

1 System.Text.ASCIIEncoding Class

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```
4 [ILASM]  
5 .class public serializable ASCIIEncoding extends  
6 System.Text.Encoding  
7 [C#]  
8 public class ASCIIEncoding: Encoding
```

9 Assembly Info:

- 10 • *Name:* mscorlib
- 11 • *Public Key:* [00 00 00 00 00 00 00 00 04 00 00 00 00 00 00]
- 12 • *Version:* 1.0.x.x
- 13 • *Attributes:*
 - 14 ○ CLSCompliantAttribute(true)

15 Summary

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17 Represents an ASCII character implementation of
18 **System.Text.Encoding**.

19 Inherits From: System.Text.Encoding

20

21 **Library:** BCL

22

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

25

26 Description

27 **System.Text.ASCIIEncoding** encodes characters as single 7-bit
28 ASCII characters. This encoding supports Unicode code points between
29 U+0000 and U+007F, inclusive.

30

31 [Note: The limited range of code points supported by
32 **System.Text.ASCIIEncoding** makes ASCII inadequate for many
33 internationalized applications. **System.Text.UTF8Encoding** and
34 **System.Text.UnicodeEncoding** provide encodings that are more
35 suitable for internationalized applications.]

36

1 `ASCIIEncoding()` Constructor

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

6 **Summary**

7 Constructs a new instance of the **System.Text.ASCIIEncoding** class.

8

1 ASCIIEncoding.GetByteCount(System.Char 2 r[], System.Int32, System.Int32) Method

```
3 [ILASM]  
4 .method public hidebysig virtual int32 GetByteCount(class  
5 System.Char[] chars, int32 index, int32 count)  
  
6 [C#]  
7 public override int GetByteCount(char[] chars, int index,  
8 int count)
```

9 Summary

10 Determines the exact number of bytes required to encode the specified
11 range of the specified array of characters as ASCII-encoded
12 characters.

13 Parameters

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Parameter	Description
<i>chars</i>	A System.Char array containing the characters to encode as ASCII-encoded characters.
<i>index</i>	A System.Int32 that specifies the first index of <i>chars</i> to encode.
<i>count</i>	A System.Int32 that specifies the number of elements in <i>chars</i> to encode.

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17 Return Value

19 A **System.Int32** containing the number of bytes required to encode
20 the range in *chars* from *index* to *index* + *count* as ASCII-encoded
21 characters.

22 Description

23 [Note: This method overrides
24 **System.Text.Encoding.GetByteCount.**]

25 Exceptions

26
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Exception	Condition
System.ArgumentNullException	<i>chars</i> is null .
System.ArgumentOutOfRangeException	<i>index</i> < 0. -or-

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count < 0.

-or-

index and *count* do not specify a valid range in *chars* (i.e. (*index* + *count*) > *chars.Length*).

1 ASCIIEncoding.GetByteCount(System.String) Method

```
3 [ILASM]  
4 .method public hidebysig virtual int32 GetByteCount(string  
5 chars)  
  
6 [C#]  
7 public override int GetByteCount(string chars)
```

8 Summary

9 Determines the exact number of bytes required to encode the specified
10 string as ASCII-encoded characters.

11 Parameters

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Parameter	Description
<i>chars</i>	A System.String to encode as ASCII-encoded characters.

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Return Value

17 A **System.Int32** containing the number of bytes required to encode
18 *chars* as ASCII-encoded characters.

19 Description

20 [Note: This method overrides
21 **System.Text.Encoding.GetByteCount.**]

22 Exceptions

23
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Exception	Condition
System.ArgumentNullException	<i>chars</i> is null .

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1 ASCIIEncoding.GetBytes(System.String, 2 System.Int32, System.Int32, 3 System.Byte[], System.Int32) Method

```
4 [ILASM]  
5 .method public hidebysig virtual int32 GetBytes(string  
6 chars, int32 charIndex, int32 charCount, class  
7 System.Byte[] bytes, int32 byteIndex)  
  
8 [C#]  
9 public override int GetBytes(string chars, int charIndex,  
10 int charCount, byte[] bytes, int byteIndex)
```

11 Summary

12 Encodes the specified range of the specified string into the specified
13 range of the specified array of bytes as ASCII-encoded characters.

14 Parameters

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Parameter	Description
<i>chars</i>	A System.String to encode as ASCII-encoded characters.
<i>charIndex</i>	A System.Int32 that specifies the first index of <i>chars</i> from which to encode.
<i>charCount</i>	A System.Int32 that specifies the number of elements in <i>chars</i> to encode.
<i>bytes</i>	A System.Byte array to encode.
<i>byteIndex</i>	A System.Int32 that specifies the first index of <i>bytes</i> to encode into.

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Return Value

20 A **System.Int32** whose value equals the number of bytes encoded
21 into *bytes* as ASCII-encoded characters.

22 Description

23 Every **System.Char** object in *chars* that is encoded into *bytes* and
24 that does not have an ASCII equivalent (i.e. has a code point greater
25 than U+007f) will be encoded as a question mark ('?').

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[Note: This method overrides **System.Text.Encoding.GetBytes.**]

1 Exceptions
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Exception	Condition
System.ArgumentException	$(bytes.Length - byteIndex) < charCount$.
System.ArgumentNullException	$chars$ is null . -or- $bytes$ is null .
System.ArgumentOutOfRangeException	$charIndex < 0$. -or- $charCount < 0$. -or- $(chars.Length - charIndex) < charCount$. -or- $byteIndex < 0$. -or- $byteIndex > bytes.Length$.

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1 ASCIIEncoding.GetBytes(System.Char[], 2 System.Int32, System.Int32, 3 System.Byte[], System.Int32) Method

```
4 [ILASM]  
5 .method public hidebysig virtual int32 GetBytes(class  
6 System.Char[] chars, int32 charIndex, int32 charCount,  
7 class System.Byte[] bytes, int32 byteIndex)  
  
8 [C#]  
9 public override int GetBytes(char[] chars, int charIndex,  
10 int charCount, byte[] bytes, int byteIndex)
```

11 Summary

12 Encodes the specified range of the specified array of characters into
13 the specified range of the specified array of bytes as ASCII-
14 encoded characters.

15 Parameters

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Parameter	Description
<i>chars</i>	A System.Char array containing the characters to encode as ASCII- encoded characters.
<i>charIndex</i>	A System.Int32 that specifies the first index of <i>chars</i> to encode.
<i>charCount</i>	A System.Int32 that specifies the number of elements in <i>chars</i> to encode.
<i>bytes</i>	A System.Byte array to encode.
<i>byteIndex</i>	A System.Int32 that specifies the first index of <i>bytes</i> to encode into.

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Return Value

21 A **System.Int32** whose value equals the number of bytes encoded
22 into *bytes* as ASCII-encoded characters.

23 Description

24 Every **System.Char** object in *chars* that is encoded into *bytes* and
25 that does not have an ASCII equivalent (i.e. has a code point greater
26 than U+007f) will be encoded as a question mark ('?').
27

28 [Note: This method overrides **System.Text.Encoding.GetBytes.**]

1 Exceptions
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Exception	Condition
System.ArgumentException	$(bytes.Length - byteIndex) < charCount$.
System.ArgumentNullException	$chars$ is null . -or- $bytes$ is null .
System.ArgumentOutOfRangeException	$charIndex < 0$. -or- $charCount < 0$. -or- $(chars.Length - charIndex) < charCount$. -or- $byteIndex < 0$. -or- $byteIndex > bytes.Length$.

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1 `ASCIIEncoding.GetCharCount(System.Byte` 2 `e[], System.Int32, System.Int32)` Method

```
3 [ILASM]  
4 .method public hidebysig virtual int32 GetCharCount(class  
5 System.Byte[] bytes, int32 index, int32 count)  
  
6 [C#]  
7 public override int GetCharCount(byte[] bytes, int index,  
8 int count)
```

9 Summary

10 Determines the exact number of characters that will be produced by
11 decoding the specified range of the specified array of bytes as ASCII-
12 encoded characters.

13 Parameters

Parameter	Description
<i>bytes</i>	A System.Byte array to decode as ASCII-encoded characters.
<i>index</i>	A System.Int32 that specifies the first index in <i>bytes</i> to decode.
<i>count</i>	A System.Int32 that specifies the number elements in <i>bytes</i> to decode.

16 Return Value

19 A **System.Int32** whose value equals the number of characters a call
20 to **System.Text.ASCIIEncoding.GetChars** will produce if presented
21 with the specified range of *bytes*.

22
23 [Note: This value does not take into account the state in which the
24 current instance was left following the last call to
25 **System.Text.ASCIIEncoding.GetChars**. This contrasts with
26 **System.Text.Decoder.GetChars**, which maintains state information
27 across calls.]

28 Description

29 [Note: This method overrides
30 **System.Text.Encoding.GetCharCount**.]

31 Exceptions

Exception	Condition
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System.ArgumentNullException	<i>bytes</i> is null .
System.ArgumentOutOfRangeException	<i>index</i> < 0. -or- <i>count</i> < 0. -or- (<i>bytes.Length</i> - <i>index</i>) < <i>count</i> .

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1 ASCIIEncoding.GetChars(System.Byte[], 2 System.Int32, System.Int32, 3 System.Char[], System.Int32) Method

```
4 [ILASM]  
5 .method public hidebysig virtual int32 GetChars(class  
6 System.Byte[] bytes, int32 byteIndex, int32 byteCount,  
7 class System.Char[] chars, int32 charIndex)  
  
8 [C#]  
9 public override int GetChars(byte[] bytes, int byteIndex,  
10 int byteCount, char[] chars, int charIndex)
```

11 Summary

12 Decodes the specified range of the specified array of bytes into the
13 specified range of the specified array of characters as ASCII-encoded
14 characters.

15 Parameters

Parameter	Description
<i>bytes</i>	A System.Byte array to decode as ASCII-encoded characters.
<i>byteIndex</i>	A System.Int32 that specifies the first index of <i>bytes</i> from which to decode.
<i>byteCount</i>	A System.Int32 that specifies the number elements in <i>bytes</i> to decode.
<i>chars</i>	A System.Char array of characters to decode into.
<i>charIndex</i>	A System.Int32 that specifies the first index of <i>chars</i> to store the decoded bytes.

18 Return Value

19 A **System.Int32** whose value equals the number of characters
20 decoded into *chars* as ASCII-encoded characters.

23 Description

24 [Note: This method overrides **System.Text.Encoding.GetChars**.

25
26 **System.Text.ASCIIEncoding.GetChars** can be used to determine
27 the exact number of characters that will be produced for a specified
28 range of bytes. Alternatively, the
29 **System.Text.ASCIIEncoding.GetMaxCharCount** method can be
30 used to determine the maximum number of characters that will be

1 produced for a specified number of bytes, regardless of the actual byte
2 values.]

3 **Exceptions**

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Exception	Condition
System.ArgumentException	<i>(chars.Length - charIndex) < byteCount.</i>
System.ArgumentNullException	<i>bytes</i> is null . -or- <i>chars</i> is null .
System.ArgumentOutOfRangeException	<i>byteIndex < 0.</i> -or- <i>byteCount < 0.</i> -or- <i>(bytes.Length - byteIndex) < byteCount.</i> -or- <i>charIndex < 0.</i> -or- <i>charIndex > chars.Length.</i>

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1 ASCIIEncoding.GetMaxByteCount(System. 2 Int32) Method

```
3 [ILASM]  
4 .method public hidebysig virtual int32  
5 GetMaxByteCount(int32 charCount)  
  
6 [C#]  
7 public override int GetMaxByteCount(int charCount)
```

8 Summary

9 Returns the maximum number of bytes required to encode the
10 specified number of characters as ASCII-encoded characters,
11 regardless of the actual character values.

12 Parameters

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Parameter	Description
<i>charCount</i>	A System.Int32 that specifies the number of characters to encode as ASCII-encoded characters.

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16 Return Value

18 A **System.Int32** containing the maximum number of bytes required
19 to encode *charCount* characters as ASCII-encoded characters.

20 Description

21 [Note: This method overrides
22 **System.Text.Encoding.GetMaxByteCount**.

23
24 Use this method to determine a minimum buffer size for byte arrays
25 passed to the **System.Text.ASCIIEncoding.GetBytes** or
26 **System.Text.Encoding.GetBytes** method for the current instance.
27 Using this minimum buffer size can help ensure that buffer overflow
28 exceptions do not occur.]

29 Exceptions

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Exception	Condition
System.ArgumentOutOfRangeException	<i>charCount</i> < 0.

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1 `ASCIIEncoding.GetMaxCharCount(System.Int32)` Method

```
3 [ILASM]  
4 .method public hidebysig virtual int32  
5 GetMaxCharCount(int32 byteCount)  
  
6 [C#]  
7 public override int GetMaxCharCount(int byteCount)
```

8 Summary

9 Gets the maximum number of characters produced by decoding a
10 specified number of bytes as ASCII-encoded characters, regardless of
11 the actual byte values.

12 Parameters

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Parameter	Description
<i>byteCount</i>	A System.Int32 that specifies the number of bytes to decode as ASCII-encoded characters.

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16 Return Value

18 A **System.Int32** containing the maximum number of characters that
19 would be produced by decoding *byteCount* bytes as ASCII-encoded
20 characters.

21 Description

22 [Note: This method overrides
23 **System.Text.Encoding.GetMaxCharCount**.

24
25 Use this method to determine the minimum buffer size for character
26 arrays passed to the **System.Text.ASCIIEncoding.GetChars** or the
27 **System.Text.Encoding.GetChars** methods. Using this minimum
28 buffer size can help ensure that buffer overflow exceptions do not
29 occur.]

30 Exceptions

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Exception	Condition
System.ArgumentOutOfRangeException	<i>byteCount</i> < 0.

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1 ASCIIEncoding.GetString(System.Byte[], 2 System.Int32, System.Int32) Method

```
3 [ILASM]  
4 .method public hidebysig virtual string GetString(class  
5 System.Byte[] bytes, int32 byteIndex, int32 byteCount)  
  
6 [C#]  
7 public override string GetString(byte[] bytes, int  
8 byteIndex, int byteCount)
```

9 Summary

10 Decodes the specified range of the specified array of bytes as a string
11 of ASCII-encoded characters.

12 Parameters

13
14

Parameter	Description
<i>bytes</i>	A System.Byte array to decode as ASCII-encoded characters.
<i>byteIndex</i>	A System.Int32 that specifies the first index of <i>bytes</i> from which to decode.
<i>byteCount</i>	A System.Int32 that specifies the number of elements in <i>bytes</i> to decode.

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Return Value

18 A **System.String** object containing the decoded representation of the
19 range in *bytes* from *byteIndex* to *byteIndex* + *byteCount* as ASCII-
20 encoded characters.

21 Description

22 [Note: This method overrides **System.Text.Encoding.GetString**.]

23 Exceptions

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25

Exception	Condition
System.ArgumentNullException	<i>bytes</i> is null .
System.ArgumentOutOfRangeException	<i>byteIndex</i> < 0.

1
2
3

-or-

byteCount < 0.

-or-

(bytes.Length - byteIndex) < byteCount.

1 ASCIIEncoding.GetString(System.Byte[])

2 Method

```
3 [ILASM]  
4 .method public hidebysig virtual string GetString(class  
5 System.Byte[] bytes)  
  
6 [C#]  
7 public override string GetString(byte[] bytes)
```

8 Summary

9 Decodes the specified array of bytes as a string of ASCII-encoded
10 characters.

11 Parameters

12
13

Parameter	Description
<i>bytes</i>	A System.Byte array to decode as ASCII-encoded characters.

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15 Return Value

17 A **System.String** containing the decoded representation of *bytes* as
18 ASCII-encoded characters.

19 Description

20 [Note: This method overrides **System.Text.Encoding.GetString**.]

21 Exceptions

22
23

Exception	Condition
System.ArgumentNullException	<i>bytes</i> is null .

24
25