System.Text.ASCIIEncoding Class

```
[ILASM]
.class public serializable ASCIIEncoding extends
System.Text.Encoding

[C#]
public class ASCIIEncoding: Encoding
```

Assembly Info:

- *Name:* mscorlib
- *Public Key:* [00 00 00 00 00 00 00 00 04 00 00 00 00 00 00 00]
- *Version:* 1.0.x.x
- *Attributes:*
  - CLSCompliantAttribute(true)

Summary

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

Inherits From: System.Text.Encoding

Library: BCL

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

Description

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

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

ASCIIEncoding() Constructor

[ILASM]
```
public rtspecialname specialname instance void .ctor()
```

[C#]
```
public ASCIIEncoding()
```

Summary

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

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

```
[ILASM]
.method public hidebysig virtual int32 GetByteCount(class
System.Char[] chars, int32 index, int32 count)

[C#]
public override int GetByteCount(char[] chars, int index,
int count)
```

Summary

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

Parameters

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

Return Value

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

Description

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

Exceptions

Exception	Condition
System.ArgumentNullException	*chars* is **null**.
System.ArgumentOutOfRangeException	*index* < 0. -or-

	count < 0. -or- *index* and *count* do not specify a valid range in *chars* (i.e. (*index* + *count*) > *chars*.Length).

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ASCIIEncoding.GetByteCount(System.String) Method

```
[ILASM]
.method public hidebysig virtual int32 GetByteCount(string
chars)

[C#]
public override int GetByteCount(string chars)
```

Summary

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

Parameters

Parameter	Description
chars	A **System.String** to encode as ASCII-encoded characters.

Return Value

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

Description

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

Exceptions

Exception	Condition
System.ArgumentNullException	*chars* is **null**.

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

```
[ILASM]
.method public hidebysig virtual int32 GetBytes(string
chars, int32 charIndex, int32 charCount, class
System.Byte[] bytes, int32 byteIndex)

[C#]
public override int GetBytes(string chars, int charIndex,
int charCount, byte[] bytes, int byteIndex)
```

Summary

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

Parameters

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

Return Value

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

Description

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

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

Exceptions

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.

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

```
[ILASM]
.method public hidebysig virtual int32 GetBytes(class
System.Char[] chars, int32 charIndex, int32 charCount,
class System.Byte[] bytes, int32 byteIndex)

[C#]
public override int GetBytes(char[] chars, int charIndex,
int charCount, byte[] bytes, int byteIndex)
```

Summary

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

Parameters

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

Return Value

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

Description

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

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

Exceptions

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.

ASCIIEncoding.GetCharCount(System.Byte[], System.Int32, System.Int32) Method

```
[ILASM]
.method public hidebysig virtual int32 GetCharCount(class
System.Byte[] bytes, int32 index, int32 count)

[C#]
public override int GetCharCount(byte[] bytes, int index,
int count)
```

Summary

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

Parameters

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

Return Value

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

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

Description

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

Exceptions

Exception	Condition

System.ArgumentNullException	*bytes* is **null**.
System.ArgumentOutOfRangeException	*index* < 0. -or- *count* < 0. -or- (*bytes*.Length - *index*) < *count*.

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

```
[ILASM]
.method public hidebysig virtual int32 GetChars(class
System.Byte[] bytes, int32 byteIndex, int32 byteCount,
class System.Char[] chars, int32 charIndex)

[C#]
public override int GetChars(byte[] bytes, int byteIndex,
int byteCount, char[] chars, int charIndex)
```

Summary

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

Parameters

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

Return Value

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

Description

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

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

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

Exceptions

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

ASCIIEncoding.GetMaxByteCount(System.Int32) Method

```
[ILASM]
.method public hidebysig virtual int32
GetMaxByteCount(int32 charCount)

[C#]
public override int GetMaxByteCount(int charCount)
```

Summary

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

Parameters

Parameter	Description
charCount	A **System.Int32** that specifies the number of characters to encode as ASCII-encoded characters.

Return Value

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

Description

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

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

Exceptions

Exception	Condition
System.ArgumentOutOfRangeException	*charCount* < 0.

ASCIIEncoding.GetMaxCharCount(System.Int32) Method

```
[ILASM]
.method public hidebysig virtual int32
GetMaxCharCount(int32 byteCount)

[C#]
public override int GetMaxCharCount(int byteCount)
```

Summary

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

Parameters

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

Return Value

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

Description

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

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

Exceptions

Exception	Condition
System.ArgumentOutOfRangeException	*byteCount* < 0.

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

```
[ILASM]
.method public hidebysig virtual string GetString(class
System.Byte[] bytes, int32 byteIndex, int32 byteCount)

[C#]
public override string GetString(byte[] bytes, int
byteIndex, int byteCount)
```

Summary

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

Parameters

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

Return Value

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

Description

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

Exceptions

Exception	Condition
System.ArgumentNullException	*bytes* is **null**.
System.ArgumentOutOfRangeException	*byteIndex* < 0.

	-or- *byteCount* < 0. -or- (*bytes*.Length - *byteIndex*) < *byteCount*.

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ASCIIEncoding.GetString(System.Byte[]) Method

```
[ILASM]
.method public hidebysig virtual string GetString(class
System.Byte[] bytes)

[C#]
public override string GetString(byte[] bytes)
```

Summary

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

Parameters

Parameter	Description
bytes	A **System.Byte** array to decode as ASCII-encoded characters.

Return Value

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

Description

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

Exceptions

Exception	Condition
System.ArgumentNullException	*bytes* is **null**.