build the JSON string?

Then, develop the class and the appropriate method.

To test the functionality, initialize a list of sample blog posts, implement the following queries (in C#), convert the result of each query to JSON and print it to the screen.

1. Find the blog post with a given id.
2. Find all posts that contain a specific word in their bodies.
3. Find all posts that have a title with more than two words.
4. Find all posts written from a specific user.
5. Return a list of all the post ids.

Resources:

- https://www.w3schools.com/js/js_json_intro.asp (JSON)
- <https://www.lipsum.com/> (Sample text generator)
- <https://www.guidgenerator.com/> (Online GUID generator)

For example, imagine you have the following classes that are used in your blogging application and need to be converted to JSON format:

```
/// <summary>
/// Describes a user.
/// </summary>
public class User
{
    /// <summary>
    /// User id.
    /// </summary>
    public Guid Id { get; set; }

    /// <summary>
    /// User display name.
    /// </summary>
    public string Username { get; set; }
}

/// <summary>
/// Describes a blog post.
/// </summary>
public class BlogPost
{
    /// <summary>
    /// Blog post id.
    /// </summary>
    public Guid Id { get; set; }

    /// <summary>
    /// User wrote the blog post.
    /// </summary>
    public User User { get; set; }

    /// <summary>
    /// Title of the blog post.
    /// </summary>
    public string Title { get; set; }

    /// <summary>
    /// Body of the blog post.
    /// </summary>
    public string Body { get; set; }
}

// Sample output
{
    "id": "b58f9d4e-f559-4f20-8a1e-c236e1f2ebc9",
    "user": {
        "id": "f4f2e0cd-c15e-4823-8434-3bf7afa05af2",
        "username": "mnikolaidis"
    },
    "title": "Lorem ipsum.",
    "body": "Lorem ipsum dolor sit amet, consectetur adipiscing elit. Sed aliquet dictum facilisis. Nullam et ligula tincidunt justo dictum consequat at vel justo. Vestibulum blandit dapibus maximus. Curabitur tristique elit id facilisis ullamcorper. Ut erat risus, laoreet vel nisi non, lacinia maximus ante. Aenean velit tortor, varius pretium varius vitae, feugiat ac odio. Proin ut consequat neque."
}
```