

# 1 System.IO.File Class

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

## 6 Assembly Info:

- 7 • *Name:* mscorlib
- 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 information and performs operations on files.

## 14 Inherits From: System.Object

15

16 **Library:** BCL

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 Implementations of this class are required to preserve the case of path strings.  
23 Implementations are required to be case sensitive if and only if the platform is case-  
24 sensitive.

25

26 The following table describes the enumerations that are used to customize the behavior  
27 of various System.IO.File methods.

Enumeration	Description
System.IO.FileAccess	Specifies read and write access to a file.
System.IO.FileShare	Specifies the level of access permitted for a file that is already in use.
System.IO.FileMode	Specifies whether the contents of an existing file are preserved or overwritten, and whether requests to create an existing file cause an exception.

1

2

# 1 File.AppendText(System.String) Method

```
2 [ILAsm]  
3 .method public hidebysig static class System.IO.StreamWriter  
4 AppendText(string path)  
  
5 [C#]  
6 public static StreamWriter AppendText(string path)
```

## 7 Summary

8 Appends UTF-8 encoded text to an existing file.

## 9 Parameters

Parameter	Description
<i>path</i>	A System.String containing the name of the file to append to.

10

## 11 Return Value

12 A System.IO.StreamWriter that appends UTF-8 encoded text to the specified file.

## 13 Description

14 This method is equivalent to System.IO.StreamWriter (*path*, true ). If the file specified  
15 by *path* does not exist, it is created. If the file does exist, writes to the  
16 System.IO.StreamWriter append text to the file. Additional threads are permitted to  
17 read the file while it is open.

18

19 The *path* argument is permitted to specify relative or absolute path information. Relative  
20 path information is interpreted as relative to the current working directory. [Note: To  
21 obtain the current working directory, see  
22 System.IO.Directory.GetCurrentDirectory.]

23

24

## 25 Exceptions

Exception	Condition
<b>System.ArgumentException</b>	<i>path</i> is a zero-length string, contains only white space, or contains one or more implementation-specific invalid characters.
<b>System.ArgumentNullException</b>	<i>path</i> is null.

<b>System.IO.DirectoryNotFoundException</b>	The directory information specified in <i>path</i> was not found.
<b>System.IO.Exception</b>	A general I/O exception occurred, such as trying to access a CD-ROM drive whose tray is open.
<b>System.IO.NotSupportedException</b>	<i>path</i> is in an implementation-specific invalid format.
<b>System.IO.PathTooLongException</b>	The length of <i>path</i> or the absolute path information for <i>path</i> exceeds the implementation-specific maximum length.
<b>System.UnauthorizedAccessException</b>	Access is denied. The caller does not have the required permission.

1

2 **Permissions**

Permission	Description
<b>System.Security.Permissions.FileIOPermission</b>	Requires permission to write to the specified file. See <code>System.Security.Permissions.FileIOPermissionAccess.Write</code> .

3

4

# 1 File.Copy(System.String, System.String)

## 2 Method

```
3 [ILAsm]  
4 .method public hidebysig static void Copy(string sourceFileName, string  
5 destFileName)  
  
6 [C#]  
7 public static void Copy(string sourceFileName, string destFileName)
```

### 8 Summary

9 Copies the specified file to a new location.

### 10 Parameters

Parameter	Description
<i>sourceFileName</i>	A System.String containing the name of the file to copy.
<i>destFileName</i>	A System.String containing the name of the destination file. Cannot specify a directory or an existing file.

11

### 12 Description

13 This method is equivalent to System.IO.File.Copy (*sourceFileName*, *destFileName*,  
14 false).

15

16 The *sourceFileName* and *destFileName* arguments are permitted to specify relative or  
17 absolute path information. Relative path information is interpreted as relative to the  
18 current working directory. [Note: To obtain the current working directory, see  
19 System.IO.Directory.GetCurrentDirectory.]

20

21

### 22 Exceptions

Exception	Condition
<b>System.ArgumentException</b>	<i>sourceFileName</i> or <i>destFileName</i> is a zero-length string, contains only white space, or contains one or more implementation-specific invalid characters.  -or-

	<i>sourceFileName</i> or <i>destFileName</i> specifies a directory.
<b>System.ArgumentNullException</b>	<i>sourceFileName</i> or <i>destFileName</i> is null.
<b>System.IO.DirectoryNotFoundException</b>	Directory information in <i>sourceFileName</i> or <i>destFileName</i> was not found.
<b>System.IO.FileNotFoundException</b>	<i>sourceFileName</i> was not found.
<b>System.IO.IOException</b>	<i>destFileName</i> exists.  -or-  An I/O error occurred.
<b>System.IO.PathTooLongException</b>	The length or the absolute path information for <i>sourceFileName</i> or <i>destFileName</i> exceeds the system-defined maximum length.
<b>System.UnauthorizedAccessException</b>	The caller does not have the required permission.

1

## 2 Permissions

Permission	Description
<b>System.Security.Permissions.FileIOPermission</b>	Requires permission to read the source file and write the destination file. See <code>System.Security.Permissions.FileIOPermissionAccess.Read</code> and <code>System.Security.Permissions.FileIOPermissionAccess.Write</code> .

3

4

# 1 File.Copy(System.String, System.String, 2 System.Boolean) Method

```
3 [ILAsm]  
4 .method public hidebysig static void Copy(string sourceFileName, string  
5 destFileName, bool overwrite)  
  
6 [C#]  
7 public static void Copy(string sourceFileName, string destFileName, bool  
8 overwrite)
```

## 9 Summary

10 Copies the specified file to a new location.

## 11 Parameters

Parameter	Description
<i>sourceFileName</i>	A System.String containing the name of the file to copy.
<i>destFileName</i>	A System.String containing the name of the destination file. Cannot specify the name of a directory.
<i>overwrite</i>	A System.Boolean value. Specify true if the destination file can be overwritten; otherwise false.

## 12 13 Description

14 The *sourceFileName* and *destFileName* arguments are permitted to specify relative or  
15 absolute path information. Relative path information is interpreted as relative to the  
16 current working directory. [Note: To obtain the current working directory, see  
17 System.IO.Directory.GetCurrentDirectory.]  
18  
19

## 20 Exceptions

Exception	Condition
<b>System.ArgumentException</b>	<i>sourceFileName</i> or <i>destFileName</i> is a zero-length string, contains only white space, or contains one or more invalid characters.  -or-

	<i>sourceFileName</i> or <i>destFileName</i> specifies a directory.
<b>System.ArgumentNullException</b>	<i>sourceFileName</i> or <i>destFileName</i> is null.
<b>System.IO.DirectoryNotFoundException</b>	Directory information in <i>destFileName</i> or <i>sourceFileName</i> was not found.
<b>System.IO.FileNotFoundException</b>	<i>sourceFileName</i> was not found.
<b>System.IO.IOException</b>	<i>destFileName</i> is read-only (write-protected), or <i>destFileName</i> exists and <i>overwrite</i> is false.  -or-  An I/O error occurred.
<b>System.IO.PathTooLongException</b>	The length or the absolute path information for <i>sourceFileName</i> or <i>destFileName</i> exceeds the system-defined maximum length.
<b>System.UnauthorizedAccessException</b>	The caller does not have the required permission.

1

## 2 Permissions

Permission	Description
<b>System.Security.Permissions.FileIOPermission</b>	Requires permission to read the source file and write the destination file. See <code>System.Security.Permissions.FileIOPermissionAccess.Read</code> and <code>System.Security.Permissions.FileIOPermissionAccess.Write</code> .

3

4

# 1 File.Create(System.String) Method

```
2 [ILAsm]  
3 .method public hidebysig static class System.IO.FileStream Create(string  
4 path)  
5 [C#]  
6 public static FileStream Create(string path)
```

## 7 Summary

8 Creates or overwrites the specified file.

## 9 Parameters

Parameter	Description
<i>path</i>	A <code>System.String</code> containing the name of the file.

10

## 11 Return Value

12 A `System.IO.FileStream` that provides read/write access to the specified file.

## 13 Description

14 If the specified file does not exist, it is created; if it does exist and it is not read-only,  
15 the contents are overwritten.

16

17 The *path* argument is permitted to specify relative or absolute path information. Relative  
18 path information is interpreted as relative to the current working directory. [*Note:* To  
19 obtain the current working directory, see  
20 `System.IO.Directory.GetCurrentDirectory.`]

21

22

## 23 Exceptions

Exception	Condition
<b>System.ArgumentNullException</b>	<i>path</i> is null.
<b>System.ArgumentException</b>	<i>path</i> is a zero-length string, contains only white space, or contains one or more implementation-specific invalid characters.
<b>System.UnauthorizedAccessException</b>	<i>path</i> specified a file that is read-only (write-

	protected).
<b>System.IO.DirectoryNotFoundException</b>	The directory information specified in <i>path</i> was not found.
<b>System.IO.IOException</b>	An I/O error occurred while creating the file.
<b>System.IO.PathTooLongException</b>	The length of <i>path</i> or the absolute path information for <i>path</i> exceeds the system-defined maximum length.
<b>System.UnauthorizedAccessException</b>	The caller does not have the required permission.

1

## 2 Permissions

Permission	Description
<b>System.Security.Permissions.FileIOPermission</b>	Requires permission to write the specified file. See <code>System.Security.Permissions.FileIOPermissionAccess.Write</code> .

3

4

# 1 File.Create(System.String, System.Int32)

## 2 Method

```
3 [ILAsm]  
4 .method public hidebysig static class System.IO.FileStream Create(string  
5 path, int32 bufferSize)  
  
6 [C#]  
7 public static FileStream Create(string path, int bufferSize)
```

### 8 Summary

9 Creates or overwrites the specified file.

### 10 Parameters

Parameter	Description
<i>path</i>	A System.String containing the name of the file.
<i>bufferSize</i>	A System.Int32 containing the number of bytes buffered for reads and writes to the file.

11

### 12 Return Value

13 A System.IO.FileStream that provides read/write access to the specified file.

### 14 Description

15 This method is equivalent to System.IO.FileStream (*path*,  
16 System.IO.FileMode.Create, System.IO.FileAccess.ReadWrite,  
17 System.IO.FileShare.None, *bufferSize*).

18

19 If the specified file does not exist, it is created; if it does exist and it is not read-only,  
20 the contents are overwritten.

21

22 The *path* argument is permitted to specify relative or absolute path information. Relative  
23 path information is interpreted as relative to the current working directory. [*Note:* To  
24 obtain the current working directory, see  
25 System.IO.Directory.GetCurrentDirectory.]

26

27

### 28 Exceptions

Exception	Condition
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<b>System.ArgumentException</b>	<i>path</i> is a zero-length string, contains only white space, or contains one or more implementation-specific invalid characters.
<b>System.ArgumentNullException</b>	<i>path</i> is null.
<b>System.UnauthorizedAccessException</b>	<i>path</i> specified a file that is read-only (write-protected).
<b>System.IO.DirectoryNotFoundException</b>	The directory information specified in <i>path</i> was not found.
<b>System.IO.IOException</b>	An I/O error occurred while creating the file.
<b>System.IO.PathTooLongException</b>	The length of <i>path</i> or the absolute path information for <i>path</i> exceeds the system-defined maximum length.
<b>System.UnauthorizedAccessException</b>	The caller does not have the required permission.

1

2 **Permissions**

Permission	Description
<b>System.Security.Permissions.FileIOPermission</b>	Requires permission to write the specified file. See <code>System.Security.Permissions.FileIOPermissionAccess.Write</code> .

3

4

# 1 File.CreateText(System.String) Method

```
2 [ILAsm]  
3 .method public hidebysig static class System.IO.StreamWriter  
4 CreateText(string path)  
  
5 [C#]  
6 public static StreamWriter CreateText(string path)
```

## 7 Summary

8 Creates or opens a file for writing UTF-8 encoded text.

## 9 Parameters

Parameter	Description
<i>path</i>	The file to be opened for writing.

10

## 11 Return Value

12 A `System.IO.StreamWriter` that writes to the specified file using UTF-8 encoding.

## 13 Description

14 This method is equivalent to `System.IO.StreamWriter(path, false)`. If the file  
15 specified by *path* does not exist, it is created. If the file does exist, its contents are  
16 overwritten. Additional threads are permitted to read the file while it is open.

17

18 The *path* argument is permitted to specify relative or absolute path information. Relative  
19 path information is interpreted as relative to the current working directory. To obtain the  
20 current working directory, see `System.IO.Directory.GetCurrentDirectory`.

## 21 Exceptions

Exception	Condition
<b>System.ArgumentException</b>	<i>path</i> is a zero-length string, contains only white space, or contains one or more implementation-specific invalid characters.
<b>System.ArgumentNullException</b>	<i>path</i> is null.
<b>System.IO.DirectoryNotFoundException</b>	The directory information specified in <i>path</i> was not found.

<b>System.IO.Exception</b>	A general I/O exception occurred, such as trying to access a CD-ROM drive whose tray is open.
<b>System.IO.NotSupportedException</b>	<i>path</i> is in an implementation-specific invalid format.
<b>System.IO.PathTooLongException</b>	The length of <i>path</i> or the absolute path information for <i>path</i> exceeds the implementation-specific maximum length.
<b>System.UnauthorizedAccessException</b>	Access is denied. The caller does not have the required permission.

1

2 **Permissions**

<b>Permission</b>	<b>Description</b>
<b>System.Security.Permissions.FileIOPermission</b>	Requires permission to write the specified file. See <code>System.Security.Permissions.FileIOPermissionAccess.Write</code> .

3

4

# 1 File.Delete(System.String) Method

```
2 [ILAsm]  
3 .method public hidebysig static void Delete(string path)  
4 [C#]  
5 public static void Delete(string path)
```

## 6 Summary

7 Deletes the specified file.

## 8 Parameters

Parameter	Description
<i>path</i>	A System.String containing the name of the file to be deleted.

## 9 Description

11 The *path* argument is permitted to specify relative or absolute path information. Relative  
12 path information is interpreted as relative to the current working directory. [*Note:* To  
13 obtain the current working directory, see  
14 System.IO.Directory.GetCurrentDirectory.]

15  
16  
17  
18 [*Note:* Some implementations might throw System.IO.IOException to cover such  
19 implementation-specific conditions as "file in use".]  
20  
21

## 22 Exceptions

Exception	Condition
<b>System.ArgumentException</b>	<i>path</i> is a zero-length string, contains only white space, or contains one or more implementation-specific invalid characters.
<b>System.ArgumentNullException</b>	<i>path</i> is null.
<b>System.UnauthorizedAccessException</b>	<i>path</i> identifies a directory. -or-

	<i>path</i> specifies a file that is read-only.
<b>System.IO.DirectoryNotFoundException</b>	The directory information specified in <i>path</i> was not found.
<b>System.IO.PathTooLongException</b>	The length of <i>path</i> or the absolute path information for <i>path</i> exceeds the system-defined maximum length.
<b>System.UnauthorizedAccessException</b>	The caller does not have the required permission.

1

2 Permissions

Permission	Description
<b>System.Security.Permissions.FileIOPermission</b>	Requires permission to write to the specified file. See <code>System.Security.Permissions.FileIOPermissionAccess.Write</code> .

3

4

# 1 File.Exists(System.String) Method

```
2 [ILAsm]  
3 .method public hidebysig static bool Exists(string path)  
4 [C#]  
5 public static bool Exists(string path)
```

## 6 Summary

7 Returns a `System.Boolean` indicating whether the specified file exists.

## 8 Parameters

Parameter	Description
<i>path</i>	A <code>System.String</code> containing the name of the file to check.

## 9 Return Value

11 `true` if the caller has the required permissions and *path* contains the name of an  
12 existing file; otherwise, `false`. If *path* is null or a zero-length string, returns `false`.

## 13 Description

14 If the caller does not have sufficient permissions to read the specified file, no exception  
15 is thrown and the method returns `false` regardless of the existence of *path*.

16 The *path* argument is permitted to specify relative or absolute path information. Relative  
17 path information is interpreted as relative to the current working directory. [*Note:* To  
18 obtain the current working directory, see  
19 `System.IO.Directory.GetCurrentDirectory`.]  
20  
21  
22

## 23 Permissions

Permission	Description
<b>System.Security.Permissions.FileIOPermission</b>	Requires permission to read the specified file. See <code>System.Security.Permissions.FileIOPermissionAccess.Read</code> .

24

25

# 1 File.GetCreationTime(System.String) Method

```
2 [ILAsm]  
3 .method public hidebysig static valuetype System.DateTime  
4 GetCreationTime(string path)  
  
5 [C#]  
6 public static DateTime GetCreationTime(string path)
```

## 7 Summary

8 Returns the creation date and time of the specified file or directory.

## 9 Parameters

Parameter	Description
<i>path</i>	A <code>System.String</code> containing the name of the file or directory for which to obtain creation date and time information.

10

## 11 Return Value

12 A `System.DateTime` structure set to the creation date and time for the specified file or  
13 directory. This value is expressed in local time.

14

15 Platforms that do not support this feature return `System.DateTime.MinValue`.

## 16 Description

17 The *path* argument is permitted to specify relative or absolute path information. Relative  
18 path information is interpreted as relative to the current working directory. [*Note:* To  
19 obtain the current working directory, see  
20 `System.IO.Directory.GetCurrentDirectory`.]

21

22

## 23 Exceptions

Exception	Condition
<b>System.ArgumentException</b>	<i>path</i> is a zero-length string, contains only white space, or contains one or more implementation-specific invalid characters.
<b>System.ArgumentNullException</b>	<i>path</i> is null.

<b>System.IO.IOException</b>	<i>path</i> was not found.
<b>System.IO.PathTooLongException</b>	The length of <i>path</i> or the absolute path information for <i>path</i> exceeds the system-defined maximum length.
<b>System.UnauthorizedAccessException</b>	The caller does not have the required permission.

1

## 2 Permissions

Permission	Description
<b>System.Security.Permissions.FileIOPermission</b>	Requires permission to read the specified file or directory. See <code>System.Security.Permissions.FileIOPermissionAccess.Read</code> .

3

4

# 1 File.GetLastAccessTime(System.String)

## 2 Method

```
3 [ILAsm]  
4 .method public hidebysig static valuetype System.DateTime  
5 GetLastAccessTime(string path)  
  
6 [C#]  
7 public static DateTime GetLastAccessTime(string path)
```

### 8 Summary

9 Returns the date and time the specified file or directory was last accessed.

### 10 Parameters

Parameter	Description
<i>path</i>	A <code>System.String</code> containing the name of the file or directory for which to obtain access date and time information.

### 11 Return Value

13 A `System.DateTime` structure set to the date and time the specified file or directory was  
14 last accessed. This value is expressed in local time.

15  
16 Platforms that do not support this feature return `System.DateTime.MinValue`.

### 17 Description

18 The *path* argument is permitted to specify relative or absolute path information. Relative  
19 path information is interpreted as relative to the current working directory. [Note: To  
20 obtain the current working directory, see  
21 `System.IO.Directory.GetCurrentDirectory`.]  
22  
23

### 24 Exceptions

Exception	Condition
<b>System.ArgumentException</b>	<i>path</i> is a zero-length string, contains only white space, or contains one or more implementation-specific invalid characters.

<b>System.ArgumentNullException</b>	<i>path</i> is null.
<b>System.IO.IOException</b>	<i>path</i> was not found.
<b>System.IO.PathTooLongException</b>	The length of <i>path</i> or the absolute path information for <i>path</i> exceeds the system-defined maximum length.
<b>System.UnauthorizedAccessException</b>	The caller does not have the required permission.

1

2 **Permissions**

<b>Permission</b>	<b>Description</b>
<b>System.Security.Permissions.FileIOPermission</b>	Requires permission to read the specified file or directory. See <code>System.Security.Permissions.FileIOPermissionAccess.Read</code> .

3

4

# 1 File.GetLastWriteTime(System.String)

## 2 Method

```
3 [ILAsm]  
4 .method public hidebysig static valuetype System.DateTime  
5 GetLastWriteTime(string path)  
  
6 [C#]  
7 public static DateTime GetLastWriteTime(string path)
```

### 8 Summary

9 Returns the date and time the specified file or directory was last written to.

### 10 Parameters

Parameter	Description
<i>path</i>	A System.String containing the name of the file for which to obtain write date and time information.

### 11 Return Value

13 A System.DateTime structure set to the date and time the specified file or directory was  
14 last written to. This value is expressed in local time.

15  
16 Platforms that do not support this feature return System.DateTime.MinValue.

### 17 Description

18 The *path* argument is permitted to specify relative or absolute path information. Relative  
19 path information is interpreted as relative to the current working directory. [Note: To  
20 obtain the current working directory, see  
21 System.IO.Directory.GetCurrentDirectory.]  
22  
23

### 24 Exceptions

Exception	Condition
<b>System.ArgumentException</b>	<i>path</i> is a zero-length string, contains only white space, or contains one or more implementation-specific invalid characters.

<b>System.ArgumentNullException</b>	<i>path</i> is null.
<b>System.IO.IOException</b>	<i>path</i> was not found.
<b>System.IO.PathTooLongException</b>	The length of <i>path</i> or the absolute path information for <i>path</i> exceeds the system-defined maximum length.
<b>System.UnauthorizedAccessException</b>	The caller does not have the required permission.

1

2 **Permissions**

Permission	Description
<b>System.Security.Permissions.FileIOPermission</b>	Requires permission to read the specified file or directory. See <code>System.Security.Permissions.FileIOPermissionAccess.Read</code> .

3

4

# 1 File.Move(System.String, System.String)

## 2 Method

```
3 [ILAsm]  
4 .method public hidebysig static void Move(string sourceFileName, string  
5 destFileName)  
  
6 [C#]  
7 public static void Move(string sourceFileName, string destFileName)
```

### 8 Summary

9 Moves the specified file to a new location.

### 10 Parameters

Parameter	Description
<i>sourceFileName</i>	A System.String containing the name of the file to move.
<i>destFileName</i>	A System.String containing the name of the new location for the file.

11

### 12 Description

13 This method does not throw an exception if the source and destination are the same.

14

15 The *sourceFileName* and *destFileName* arguments are permitted to specify relative or  
16 absolute path information. Relative path information is interpreted as relative to the  
17 current working directory. [Note: To obtain the current working directory, see  
18 System.IO.Directory.GetCurrentDirectory.]

19

20

### 21 Exceptions

Exception	Condition
<b>System.ArgumentException</b>	<i>sourceFileName</i> or <i>destFileName</i> is a zero-length string, contains only white space, or contains one or more implementation-specific invalid characters.
<b>System.ArgumentNullException</b>	<i>sourceFileName</i> or <i>destFileName</i> is null.
<b>System.IO.DirectoryNotFoundException</b>	The directory information in <i>sourceFileName</i> or

	<i>destFileName</i> was not found.
<b>System.IO.FileNotFoundException</b>	<i>sourceFileName</i> was not found or specifies a directory.
<b>System.IO.IOException</b>	<i>destFileName</i> already exists or is a directory.
<b>System.IO.PathTooLongException</b>	The length or absolute path information for <i>sourceFileName</i> or <i>destFileName</i> exceeds the system-defined maximum length.
<b>System.UnauthorizedAccessException</b>	The caller does not have the required permission.

1

2 **Permissions**

Permission	Description
<b>System.Security.Permissions.FileIOPermission</b>	Requires permission to read from <i>sourceFileName</i> , and write to <i>sourceFileName</i> and <i>destFileName</i> . See <code>System.Security.Permissions.FileIOPermissionAccess.Read</code> and <code>System.Security.Permissions.FileIOPermissionAccess.Write</code> .

3

4

# 1 File.Open(System.String, 2 System.IO.FileMode, System.IO.FileAccess, 3 System.IO.FileShare) Method

```
4 [ILAsm]  
5 .method public hidebysig static class System.IO.FileStream Open(string  
6 path, valuetype System.IO.FileMode mode, valuetype System.IO.FileAccess  
7 access, valuetype System.IO.FileShare share)  
  
8 [C#]  
9 public static FileStream Open(string path, FileMode mode, FileAccess  
10 access, FileShare share)
```

## 11 Summary

12 Opens a System.IO.FileStream on the specified file.

## 13 Parameters

Parameter	Description
<i>path</i>	A System.String containing the name of the file to open.
<i>mode</i>	A System.IO.FileMode value that specifies whether a file is created if one does not exist, and determines whether the contents of existing files are retained or overwritten.
<i>access</i>	A System.IO.FileAccess value that specifies the operations that can be performed on the file.
<i>share</i>	A System.IO.FileShare value specifying the type of access other threads have to the file.

## 14 15 Return Value

16 A System.IO.FileStream that provides access to the specified file.

## 17 Description

18 This method is equivalent to System.IO.FileStream (*path, mode, access, share*).

19  
20 The *path* argument is permitted to specify relative or absolute path information. Relative  
21 path information is interpreted as relative to the current working directory. [*Note:* To  
22 obtain the current working directory, see  
23 System.IO.Directory.GetCurrentDirectory.]

1  
2

### 3 Exceptions

Exception	Condition
<b>System.ArgumentException</b>	<i>path</i> is a zero-length string, contains only white space, or contains one or more implementation-specific invalid characters.  -or-  <i>access</i> specified Read and <i>mode</i> specified Create, CreateNew, Truncate Or Append.
<b>System.ArgumentNullException</b>	<i>path</i> is null.
<b>System.ArgumentOutOfRangeException</b>	<i>mode</i> , <i>access</i> , or <i>share</i> specified an invalid value.
<b>System.UnauthorizedAccessException</b>	<i>path</i> specified a read-only file and <i>access</i> is not Read, or <i>path</i> specified a directory.
<b>System.IO.DirectoryNotFoundException</b>	The directory information specified in <i>path</i> was not found.
<b>System.IO.FileNotFoundException</b>	<i>path</i> was not found.
<b>System.IO.IOException</b>	An I/O error occurred while opening the file.
<b>System.IO.PathTooLongException</b>	The length of <i>path</i> or the absolute path information for <i>path</i> exceeds the system-defined maximum length.
<b>System.UnauthorizedAccessException</b>	The caller does not have the required permission.

4  
5

### Permissions

Permission	Description
<b>System.Security.Permissions.</b>	Requires permission to read and might also require permission to write the file. See

**FileIOPermission**

System.Security.Permissions.FileIOPermissionAccess.  
Read and  
System.Security.Permissions.FileIOPermissionAccess.  
Write.

1

2

# 1 File.Open(System.String, 2 System.IO.FileMode, System.IO.FileAccess) 3 Method

```
4 [ILAsm]  
5 .method public hidebysig static class System.IO.FileStream Open(string  
6 path, valuetype System.IO.FileMode mode, valuetype System.IO.FileAccess  
7 access)  
  
8 [C#]  
9 public static FileStream Open(string path, FileMode mode, FileAccess  
10 access)
```

## 11 Summary

12 Opens a System.IO.FileStream on the specified file.

## 13 Parameters

Parameter	Description
<i>path</i>	A System.String containing the name of the file to open.
<i>mode</i>	A System.IO.FileMode value that specifies whether a file is created if one does not exist, and determines whether the contents of existing files are retained or overwritten.
<i>access</i>	A System.IO.FileAccess value that specifies the operations that can be performed on the file.

## 14 15 Return Value

16 A System.IO.FileStream that provides access to the specified file.

## 17 Description

18 This method is equivalent to System.IO.FileStream (*path*, *mode*, *access*,  
19 System.IO.FileShare.None ).

20  
21 The *path* argument is permitted to specify relative or absolute path information. Relative  
22 path information is interpreted as relative to the current working directory. [*Note:* To  
23 obtain the current working directory, see  
24 System.IO.Directory.GetCurrentDirectory.]  
25  
26

## 1 Exceptions

Exception	Condition
<b>System.ArgumentException</b>	<i>path</i> is a zero-length string, contains only white space, or contains one or more implementation-specific invalid characters.  -or-  <i>access</i> specified Read and <i>mode</i> specified Create, CreateNew, Truncate Or Append.
<b>System.ArgumentNullException</b>	<i>path</i> is null.
<b>System.ArgumentOutOfRangeException</b>	<i>mode</i> or <i>access</i> specified an invalid value.
<b>System.UnauthorizedAccessException</b>	<i>path</i> specified a read-only file and <i>access</i> is not Read, or <i>path</i> specified a directory.
<b>System.IO.DirectoryNotFoundException</b>	The directory information specified in <i>path</i> was not found.
<b>System.IO.FileNotFoundException</b>	<i>mode</i> is System.IO.FileMode.Truncate or System.IO.FileMode.Open, but the specified file was not found. If a different mode is specified and the file was not found, a new one is created.
<b>System.IO.IOException</b>	An I/O error occurred, such as specifying System.IO.FileMode.CreateNew when the file specified by <i>path</i> already exists.
<b>System.IO.PathTooLongException</b>	The length of <i>path</i> or the absolute path information for <i>path</i> exceeds the system-defined maximum length.

2

## 3 Permissions

Permission	Description
<b>System.Security.Permissions.FileIOPermission</b>	Requires permission to read and might also require permission to write to the file. See System.Security.Permissions.FileIOPermissionAccess.

	Read and System.Security.Permissions.FileIOPermissionAccess. Write.
--	---

1

2

# 1 File.Open(System.String, 2 System.IO.FileMode) Method

```
3 [ILAsm]  
4 .method public hidebysig static class System.IO.FileStream Open(string  
5 path, valuetype System.IO.FileMode mode)  
  
6 [C#]  
7 public static FileStream Open(string path, FileMode mode)
```

## 8 Summary

9 Opens a `System.IO.FileStream` on the specified file with read/write access.

## 10 Parameters

Parameter	Description
<i>path</i>	A <code>System.String</code> containing the name of the file to open.
<i>mode</i>	A <code>System.IO.FileMode</code> value that specifies whether a file is created if one does not exist, and determines whether the contents of existing files are retained or overwritten.

11

## 12 Return Value

13 A `System.IO.FileStream` that provides read/write access to the specified file.

## 14 Description

15 This method is equivalent to `System.IO.FileStream (path, mode,`  
16 `System.IO.FileAccess.ReadWrite, System.IO.FileShare.None )`.

17

18 The *path* argument is permitted to specify relative or absolute path information. Relative  
19 path information is interpreted as relative to the current working directory. [*Note:* To  
20 obtain the current working directory, see  
21 `System.IO.Directory.GetCurrentDirectory.`]

22

23

## 24 Exceptions

Exception	Condition
<b>System.ArgumentException</b>	<i>path</i> is a zero-length string, contains only white space, or contains one or more

	implementation-specific invalid characters.
<b>System.ArgumentNullException</b>	<i>path</i> is null.
<b>System.ArgumentOutOfRangeException</b>	<i>mode</i> specified an invalid value.
<b>System.UnauthorizedAccessException</b>	<p><i>path</i> specified a read-only file (this method attempts to open the file with read/write access).</p> <p>-or-</p> <p>This operation is not supported on the current platform.</p> <p>-or-</p> <p><i>path</i> specified a directory.</p>
<b>System.IO.DirectoryNotFoundException</b>	The directory information specified in <i>path</i> was not found.
<b>System.IO.FileNotFoundException</b>	<i>path</i> was not found.
<b>System.IO.IOException</b>	An I/O error occurred while opening the file.
<b>System.IO.PathTooLongException</b>	The length of <i>path</i> or the absolute path information for <i>path</i> exceeds the system-defined maximum length.
<b>System.UnauthorizedAccessException</b>	The caller does not have the required permission.

1

2 **Permissions**

Permission	Description
<b>System.Security.Permissions.FileIOPermission</b>	Requires permission to read and write the file. See <code>System.Security.Permissions.FileIOPermissionAccess.Read</code> and <code>System.Security.Permissions.FileIOPermissionAccess.Write</code> .

3



# 1 File.OpenRead(System.String) Method

```
2 [ILAsm]  
3 .method public hidebysig static class System.IO.FileStream OpenRead(string  
4 path)  
  
5 [C#]  
6 public static FileStream OpenRead(string path)
```

## 7 Summary

8 Opens an existing file for reading.

## 9 Parameters

Parameter	Description
<i>path</i>	A System.String containing the name of the file to be opened for reading.

## 10 11 Return Value

12 A read-only System.IO.FileStream containing the contents of the specified file.

## 13 Description

14 This method is equivalent to System.IO.FileStream (*path*, System.IO.FileMode.Open,  
15 System.IO.FileAccess.Read, System.IO.FileShare.Read ).

16  
17 The *path* argument is permitted to specify relative or absolute path information. Relative  
18 path information is interpreted as relative to the current working directory. [Note: To  
19 obtain the current working directory, see  
20 System.IO.Directory.GetCurrentDirectory.]  
21  
22

## 23 Exceptions

Exception	Condition
<b>System.ArgumentException</b>	<i>path</i> is a zero-length string, contains only white space, or contains one or more implementation-specific invalid characters.
<b>System.ArgumentNullException</b>	<i>path</i> is null.
<b>System.UnauthorizedAccessException</b>	<i>path</i> specified a directory.

<b>System.IO.DirectoryNotFoundException</b>	The directory information specified in <i>path</i> was not found.
<b>System.IO.FileNotFoundException</b>	<i>path</i> was not found.
<b>System.IO.PathTooLongException</b>	The length of <i>path</i> or the absolute path information for <i>path</i> exceeds the system-defined maximum length.
<b>System.UnauthorizedAccessException</b>	The caller does not have the required permission.

1

## 2 Permissions

Permission	Description
<b>System.Security.Permissions.FileIOPermission</b>	Requires permission to read the specified file. See <code>System.Security.Permissions.FileIOPermissionAccess.Read</code> .

3

4

# 1 File.OpenText(System.String) Method

```
2 [ILAsm]  
3 .method public hidebysig static class System.IO.StreamReader  
4 OpenText(string path)  
  
5 [C#]  
6 public static StreamReader OpenText(string path)
```

## 7 Summary

8 Opens an existing UTF-8 encoded text file for reading.

## 9 Parameters

Parameter	Description
<i>path</i>	A System.String containing the name of the file to be opened for reading.

10

## 11 Return Value

12 A System.IO.StreamReader containing the contents of the specified file.

## 13 Description

14 This method is equivalent to System.IO.StreamReader (*path*).

15

16 The *path* argument is permitted to specify relative or absolute path information. Relative  
17 path information is interpreted as relative to the current working directory. [Note: To  
18 obtain the current working directory, see  
19 System.IO.Directory.GetCurrentDirectory.]

20

21

## 22 Exceptions

Exception	Condition
<b>System.ArgumentException</b>	<i>path</i> is a zero-length string, contains only white space, or contains one or more implementation-specific invalid characters.
<b>System.ArgumentNullException</b>	<i>path</i> is null.
<b>System.IO.DirectoryNotFoundException</b>	The directory information specified in <i>path</i> was not found.

<b>System.IO.FileNotFoundException</b>	<i>path</i> was not found.
<b>System.IO.PathTooLongException</b>	The length of <i>path</i> or the absolute path information for <i>path</i> exceeds the system-defined maximum length.
<b>System.UnauthorizedAccessException</b>	The caller does not have the required permission.

1

2 **Permissions**

Permission	Description
<b>System.Security.Permissions.FileIOPermission</b>	Requires permission to write to the specified file. See <code>System.Security.Permissions.FileIOPermissionAccess.Write</code> .

3

4

# 1 File.OpenWrite(System.String) Method

```
2 [ILAsm]  
3 .method public hidebysig static class System.IO.FileStream  
4 OpenWrite(string path)  
5 [C#]  
6 public static FileStream OpenWrite(string path)
```

## 7 Summary

8 Opens an existing file for writing.

## 9 Parameters

Parameter	Description
<i>path</i>	A System.String containing the name of the file to be opened for writing.

10

## 11 Return Value

12 A writable System.IO.FileStream that writes to the file specified by *path*.

## 13 Description

14 This method is equivalent to System.IO.FileStream (*path*,  
15 System.IO.FileMode.OpenOrCreate, System.IO.FileAccess.Write,  
16 System.IO.FileShare.None ).

17

18 The *path* argument is permitted to specify relative or absolute path information. Relative  
19 path information is interpreted as relative to the current working directory. [*Note:* To  
20 obtain the current working directory, see  
21 System.IO.Directory.GetCurrentDirectory.]

22

23

## 24 Exceptions

Exception	Condition
<b>System.ArgumentException</b>	<i>path</i> is a zero-length string, contains only white space, or contains one or more implementation-specific invalid characters.
<b>System.ArgumentNullException</b>	<i>path</i> is null.

<b>System.UnauthorizedAccessException</b>	<i>path</i> specified a read-only file or a directory.
<b>System.IO.DirectoryNotFoundException</b>	The directory information specified in <i>path</i> was not found.
<b>System.IO.FileNotFoundException</b>	<i>path</i> was not found.
<b>System.IO.PathTooLongException</b>	The length of <i>path</i> or the absolute path information for <i>path</i> exceeds the system-defined maximum length.
<b>System.UnauthorizedAccessException</b>	The caller does not have the required permission.

1

## 2 Permissions

Permission	Description
<b>System.Security.Permissions.FileIOPermission</b>	Requires permission to write the specified file. See <code>System.Security.Permissions.FileIOPermissionAccess.Write</code> .

3

4

# 1 File.SetCreationTime(System.String, 2 System.DateTime) Method

```
3 [ILAsm]  
4 .method public hidebysig static void SetCreationTime(string path,  
5 valuetype System.DateTime creationTime)  
  
6 [C#]  
7 public static void SetCreationTime(string path, DateTime creationTime)
```

## 8 Summary

9 Sets the creation date and time for the specified file.

## 10 Parameters

Parameter	Description
<i>path</i>	A System.String containing the name of the file for which to set the creation date and time information.
<i>creationTime</i>	A System.DateTime containing the value to set for the creation date and time of <i>path</i> . This value is expressed in local time.

11

## 12 Description

13 The *path* argument is permitted to specify relative or absolute path information. Relative  
14 path information is interpreted as relative to the current working directory. [Note: To  
15 obtain the current working directory, see  
16 System.IO.Directory.GetCurrentDirectory.]

17

18

19

20 On platforms that do not support this feature, this method has no effect. If this feature  
21 is supported, the range of dates that is valid for this operation is implementation-  
22 specific.

## 23 Exceptions

Exception	Condition
<b>System.ArgumentException</b>	<i>path</i> is a zero-length string, contains only white space, or contains one or more implementation-specific invalid characters.

<b>System.ArgumentOutOfRangeException</b>	<i>creationTime</i> specifies a value outside the range of date/times permitted for this operation.
<b>System.ArgumentNullException</b>	<i>path</i> is null.
<b>System.IO.FileNotFoundException</b>	<i>path</i> was not found.
<b>System.IO.IOException</b>	An I/O error occurred while performing the operation.
<b>System.IO.PathTooLongException</b>	The length of <i>path</i> or the absolute path information for <i>path</i> exceeds the system-defined maximum length.
<b>System.UnauthorizedAccessException</b>	The caller does not have the required permission.

1

## 2 Permissions

Permission	Description
<b>System.Security.Permissions.FileIOPermission</b>	Requires permission to write to the specified file or directory. See <code>System.Security.Permissions.FileIOPermissionAccess.Write</code> .

3

4

# 1 File.SetLastAccessTime(System.String, 2 System.DateTime) Method

```
3 [ILAsm]  
4 .method public hidebysig static void SetLastAccessTime(string path,  
5 valuetype System.DateTime lastAccessTime)  
  
6 [C#]  
7 public static void SetLastAccessTime(string path, DateTime lastAccessTime)
```

## 8 Summary

9 Sets the date and time the specified file was last accessed.

## 10 Parameters

Parameter	Description
<i>path</i>	A System.String containing the name of the file for which to set the access date and time information.
<i>lastAccessTime</i>	A System.DateTime containing the value to set for the access date and time of <i>path</i> . This value is expressed in local time.

11

## 12 Description

13 The *path* argument is permitted to specify relative or absolute path information. Relative  
14 path information is interpreted as relative to the current working directory. [*Note:* To  
15 obtain the current working directory, see  
16 System.IO.Directory.GetCurrentDirectory.]

17

18

19

20 On platforms that do not support this feature, this method has no effect. If this feature  
21 is supported, the range of dates that is valid for this operation is implementation-  
22 specific.

## 23 Exceptions

Exception	Condition
<b>System.ArgumentException</b>	<i>path</i> is a zero-length string, contains only white space, or contains one or more implementation-specific invalid characters.

<b>System.ArgumentNullException</b>	<i>path</i> is null.
<b>System.ArgumentOutOfRangeException</b>	<i>lastAccessTime</i> specifies a value outside the range of date/times permitted for this operation.
<b>System.IO.FileNotFoundException</b>	<i>path</i> was not found.
<b>System.IO.IOException</b>	An I/O error occurred while performing the operation.
<b>System.IO.PathTooLongException</b>	The length of <i>path</i> or the absolute path information for <i>path</i> exceeds the system-defined maximum length.
<b>System.UnauthorizedAccessException</b>	The caller does not have the required permission.

1

## 2 Permissions

Permission	Description
<b>System.Security.Permissions.FileIOPermission</b>	Requires permission to write to the specified file. See <code>System.Security.Permissions.FileIOPermissionAccess.Write</code> .

3

4

# 1 File.SetLastWriteTime(System.String, 2 System.DateTime) Method

```
3 [ILAsm]  
4 .method public hidebysig static void SetLastWriteTime(string path,  
5 valuetype System.DateTime lastWriteTime)  
  
6 [C#]  
7 public static void SetLastWriteTime(string path, DateTime lastWriteTime)
```

## 8 Summary

9 Sets the date and time a file was last written to.

## 10 Parameters

Parameter	Description
<i>path</i>	A <code>System.String</code> containing the name of the file for which to set the date and time information.
<i>lastWriteTime</i>	A <code>System.DateTime</code> containing the value to set for the last write date and time of <i>path</i> . This value is expressed in local time.

11

## 12 Description

13 The *path* argument is permitted to specify relative or absolute path information. Relative  
14 path information is interpreted as relative to the current working directory. [*Note:* To  
15 obtain the current working directory, see  
16 `System.IO.Directory.GetCurrentDirectory`.]  
17

18

19

20 On platforms that do not support this feature, this method has no effect. If this feature  
21 is supported, the range of dates that is valid for this operation is implementation-  
22 specific.

## 23 Exceptions

Exception	Condition
<b>System.ArgumentException</b>	<i>path</i> is a zero-length string, contains only white space, or contains one or more implementation-specific invalid characters.

<b>System.ArgumentNullException</b>	<i>path</i> is null.
<b>System.ArgumentOutOfRangeException</b>	<i>lastWriteTime</i> specifies a value outside the range of date/times permitted for this operation.
<b>System.IO.FileNotFoundException</b>	<i>path</i> was not found.
<b>System.IO.IOException</b>	An I/O error occurred while performing the operation.
<b>System.IO.PathTooLongException</b>	The length of <i>path</i> or the absolute path information for <i>path</i> exceeds the system-defined maximum length.
<b>System.UnauthorizedAccessException</b>	The caller does not have the required permission.

1

## 2 Permissions

Permission	Description
<b>System.Security.Permissions.FileIOPermission</b>	Requires permission to write to the specified file. See <code>System.Security.Permissions.FileIOPermissionAccess.Write</code> .

3

4