Json.NET Schema

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HELPING DEVELOPERS UNDERSTAND SEARCH & BIG DATA

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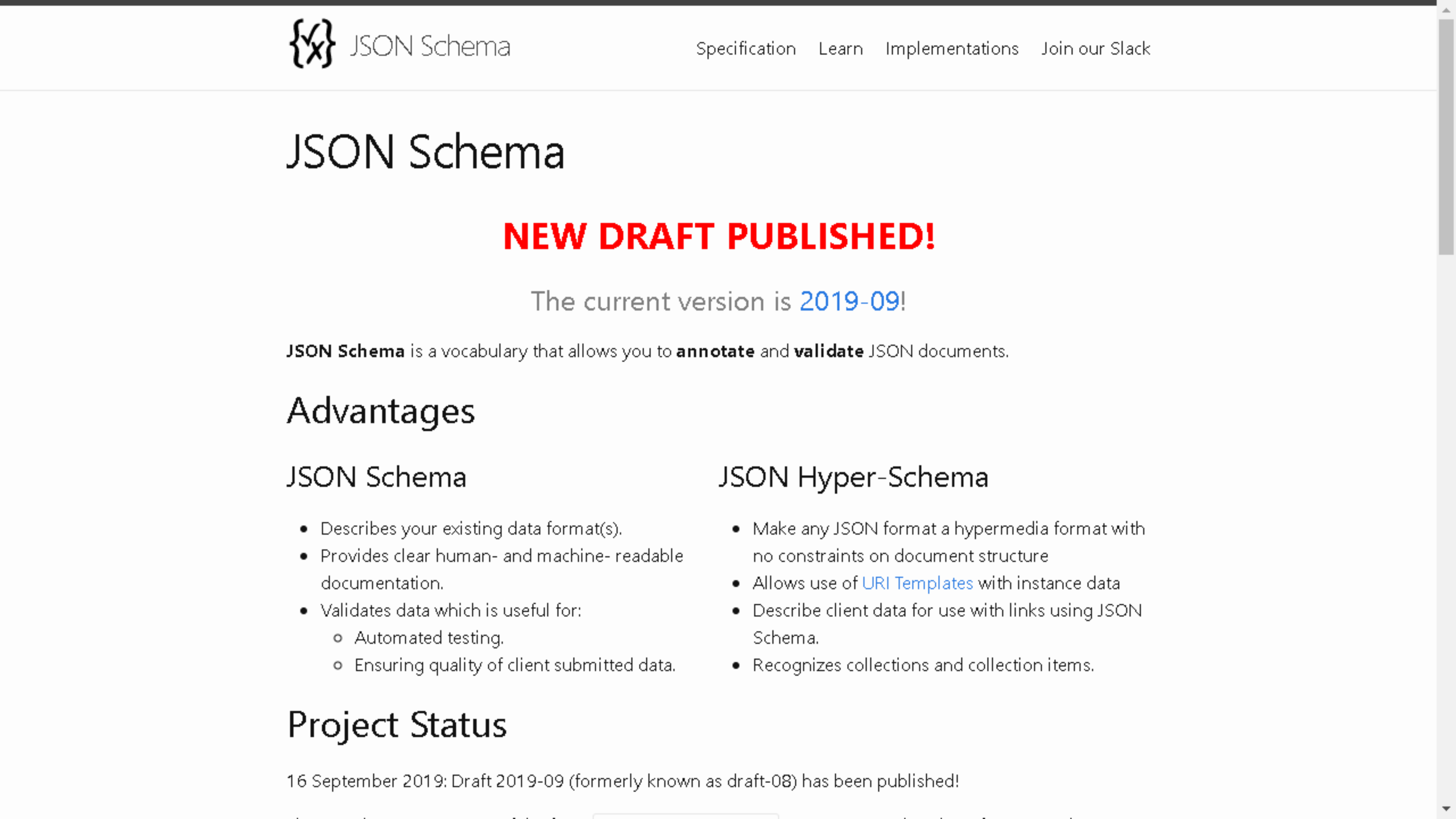


JSON Schema

NEW DRAFT PUBLISHED!

The current version is 2019-09!

JSON Schema is a vocabulary that allows you to **annotate** and **validate** JSON documents.

Advantages

JSON Schema

- Describes your existing data format(s).
- Provides clear human- and machine- readable documentation.
- Validates data which is useful for:
  - Automated testing.
  - Ensuring quality of client submitted data.

JSON Hyper-Schema

- Make any JSON format a hypermedia format with no constraints on document structure
- Allows use of URI Templates with instance data
- Describe client data for use with links using JSON Schema.
- Recognizes collections and collection items.

Project Status

16 September 2019: Draft 2019-09 (formerly known as draft-08) has been published!

Json.NET Schema

Json.NET's functionality

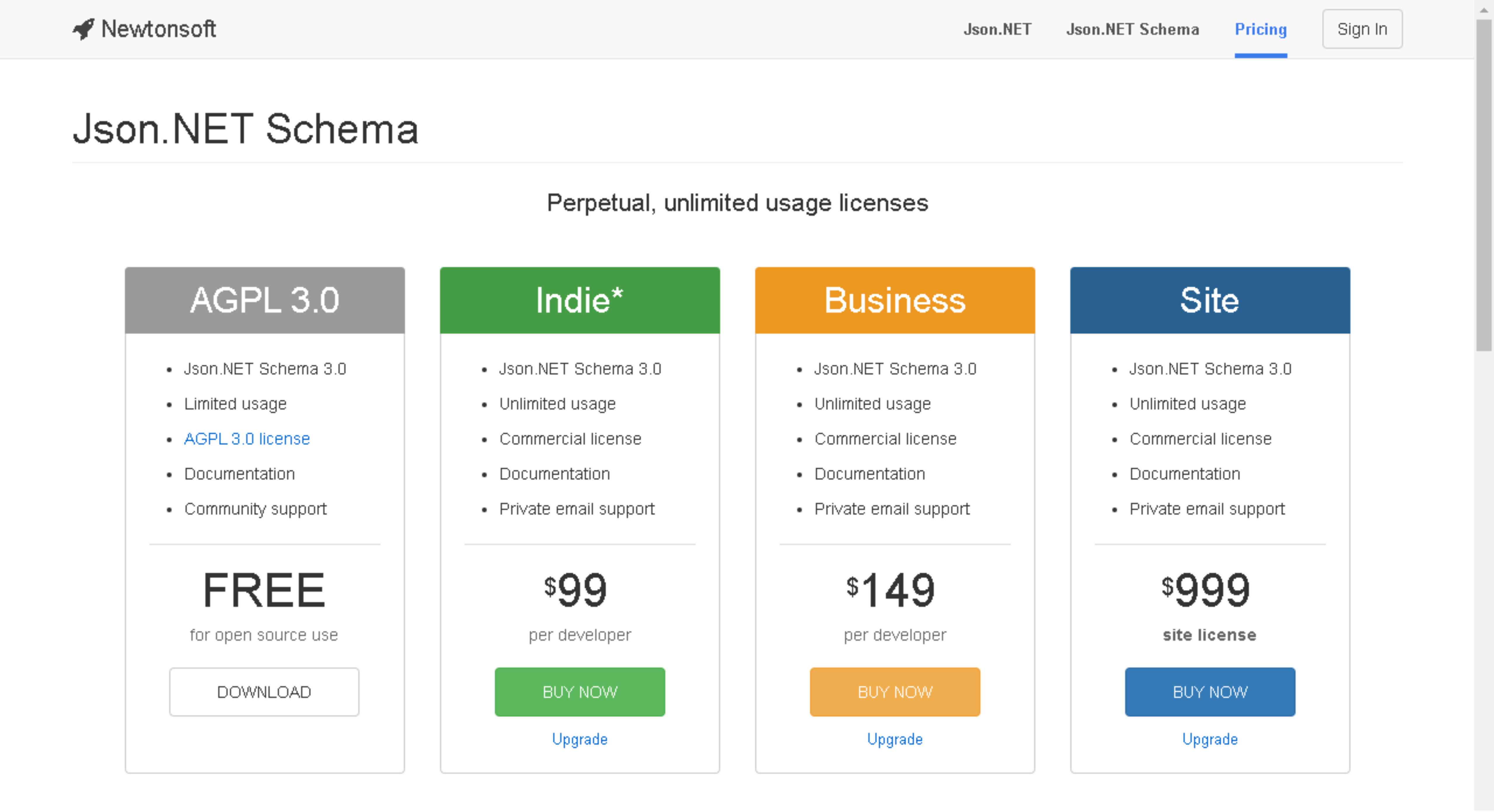
- Describing and validating JSON

Create schemas

Validate JSON

Separate package

Licensed



Json.NET Schema

Perpetual, unlimited usage licenses

AGPL 3.0	Indie*	Business	Site
Json.NET Schema 3.0	Json.NET Schema 3.0	Json.NET Schema 3.0	Json.NET Schema 3.0
Limited usage	Unlimited usage	Unlimited usage	Unlimited usage
AGPL 3.0 license	Commercial license	Commercial license	Commercial license
Documentation	Documentation	Documentation	Documentation
Community support	Private email support	Private email support	Private email support
FREE	$99	$149	$999
for open source use	per developer	per developer	**site license**
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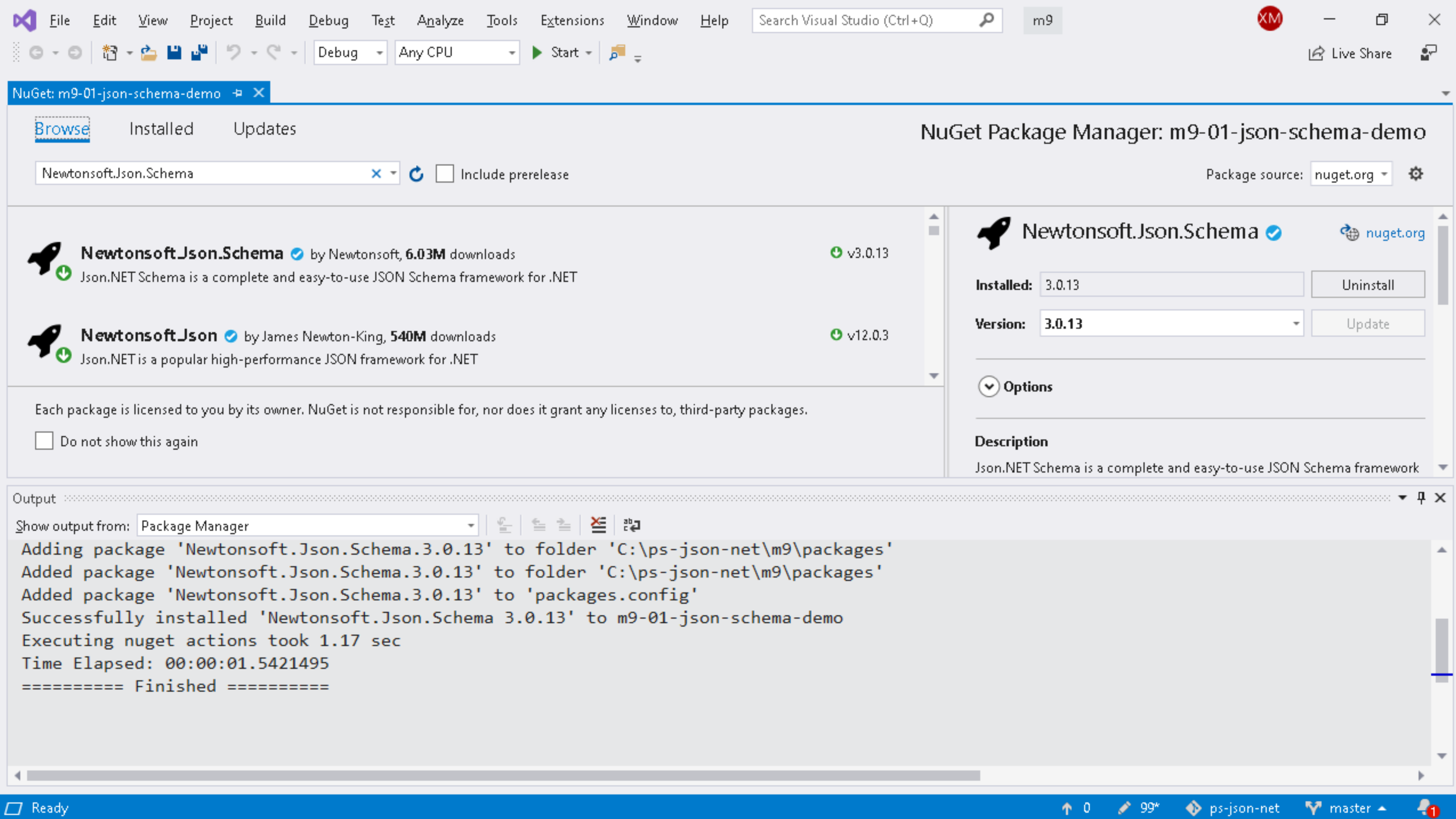
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Newtonsoft.Json.Schema
nuget.org
Installed: 3.0.13
Uninstall
Version: 3.0.13
Update
Options
Description
Json.NET Schema is a complete and easy-to-use JSON Schema framework
Output
Show output from: Package Manager
Ready
0
99*
ps-json-net
master

```
Adding package 'Newtonsoft.Json.Schema.3.0.13' to folder 'C:\ps-json-net\m9\packages'
Added package 'Newtonsoft.Json.Schema.3.0.13' to folder 'C:\ps-json-net\m9\packages'
Added package 'Newtonsoft.Json.Schema.3.0.13' to 'packages.config'
Successfully installed 'Newtonsoft.Json.Schema 3.0.13' to m9-01-json-schema-demo
Executing nuget actions took 1.17 sec
Time Elapsed: 00:00:01.5421495
========== Finished ==========
JSchema schema = new JSchema
{
   Type = JSchemaType.Object,
   Properties = {
      {"name", new JSchema {Type=JSchemaType.String}},
      {"courses", new JSchema{
         Type = JSchemaType. Array,
         Items = {new JSchema {Type=JSchemaType.String}}
         }
      }
};
```

Creating a Schema Manually

Describing your JSON manually

- Make sure it is a valid JSON object
- Contains the properties specified in the schema

Stored in a JSchema class

```
JSchemaGenerator jsonSchemaGenerator = new JSchemaGenerator();

JSchema schema = jsonSchemaGenerator.Generate(typeof(Author));
```

Creating a Schema Automatically

Call jsonSchemaGenerator.Generate

Pass the class that you want to generate a schema for

```
Ilist<string> why;
bool validateManual = author.IsValid(manualSchema, out why);
```

Validating JSON

Extension method for Json.NET LINQ objects

- JObject.IsValid() with overload for error message list

JSchemaValidatingReader/JSchemaValidatingWriter

- Validating while reading/writing

Demo

Creating and Validating JSON with Json.NET Schema

Takeaway

JSON Schema

Json.NET Schema

- Create & Generate
- Validate

Manually and automatically

IsValid

- Provides a list of validation messages