I just wanna use Json.NET in Unity!

- Json.NET is a powerful, open source, and free serializing solution.
- But it's too smart to serialize something like Vectoe3 or Color, etc.
- It even tries to serialize the "normalized" property and throw a loop exception.
- And it always treats a dictionary key as a string, even if it's an array.

Overview:

- This has some common type converters, and sets them as default to make it up..
- If you're using Json.NET, just import and forget this, then coding like before.
- An official DLL is included in case you don't have it, just remove it if you had.

The further technical documentation is available here.
And the tutorial is right below.

Remarks:

- Remember to set the "Api Compatibility Lavel" to .NET 2.0 before importing.
- Thank James Newton-King!
- This's released as feedback for free.

Release Notes:

1.0.2
- Update the documentation link.

1.0.1
- Change NotImplementedException in some converters to InvalidOperationException, avoid showing in MonoDevelop's task list since unnecessary.
- Update the included Json.NET to 9.0.1.

1.0
- First release.

Publish Notes:

- Requires: Unity 5.1.0f3 or higher.
- Category: Scripting / Input - Output
- Keywords: Json NET Converter Serialize Deserialize

JsonNetUtility

Integrate custom `Newtonsoft.Json.JsonConverter` to use Json.NET in Unity. More...

Static Public Attributes

static JsonSerializerSettings	**defaultSettings**
	The default `Newtonsoft.Json.JsonSerializerSettings`. More...

Detailed Description

Integrate custom `Newtonsoft.Json.JsonConverter` to use Json.NET in Unity.

To use Json.NET, please set Unity "PlayerSettings/Api Compatibility Lavel" to .NET 2.0. Then download from its website and import the .NET 2.0 dll. Json.NET doesn't support serializing some types originally, e.g., `UnityEngine.Vector3`. This has the `defaultSettings` includes necessary custom converters by default for Unity using it. And assign to `Newtonsoft.Json.JsonConvert.DefaultSettings` when initializing if the original `null`.

Now we can use Json.NET just like before:

```
Debug.Log(JsonConvert.SerializeObject(Vector3.up));
var vec = JsonConvert.DeserializeObject("{'x':1.0,'y':0.0}", typeof(Vector2));
```

User can directly modify `defaultSettings` for customization, and override it:

```
JsonConvert.DefaultSettings = () => new JsonSerializerSettings(){
    Converters = JsonNetUtility.defaultSettings.Converters,
    DefaultValueHandling = DefaultValueHandling.Populate
};
```

Member Data Documentation

JsonSerializerSettings defaultSettings `static`

The default `Newtonsoft.Json.JsonSerializerSettings`.

All its properties stay default, but the `Converters` includes below:

1. All custom `Newtonsoft.Json.JsonConverter` with constructor needs no params.
2. All `Newtonsoft.Json.JsonConverter` from **WanzyeeStudio.Json**.
3. `Newtonsoft.Json.Converters.StringEnumConverter`.
4. `Newtonsoft.Json.Converters.VersionConverter`.

DictionaryConverter

Custom `Newtonsoft.Json.JsonConverter` for `System.Collections.Generic.Dictionary`. More...

Inherits JsonConverter.

Public Member Functions

override bool	**CanConvert** (Type objectType) Determine if the type is `System.Collections.Generic.Dictionary`. More...
override object	**ReadJson** (JsonReader reader, Type objectType, object existingValue, JsonSerializer serializer) Read as `System.Collections.Generic.KeyValuePair` array to rebuild a dictionary. More...
override void	**WriteJson** (JsonWriter writer, object value, JsonSerializer serializer) Write as `System.Collections.Generic.KeyValuePair` array. More...

Detailed Description

Custom `Newtonsoft.Json.JsonConverter` for `System.Collections.Generic.Dictionary`.

Member Function Documentation

override bool CanConvert (Type objectType)

Determine if the type is `System.Collections.Generic.Dictionary`.

Parameters

    objectType Type of the object.

Returns

    `true` if this can convert the specified type; otherwise, `false`.

```
override object ReadJson ( JsonReader    reader,
                           Type          objectType,
                           object        existingValue,
                           JsonSerializer serializer
                         )
```

Read as `System.Collections.Generic.KeyValuePair` array to rebuild a dictionary.

Returns

   The object value.

Parameters

   reader   The `Newtonsoft.Json.JsonReader` to read from.

   objectType   Type of the object.

   existingValue The existing value of object being read.

   serializer   The calling serializer.

```
override void WriteJson ( JsonWriter    writer,
                          object        value,
                          JsonSerializer serializer
                        )
```

Write as `System.Collections.Generic.KeyValuePair` array.

Parameters

   writer   The `Newtonsoft.Json.JsonWriter` to write to.

   value   The value.

   serializer The calling serializer.

BoundsConverter

Newtonsoft.Json.JsonConverter for UnityEngine.Bounds. More...

Inherits JsonConverter.

Public Member Functions

override bool	**CanConvert** (Type objectType)
	Determine if the type is UnityEngine.Bounds. More...
override object	**ReadJson** (JsonReader reader, Type objectType, object existingValue, JsonSerializer serializer)
	Not implemented, unnecessary because CanRead is false. More...
override void	**WriteJson** (JsonWriter writer, object value, JsonSerializer serializer)
	Write x and y. More...

Properties

override bool	**CanRead** [get]
	Return false, since default serializer does well. More...

Detailed Description

Newtonsoft.Json.JsonConverter for UnityEngine.Bounds.

Member Function Documentation

override bool CanConvert (Type objectType)

Determine if the type is UnityEngine.Bounds.

Parameters

> **objectType** Type of the object.

Returns

> true if this can convert the specified type; otherwise, false.

override object ReadJson (JsonReader reader,

                                Type objectType,

                                object existingValue,

                                JsonSerializer serializer

)

Not implemented, unnecessary because `CanRead` is false.

Returns

    The object value.

Parameters

    reader   The `Newtonsoft.Json.JsonReader` to read from.

    objectType   Type of the object.

    existingValue The existing value of object being read.

    serializer   The calling serializer.

---

override void WriteJson (JsonWriter writer,

                                object value,

                                JsonSerializer serializer

)

Write x and y.

Parameters

    writer   The `Newtonsoft.Json.JsonWriter` to write to.

    value   The value.

    serializer The calling serializer.

Property Documentation

override bool CanRead   `get`

Return `false`, since default serializer does well.

`true` if this instance can read; otherwise, `false`.

ColorConverter

Newtonsoft.Json.JsonConverter for UnityEngine.Color. More...

Inherits JsonConverter.

Public Member Functions

override bool	**CanConvert** (Type objectType)
	Determine if the type is UnityEngine.Color. More...
override object	**ReadJson** (JsonReader reader, Type objectType, object existingValue, JsonSerializer serializer)
	Not implemented, unnecessary because CanRead is false. More...
override void	**WriteJson** (JsonWriter writer, object value, JsonSerializer serializer)
	Write r, g, b and a. More...

Properties

override bool	**CanRead** [get]
	Return false, since default serializer does well. More...

Detailed Description

Newtonsoft.Json.JsonConverter for UnityEngine.Color.

Member Function Documentation

override bool CanConvert (Type objectType)

Determine if the type is UnityEngine.Color.

Parameters

    objectType Type of the object.

Returns

    true if this can convert the specified type; otherwise, false.

```
override object ReadJson ( JsonReader      reader,
                           Type            objectType,
                           object          existingValue,
                           JsonSerializer  serializer
                         )
```

Not implemented, unnecessary because `CanRead` is false.

Returns

The object value.

Parameters

reader	The `Newtonsoft.Json.JsonReader` to read from.
objectType	Type of the object.
existingValue	The existing value of object being read.
serializer	The calling serializer.

```
override void WriteJson ( JsonWriter      writer,
                          object          value,
                          JsonSerializer  serializer
                        )
```

Write r, g, b and a.

Parameters

writer	The `Newtonsoft.Json.JsonWriter` to write to.
value	The value.
serializer	The calling serializer.

Property Documentation

override bool CanRead   `get`

Return `false`, since default serializer does well.

`true` if this instance can read; otherwise, `false`.

Matrix4x4Converter

Newtonsoft.Json.JsonConverter for UnityEngine.Matrix4x4. More...

Inherits JsonConverter.

Public Member Functions

override bool	**CanConvert** (Type objectType)
	Determine if the type is `UnityEngine.Matrix4x4`. More...
override object	**ReadJson** (JsonReader reader, Type objectType, object existingValue, JsonSerializer serializer)
	Not implemented, unnecessary because `CanRead` is false. More...
override void	**WriteJson** (JsonWriter writer, object value, JsonSerializer serializer)
	Write the 16 components. More...

Properties

override bool	**CanRead** [get]
	Return `false`, since default serializer does well. More...

Detailed Description

Newtonsoft.Json.JsonConverter for UnityEngine.Matrix4x4.

Member Function Documentation

override bool CanConvert (Type objectType)

Determine if the type is `UnityEngine.Matrix4x4`.

Parameters

> **objectType** Type of the object.

Returns

> `true` if this can convert the specified type; otherwise, `false`.

```
override object ReadJson ( JsonReader    reader,
                           Type          objectType,
                           object        existingValue,
                           JsonSerializer serializer
                         )
```

Not implemented, unnecessary because `CanRead` is false.

Returns

The object value.

Parameters

reader   The `Newtonsoft.Json.JsonReader` to read from.

objectType   Type of the object.

existingValue The existing value of object being read.

serializer   The calling serializer.

```
override void WriteJson ( JsonWriter     writer,
                          object         value,
                          JsonSerializer serializer
                        )
```

Write the 16 components.

Parameters

writer   The `Newtonsoft.Json.JsonWriter` to write to.

value   The value.

serializer The calling serializer.

Property Documentation

override bool CanRead   `get`

Return `false`, since default serializer does well.

`true` if this instance can read; otherwise, `false`.

QuaternionConverter

Newtonsoft.Json.JsonConverter for UnityEngine.Quaternion. More...

Inherits JsonConverter.

Public Member Functions

override bool	**CanConvert** (Type objectType)
	Determine if the type is UnityEngine.Quaternion. More...
override object	**ReadJson** (JsonReader reader, Type objectType, object existingValue, JsonSerializer serializer)
	Not implemented, unnecessary because CanRead is false. More...
override void	**WriteJson** (JsonWriter writer, object value, JsonSerializer serializer)
	Write x, y, z and w. More...

Properties

override bool	**CanRead** [get]
	Return false, since default serializer does well. More...

Detailed Description

Newtonsoft.Json.JsonConverter for UnityEngine.Quaternion.

Member Function Documentation

override bool CanConvert (Type objectType)

Determine if the type is UnityEngine.Quaternion.

Parameters

> **objectType** Type of the object.

Returns

> true if this can convert the specified type; otherwise, false.

override object ReadJson (JsonReader	reader,
Type	objectType,
object	existingValue,
JsonSerializer	serializer
)	

Not implemented, unnecessary because `CanRead` is false.

Returns

    The object value.

Parameters

reader	The `Newtonsoft.Json.JsonReader` to read from.
objectType	Type of the object.
existingValue	The existing value of object being read.
serializer	The calling serializer.

override void WriteJson (JsonWriter	writer,
object	value,
JsonSerializer	serializer
)	

Write x, y, z and w.

Parameters

writer	The `Newtonsoft.Json.JsonWriter` to write to.
value	The value.
serializer	The calling serializer.

Property Documentation

override bool CanRead `get`

Return `false`, since default serializer does well.

`true` if this instance can read; otherwise, `false`.

RectConverter

Newtonsoft.Json.JsonConverter for UnityEngine.Rect. More...

Inherits JsonConverter.

Public Member Functions

override bool	**CanConvert** (Type objectType)
	Determine if the type is UnityEngine.Rect. More...
override object	**ReadJson** (JsonReader reader, Type objectType, object existingValue, JsonSerializer serializer)
	Not implemented, unnecessary because CanRead is false. More...
override void	**WriteJson** (JsonWriter writer, object value, JsonSerializer serializer)
	Write x, y, width and height. More...

Properties

override bool	**CanRead** [get]
	Return false, since default serializer does well. More...

Detailed Description

Newtonsoft.Json.JsonConverter for UnityEngine.Rect.

Member Function Documentation

override bool CanConvert (Type objectType)

Determine if the type is UnityEngine.Rect.

Parameters

  objectType Type of the object.

Returns

  true if this can convert the specified type; otherwise, false.

override object ReadJson (JsonReader	reader,
Type	objectType,
object	existingValue,
JsonSerializer	serializer
)	

Not implemented, unnecessary because `CanRead` is false.

Returns

The object value.

Parameters

reader	The `Newtonsoft.Json.JsonReader` to read from.
objectType	Type of the object.
existingValue	The existing value of object being read.
serializer	The calling serializer.

override void WriteJson (JsonWriter	writer,
object	value,
JsonSerializer	serializer
)	

Write `x`, `y`, `width` and `height`.

Parameters

writer	The `Newtonsoft.Json.JsonWriter` to write to.
value	The value.
serializer	The calling serializer.

Property Documentation

override bool CanRead `get`

Return `false`, since default serializer does well.

`true` if this instance can read; otherwise, `false`.

RectOffsetConverter

Newtonsoft.Json.JsonConverter for UnityEngine.RectOffset. More...

Inherits JsonConverter.

Public Member Functions

override bool	**CanConvert** (Type objectType)
	Determine if the type is `UnityEngine.RectOffset`. More...
override object	**ReadJson** (JsonReader reader, Type objectType, object existingValue, JsonSerializer serializer)
	Not implemented, unnecessary because `CanRead` is false. More...
override void	**WriteJson** (JsonWriter writer, object value, JsonSerializer serializer)
	Write `left`, `right`, `top` and `bottom`. More...

Properties

override bool	**CanRead** [get]
	Return `false`, since default serializer does well. More...

Detailed Description

Newtonsoft.Json.JsonConverter for UnityEngine.RectOffset.

Member Function Documentation

override bool CanConvert (Type objectType)

Determine if the type is `UnityEngine.RectOffset`.

Parameters

> **objectType** Type of the object.

Returns

> `true` if this can convert the specified type; otherwise, `false`.

override object ReadJson (JsonReader	reader,
Type	objectType,
object	existingValue,
JsonSerializer	serializer
)	

Not implemented, unnecessary because `CanRead` is false.

Returns

    The object value.

Parameters

reader	The `Newtonsoft.Json.JsonReader` to read from.
objectType	Type of the object.
existingValue	The existing value of object being read.
serializer	The calling serializer.

override void WriteJson (JsonWriter	writer,
object	value,
JsonSerializer	serializer
)	

Write `left`, `right`, `top` and `bottom`.

Parameters

writer	The `Newtonsoft.Json.JsonWriter` to write to.
value	The value.
serializer	The calling serializer.

Property Documentation

override bool CanRead `get`

Return `false`, since default serializer does well.

`true` if this instance can read; otherwise, `false`.

Vector2Converter

Newtonsoft.Json.JsonConverter for UnityEngine.Vector2. More...

Inherits JsonConverter.

Public Member Functions

override bool	**CanConvert** (Type objectType)
	Determine if the type is UnityEngine.Vector2. More...
override object	**ReadJson** (JsonReader reader, Type objectType, object existingValue, JsonSerializer serializer)
	Not implemented, unnecessary because CanRead is false. More...
override void	**WriteJson** (JsonWriter writer, object value, JsonSerializer serializer)
	Write x and y. More...

Properties

override bool	**CanRead** [get]
	Return false, since default serializer does well. More...

Detailed Description

Newtonsoft.Json.JsonConverter for UnityEngine.Vector2.

Member Function Documentation

override bool CanConvert (Type objectType)

Determine if the type is UnityEngine.Vector2.

Parameters

> **objectType** Type of the object.

Returns

> true if this can convert the specified type; otherwise, false.

override object ReadJson (JsonReader	reader,
	Type	objectType,
	object	existingValue,
	JsonSerializer	serializer
	)

Not implemented, unnecessary because `CanRead` is false.

Returns

The object value.

Parameters

reader	The `Newtonsoft.Json.JsonReader` to read from.
objectType	Type of the object.
existingValue	The existing value of object being read.
serializer	The calling serializer.

override void WriteJson (JsonWriter	writer,
	object	value,
	JsonSerializer	serializer
	)

Write `x` and `y`.

Parameters

writer	The `Newtonsoft.Json.JsonWriter` to write to.
value	The value.
serializer	The calling serializer.

Property Documentation

override bool CanRead   `get`

Return `false`, since default serializer does well.

`true` if this instance can read; otherwise, `false`.

Vector3Converter

Newtonsoft.Json.JsonConverter for UnityEngine.Vector3. More...

Inherits JsonConverter.

Public Member Functions

override bool	**CanConvert** (Type objectType)
	Determine if the type is UnityEngine.Vector3. More...
override object	**ReadJson** (JsonReader reader, Type objectType, object existingValue, JsonSerializer serializer)
	Not implemented, unnecessary because CanRead is false. More...
override void	**WriteJson** (JsonWriter writer, object value, JsonSerializer serializer)
	Write x, y and z. More...

Properties

override bool	**CanRead** [get]
	Return false, since default serializer does well. More...

Detailed Description

Newtonsoft.Json.JsonConverter for UnityEngine.Vector3.

Member Function Documentation

override bool CanConvert (Type objectType)

Determine if the type is UnityEngine.Vector3.

Parameters

> **objectType** Type of the object.

Returns

> true if this can convert the specified type; otherwise, false.

override object ReadJson (JsonReader **reader,**

Type **objectType,**

object **existingValue,**

JsonSerializer **serializer**

)

Not implemented, unnecessary because `CanRead` is false.

Returns

The object value.

Parameters

reader   The `Newtonsoft.Json.JsonReader` to read from.

objectType   Type of the object.

existingValue The existing value of object being read.

serializer   The calling serializer.

---

override void WriteJson (JsonWriter **writer,**

object **value,**

JsonSerializer **serializer**

)

Write x, y and z.

Parameters

writer   The `Newtonsoft.Json.JsonWriter` to write to.

value   The value.

serializer The calling serializer.

Property Documentation

override bool CanRead `get`

Return `false`, since default serializer does well.

`true` if this instance can read; otherwise, `false`.

Vector4Converter

Newtonsoft.Json.JsonConverter for UnityEngine.Vector4. More...

Inherits JsonConverter.

Public Member Functions

override bool	**CanConvert** (Type objectType)
	Determine if the type is `UnityEngine.Vector4`. More...
override object	**ReadJson** (JsonReader reader, Type objectType, object existingValue, JsonSerializer serializer)
	Not implemented, unnecessary because `CanRead` is false. More...
override void	**WriteJson** (JsonWriter writer, object value, JsonSerializer serializer)
	Write `x`, `y`, `z` and `w`. More...

Properties

override bool	**CanRead** [get]
	Return `false`, since default serializer does well. More...

Detailed Description

Newtonsoft.Json.JsonConverter for UnityEngine.Vector4.

Member Function Documentation

override bool CanConvert (Type objectType)

Determine if the type is `UnityEngine.Vector4`.

Parameters

    objectType Type of the object.

Returns

    `true` if this can convert the specified type; otherwise, `false`.

```
override object ReadJson ( JsonReader    reader,
                           Type          objectType,
                           object        existingValue,
                           JsonSerializer serializer
                         )
```

Not implemented, unnecessary because `CanRead` is false.

Returns

The object value.

Parameters

reader	The `Newtonsoft.Json.JsonReader` to read from.
objectType	Type of the object.
existingValue	The existing value of object being read.
serializer	The calling serializer.

```
override void WriteJson ( JsonWriter     writer,
                          object         value,
                          JsonSerializer serializer
                        )
```

Write x, y, z and w.

Parameters

writer	The `Newtonsoft.Json.JsonWriter` to write to.
value	The value.
serializer	The calling serializer.

Property Documentation

override bool CanRead   `get`

Return `false`, since default serializer does well.

`true` if this instance can read; otherwise, `false`.