

# 1 System.UriBuilder Class

```
2 [ILAsm]  
3 .class public UriBuilder extends System.Object  
  
4 [C#]  
5 public class UriBuilder
```

## 6 Assembly Info:

- 7 • *Name:* System
- 8 • *Public Key:* [00 00 00 00 00 00 00 00 04 00 00 00 00 00 00 00]
- 9 • *Version:* 2.0.x.x
- 10 • *Attributes:*
  - 11 ○ CLSCompliantAttribute(true)

## 12 Summary

13 Provides a mutable version of the System.Uri class.

## 14 Inherits From: System.Object

15

16 **Library:** Networking

17

18 **Thread Safety:** All public static members of this type are safe for multithreaded operations.  
19 No instance members are guaranteed to be thread safe.

20

## 21 Description

22 The System.Uri and System.UriBuilder classes both represent a Uniform Resource  
23 Identifier (URI). Instances of the System.Uri type are immutable: once the underlying  
24 URI is specified, neither it nor its components, or constituent parts, can be changed. The  
25 System.UriBuilder type permits modifications to the components of the URI it  
26 represents. The System.UriBuilder.Uri property provides the current contents of a  
27 System.UriBuilder as a System.Uri instance.

28

29 [*Note:* For more information on URI, see IETF RFC 2396.]

30

31

32

# UriBuilder(System.String, System.String, System.Int32, System.String, System.String) Constructor

```
[ILAsm]
public rtspecialname specialname instance void .ctor(string scheme, string
host, int32 port, string path, string extraValue)

[C#]
public UriBuilder(string scheme, string host, int port, string path,
string extraValue)
```

## Summary

Constructs and initializes a new instance of the `System.UriBuilder` class with the specified scheme, host, port number, path, and query string or fragment identifier.

## Parameters

Parameter	Description
<i>scheme</i>	A <code>System.String</code> containing the name of an Internet access protocol.
<i>host</i>	A <code>System.String</code> containing a DNS host name or IP address.
<i>port</i>	A <code>System.Int32</code> containing an IP port number.
<i>path</i>	A <code>System.String</code> containing the path for the resource.
<i>extraValue</i>	A <code>System.String</code> containing a query or fragment component.

## Description

This constructor creates a new instance of the `System.UriBuilder` class with its properties initialized as follows:

Property	Initial value
Fragment	If <i>extraValue</i> begins with a "#", <i>extraValue</i> ; otherwise <code>System.String.Empty</code> .
Host	<i>host</i>
Password	<code>System.String.Empty</code>

Path	<i>path</i>
Port	<i>port</i>
Query	If <i>extraValue</i> begins with a "?", <i>extraValue</i> ; otherwise <code>System.String.Empty</code> .
Scheme	<i>scheme</i>
UserName	<code>System.String.Empty</code>

1  
2 Before setting the `System.UriBuilder.Path` property, this constructor converts any  
3 backward slashes in *path* to forward slashes, and calls  
4 `System.Uri.EscapeString(path)`.

5 **Exceptions**

Exception	Condition
<b>System.ArgumentOutOfRangeException</b>	<i>port</i> is less than zero.
<b>System.ArgumentException</b>	<i>extraValue</i> is not null or <code>System.String.Empty</code> , and does not have as its first character a number sign ('#') indicating a fragment, or a question mark ('?') indicating a query.

6  
7

# 1 UriBuilder() Constructor

```
2 [ILAsm]  
3 public rtspecialname specialname instance void .ctor()  
4 [C#]  
5 public UriBuilder()
```

## 6 Summary

7 Constructs and initializes a new instance of the `System.UriBuilder` class.

## 8 Description

9 This constructor creates a new instance of the `System.UriBuilder` class with its  
10 properties initialized as follows:

Property	Initial value
Fragment	<code>System.String.Empty</code>
Host	<code>"loopback"</code>
Password	<code>System.String.Empty</code>
Path	<code>"/"</code>
Port	<code>80</code>
Query	<code>System.String.Empty</code>
Scheme	<code>System.Uri.UriSchemeHttp</code>
UserName	<code>System.String.Empty</code>

11

12

# 1 UriBuilder(System.String) Constructor

```
2 [ILAsm]  
3 public rtspecialname specialname instance void .ctor(string uri)  
4 [C#]  
5 public UriBuilder(string uri)
```

## 6 Summary

7 Constructs and initializes a new instance of the `System.UriBuilder` class using the  
8 specified URI.

## 9 Parameters

Parameter	Description
<i>uri</i>	A <code>System.String</code> containing a URI.

## 10 Description

12 This constructor checks for the presence of a scheme in *uri*. If no scheme is found,  
13 `System.Uri.UriSchemeHttp + System.Uri.SchemeDelimiter` are prepended to *uri*. The  
14 `System.Uri(System.String)` constructor is passed *uri*, and the components of the new  
15 `System.Uri` instance are used to initialize the properties of the `System.UriBuilder`  
16 instance being constructed.

17  
18 If *uri.Fragment* is not equal to `System.String.Empty`, *uri.Fragment* is copied to the  
19 `System.UriBuilder.Fragment` property of the current instance, otherwise *uri.Query* is  
20 copied to the `System.UriBuilder.Query` property of the current instance.

21  
22 The `Host`, `Port` and `Scheme` properties of the `System.Uri` instance are used to initialize  
23 the corresponding properties in the current instance. The `AbsolutePath` property of the  
24 `System.Uri` instance is used to initialize the `Path` property of the current instance.

25  
26 The `UserInfo` property of the `System.Uri` instance is used to initialize the `UserName` and  
27 `Password` properties of the current instance.

## 28 Exceptions

Exception	Condition
<code>System.ArgumentNullException</code>	<i>uri</i> is null.
<code>System.UriFormatException</code>	<i>uri</i> is a zero length string or contains only spaces. -or-

The parsing routine detected a scheme in an invalid form.

-or-

The parser detected more than two consecutive slashes in a URI that does not use the "file" scheme.

-or-

*uri* is in an invalid form and cannot be parsed.

1

2

# 1 UriBuilder(System.Uri) Constructor

```
2 [ILAsm]  
3 public rtspecialname specialname instance void .ctor(class System.Uri uri)  
4 [C#]  
5 public UriBuilder(Uri uri)
```

## 6 Summary

7 Constructs and initializes a new instance of the `System.UriBuilder` class with the  
8 specified `System.Uri` instance.

## 9 Parameters

Parameter	Description
<i>uri</i>	An instance of the <code>System.Uri</code> class.

10

## 11 Description

12 The components of the specified `System.Uri` instance are used to initialize the  
13 properties of the `System.UriBuilder` instance being constructed.

14

15 If *uri.Fragmant* is not equal to `System.String.Empty`, *uri.Fragmant* is copied to the  
16 `System.UriBuilder.Fragment` property of the current instance, otherwise *uri.Query* is  
17 copied to the `System.UriBuilder.Query` property of the current instance.

18

19 The `Host`, `Port` and `Scheme` properties of the `System.Uri` instance are used to initialize  
20 the corresponding properties in the current instance. The `AbsolutePath` property of the  
21 `System.Uri` instance is used to initialize the `Path` property of the current instance.

22

23 The `UserInfo` property of the `System.Uri` instance is used to initialize the `UserName` and  
24 `Password` properties of the current instance.

## 25 Exceptions

Exception	Condition
<code>System.NullReferenceException</code>	<i>uri</i> is null.

26

27

# 1 UriBuilder(System.String, System.String)

## 2 Constructor

```
3 [ILAsm]  
4 public rtspecialname specialname instance void .ctor(string schemeName,  
5 string hostName)  
  
6 [C#]  
7 public UriBuilder(string schemeName, string hostName)
```

### 8 Summary

9 Constructs and initializes a new instance of the `System.UriBuilder` class with the  
10 specified scheme and host.

### 11 Parameters

Parameter	Description
<i>schemeName</i>	A <code>System.String</code> containing the name of an Internet access protocol.
<i>hostName</i>	A <code>System.String</code> containing a DNS host name or IP address.

12

### 13 Description

14 This constructor creates a new instance of the `System.UriBuilder` class with its  
15 properties initialized as follows:

Property	Initial value
Fragment	<code>System.String.Empty</code>
Host	<i>hostName</i>
Password	<code>System.String.Empty</code>
Path	<code>"/"</code>
Port	<code>-1</code>
Query	<code>System.String.Empty</code>
Scheme	<i>schemeName</i>

UserName	System.String.Empty
----------	---------------------

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- 2
- 3
- 4

[*Note:* `System.UriBuilder.Port` is initialized to the value -1 to indicate the default port for the scheme should be used.]

# 1 UriBuilder(System.String, System.String, 2 System.Int32) Constructor

```
3 [ILAsm]  
4 public rtspecialname specialname instance void .ctor(string scheme, string  
5 host, int32 portNumber)  
  
6 [C#]  
7 public UriBuilder(string scheme, string host, int portNumber)
```

## 8 Summary

9 Constructs and initializes a new instance of the `System.UriBuilder` class with the  
10 specified scheme, host, and port.

## 11 Parameters

Parameter	Description
<i>scheme</i>	A <code>System.String</code> containing the name of an Internet access protocol.
<i>host</i>	A <code>System.String</code> containing a DNS host name or IP address.
<i>portNumber</i>	A <code>System.Int32</code> containing an IP port number.

## 12 13 Description

14 This constructor creates a new instance of the `System.UriBuilder` class with its  
15 properties initialized as follows:

Property	Initial value
Fragment	<code>System.String.Empty</code>
Host	<i>host</i>
Password	<code>System.String.Empty</code>
Path	<code>"/"</code>
Port	<i>portNumber</i>
Query	<code>System.String.Empty</code>

Scheme	<i>scheme</i>
UserName	System.String.Empty

1

## 2 Exceptions

Exception	Condition
<b>System.ArgumentOutOfRangeException</b>	<i>portNumber</i> is less than zero.

3

4

# 1 UriBuilder(System.String, System.String, 2 System.Int32, System.String) Constructor

```
3 [ILAsm]  
4 public rtspecialname specialname instance void .ctor(string scheme, string  
5 host, int32 port, string pathValue)  
  
6 [C#]  
7 public UriBuilder(string scheme, string host, int port, string pathValue)
```

## 8 Summary

9 Constructs and initializes a new instance of the `System.UriBuilder` class with the  
10 specified scheme, host, port number, and path.

## 11 Parameters

Parameter	Description
<i>scheme</i>	A <code>System.String</code> containing the name of an Internet access protocol.
<i>host</i>	A <code>System.String</code> containing a DNS host name or IP address.
<i>port</i>	A <code>System.Int32</code> containing an IP port number.
<i>pathValue</i>	A <code>System.String</code> containing the path for the resource.

12

## 13 Description

14 This constructor creates a new instance of the `System.UriBuilder` class with its  
15 properties initialized as follows:

Property	Initial value
Fragment	<code>System.String.Empty</code>
Host	<i>host</i>
Password	<code>System.String.Empty</code>
Path	<i>pathValue</i>
Port	<i>port</i>

Query	System.String.Empty
Scheme	<i>scheme</i>
UserName	System.String.Empty

1  
2 Before setting the `System.UriBuilder.Path` property, this constructor converts any  
3 backward slashes in *pathValue* to forward slashes, and calls  
4 `System.Uri.EscapeString(pathValue)`.

5 **Exceptions**

Exception	Condition
<code>System.ArgumentOutOfRangeException</code>	<i>port</i> is less than zero.

6  
7

# 1 UriBuilder.Equals(System.Object) Method

```
2 [ILAsm]  
3 .method public hidebysig virtual bool Equals(object rparam)  
4 [C#]  
5 public override bool Equals(object rparam)
```

## 6 Summary

7 Compares the current instance and the specified object for equality.

## 8 Parameters

Parameter	Description
<i>rparam</i>	The object to compare with the current instance. The string representation of this argument is used to construct a <code>System.Uri</code> for comparison.

9

## 10 Return Value

11 true if *rparam* represents the same URI as the current instance. If *rparam* is null,  
12 returns false.

## 13 Description

14 This method invokes `System.Uri.Equals(rparam.ToString())` on the `System.Uri`  
15 instance returned by the `System.UriBuilder.Uri` property of the current instance.

16  
17 [Note: This method overrides `System.Object.Equals.`]  
18  
19

20

# 1 UriBuilder.GetHashCode() Method

```
2 [ILAsm]  
3 .method public hidebysig virtual int32 GetHashCode()  
4 [C#]  
5 public override int GetHashCode()
```

## 6 Summary

7 Generates a hash code for the current instance.

## 8 Return Value

9 A `System.Int32` containing the hash code for this instance.

## 10 Description

11 The hash code is generated without the fragment component. For example, the URIs  
12 "http://www.contoso.com/index.htm#search" and "http://www.contoso.com/index.htm"  
13 produce the same hash code.

14 The algorithm used to generate the hash code is unspecified.

15 [Note: This method overrides `System.Object.GetHashCode()`.]  
16  
17  
18  
19

20

# 1 UriBuilder.ToString() Method

```
2 [ILAsm]  
3 .method public hidebysig virtual string ToString()  
4 [C#]  
5 public override string ToString()
```

## 6 Summary

7 Returns the escaped form of the URI represented by the current instance.

## 8 Return Value

9 A System.String containing the escaped URI contained in the current  
10 System.UriBuilder instance.

## 11 Description

12 The string returned by this method (shown here as uriString) is constructed as follows:

13 uriString = scheme + scheme delimiter + host.  
14

15  
16 If port != -1 and host != "", then uriString = uriString + ":" + port.  
17

18  
19 If host != "" and path != "" and path != "/", then uriString = uriString +  
20 "/".  
21

22  
23 uriString = uriString + path.  
24

25  
26 If fragment != "", then uriString = uriString + fragment, else uriString =  
27 uriString + query.  
28

29  
30  
31 [*Note:* This method overrides System.Object.ToString.]  
32

33

34

# 1 UriBuilder.Fragment Property

```
2 [ILAsm]  
3 .property string Fragment { public hidebysig specialname instance string  
4 get_Fragment() public hidebysig specialname instance void  
5 set_Fragment(string value) }  
  
6 [C#]  
7 public string Fragment { get; set; }
```

## 8 Summary

9 Gets or sets the fragment component of the current instance.

## 10 Property Value

11 A `System.String` containing the fragment component of the URI represented by the  
12 current instance.

## 13 Description

14 The `System.UriBuilder.Fragment` property contains any text following a fragment  
15 marker ('#') in the URI, including the marker itself. When setting the  
16 `System.UriBuilder.Fragment` property, the property value does not include the  
17 fragment marker as it is added to the property value by the set operation. Specifying  
18 `null` for the `System.UriBuilder.Fragment` property value sets the property to  
19 `System.String.Empty`. If `null` or `System.String.Empty` are specified in a set  
20 operation, the fragment marker is not added to the property value. The set operation  
21 does not escape the fragment value.

22  
23 Setting the `System.UriBuilder.Fragment` property to any value, including `null`, sets  
24 the `System.UriBuilder.Query` property to `System.String.Empty`.

25

# 1 UriBuilder.Host Property

```
2 [ILAsm]  
3 .property string Host { public hidebysig specialname instance string  
4 get_Host() public hidebysig specialname instance void set_Host(string  
5 value) }  
  
6 [C#]  
7 public string Host { get; set; }
```

## 8 Summary

9 Gets or sets the Domain Name System (DNS) host name or IP address of a machine  
10 that provides access to the resource identified by the current instance.

## 11 Property Value

12 A `System.String` containing the DNS host name or IP address of the host machine.

## 13 Description

14 Specifying `null` for a set operation sets this property to `System.String.Empty`.

15

# 1 UriBuilder.Password Property

```
2 [ILAsm]  
3 .property string Password { public hidebysig specialname instance string  
4 get_Password() public hidebysig specialname instance void  
5 set_Password(string value) }  
  
6 [C#]  
7 public string Password { get; set; }
```

## 8 Summary

9 Gets or sets the password information used to access the resource represented by the  
10 current instance.

## 11 Property Value

12 A `System.String` containing the password used to access the resource represented by  
13 the current instance.

## 14 Description

15 Specifying `null` for a set operation sets this property to `System.String.Empty`.

16

# 1 UriBuilder.Path Property

```
2 [ILAsm]  
3 .property string Path { public hidebysig specialname instance string  
4 get_Path() public hidebysig specialname instance void set_Path(string  
5 value) }  
  
6 [C#]  
7 public string Path { get; set; }
```

## 8 Summary

9 Gets or sets the path to the resource represented by the current instance.

## 10 Property Value

11 A `System.String` containing the path to the resource represented by the current  
12 instance.

## 13 Description

14 This property returns the escaped form of the path information in the current instance.  
15 Values specified for set operations are escaped, and any backslashes are converted to  
16 forward slashes.

17  
18 Specifying `null` or `System.String.Empty` for a set operation sets this property to `"/`.

19

# 1 UriBuilder.Port Property

```
2 [ILAsm]  
3 .property int32 Port { public hidebysig specialname instance int32  
4 get_Port() public hidebysig specialname instance void set_Port(int32  
5 value) }  
  
6 [C#]  
7 public int Port { get; set; }
```

## 8 Summary

9 Gets or sets the port number used to connect to the `System.UriBuilder.Host`  
10 referenced by the current instance.

## 11 Property Value

12 A `System.Int32` containing a non-negative port number or -1.

## 13 Description

14 If no port was specified, the `System.Uri.Port` property returns the default port as  
15 determined by the scheme of the current instance. A port value of -1 indicates that the  
16 current scheme does not use a port, as is the case when the scheme of the current  
17 instance is the `System.Uri.UriSchemeFile` scheme.

18  
19 [*Note:* For the list of default ports used with each scheme, see `System.Uri.Port`.]  
20  
21

## 22 Exceptions

Exception	Condition
<code>System.ArgumentOutOfRangeException</code>	The value specified for a set operation was less than zero.

23

24

# 1 UriBuilder.Query Property

```
2 [ILAsm]
3 .property string Query { public hidebysig specialname instance string
4 get_Query() public hidebysig specialname instance void set_Query(string
5 value) }
6 [C#]
7 public string Query { get; set; }
```

## 8 Summary

9 Gets or sets the query component of the current instance.

## 10 Property Value

11 A `System.String` containing the query component of the URI represented by the current  
12 instance.

## 13 Description

14 The `System.UriBuilder.Query` property contains any text following a query marker  
15 ('?') in the URI, including the marker itself. When setting the `System.UriBuilder.Query`  
16 property, the property value does not include the query marker as it is added to the  
17 property value by the set operation. Specifying `null` for the `System.UriBuilder.Query`  
18 property value sets the property to `System.String.Empty`. If `null` or  
19 `System.String.Empty` are specified in a set operation, the query marker is not added to  
20 the property value. The set operation does not escape the query value.

21  
22 Setting the `System.UriBuilder.Query` property to any value, including `null`, sets the  
23 `System.UriBuilder.Fragment` property to `System.String.Empty`.

24

# 1 UriBuilder.Scheme Property

```
2 [ILAsm]  
3 .property string Scheme { public hidebysig specialname instance string  
4 get_Scheme() public hidebysig specialname instance void set_Scheme(string  
5 value) }  
  
6 [C#]  
7 public string Scheme { get; set; }
```

## 8 Summary

9 Gets or sets the scheme component of the current instance.

## 10 Property Value

11 A `System.String` containing the scheme component of the current instance.

## 12 Description

13 Specifying `null` for a set operation sets this property to `System.String.Empty`. If the  
14 value specified for a set operation contains a colon (":"), the scheme is set using the  
15 substring that includes all characters from the start of the value up to, but not including  
16 the colon. The characters in the value are converted to lower case.

17

# 1 UriBuilder.Uri Property

```
2 [ILAsm]  
3 .property class System.Uri Uri { public hidebysig specialname instance  
4 class System.Uri get_Uri() }  
  
5 [C#]  
6 public Uri Uri { get; }
```

## 7 Summary

8 Gets a `System.Uri` instance constructed using the current instance.

## 9 Property Value

10 A `System.Uri` containing the URI components of the current instance.

## 11 Description

12 This property returns the same `System.Uri` instance until modifications are made to the  
13 current instance, at which time a new `System.Uri` instance is constructed by passing  
14 the string representation of the current instance to the `System.Uri(System.String)`  
15 constructor.

## 16 Exceptions

Exception	Condition
<b>System.UriFormatException</b>	The URI constructed using the string representation of the current instance is in an invalid form.

17

18

# 1 UriBuilder.UserName Property

```
2 [ILAsm]  
3 .property string UserName { public hidebysig specialname instance string  
4 get_UserName() public hidebysig specialname instance void  
5 set_UserName(string value) }  
  
6 [C#]  
7 public string UserName { get; set; }
```

## 8 Summary

9 Gets or sets the user name information used to access the resource identified by the  
10 current instance.

## 11 Property Value

12 A `System.String` containing the user name used to access the resource identified by  
13 the current instance.

## 14 Description

15 Specifying `null` for a set operation sets this property to `System.String.Empty`.

16