

:mod:`msvcrt` --- Useful routines from the MS VC++ runtime

System Message: ERROR/3 (D:\onboarding-resources\sample-onboarding-resources\cpython-main\Doc\library\[cpython-main] [Doc] [library]msvcrt.rst, line 1); [backlink](#)

Unknown interpreted text role "mod".

System Message: ERROR/3 (D:\onboarding-resources\sample-onboarding-resources\cpython-main\Doc\library\[cpython-main] [Doc] [library]msvcrt.rst, line 4)

Unknown directive type "module".

```
.. module:: msvcrt
   :platform: Windows
   :synopsis: Miscellaneous useful routines from the MS VC++ runtime.
```

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Unknown directive type "sectionauthor".

```
.. sectionauthor:: Fred L. Drake, Jr. <fdrake@acm.org>
```

These functions provide access to some useful capabilities on Windows platforms. Some higher-level modules use these functions to build the Windows implementations of their services. For example, the :mod:`getpass` module uses this in the implementation of the :func:`getpass` function.

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Unknown interpreted text role "mod".

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Unknown interpreted text role "func".

Further documentation on these functions can be found in the Platform API documentation.

The module implements both the normal and wide char variants of the console I/O api. The normal API deals only with ASCII characters and is of limited use for internationalized applications. The wide char API should be used where ever possible.

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Unknown directive type "versionchanged".

```
.. versionchanged:: 3.3
   Operations in this module now raise :exc:`OSError` where :exc:`IOError`
   was raised.
```

File Operations

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Unknown directive type "function".

```
.. function:: locking(fd, mode, nbytes)

   Lock part of a file based on file descriptor *fd* from the C runtime.  Raises
```

:exc:`OSError` on failure. The locked region of the file extends from the current file position for *nbytes* bytes, and may continue beyond the end of the file. *mode* must be one of the :const:`LK_*` constants listed below. Multiple regions in a file may be locked at the same time, but may not overlap. Adjacent regions are not merged; they must be unlocked individually.

```
.. audit-event:: msvcrt.locking fd,mode,nbytes msvcrt.locking
```

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Unknown directive type "data".

```
.. data:: LK_LOCK
          LK_RLCK
```

Locks the specified bytes. If the bytes cannot be locked, the program immediately tries again after 1 second. If, after 10 attempts, the bytes cannot be locked, :exc:`OSError` is raised.

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Unknown directive type "data".

```
.. data:: LK_NBLCK
          LK_NBRLOCK
```

Locks the specified bytes. If the bytes cannot be locked, :exc:`OSError` is raised.

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Unknown directive type "data".

```
.. data:: LK_UNLCK
```

Unlocks the specified bytes, which must have been previously locked.

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Unknown directive type "function".

```
.. function:: setmode(fd, flags)
```

Set the line-end translation mode for the file descriptor *fd*. To set it to text mode, *flags* should be :const:`os.O_TEXT`; for binary, it should be :const:`os.O_BINARY`.

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Unknown directive type "function".

```
.. function:: open_osfhandle(handle, flags)
```

Create a C runtime file descriptor from the file handle *handle*. The *flags* parameter should be a bitwise OR of :const:`os.O_APPEND`, :const:`os.O_RDONLY`, and :const:`os.O_TEXT`. The returned file descriptor may be used as a parameter to :func:`os.fdopen` to create a file object.

```
.. audit-event:: msvcrt.open_osfhandle handle,flags msvcrt.open_osfhandle
```

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Unknown directive type "function".

```
.. function:: get_osfhandle(fd)

    Return the file handle for the file descriptor *fd*.  Raises :exc:`OSError` if
    *fd* is not recognized.

.. audit-event:: msvcrt.get_osfhandle fd msvcrt.get_osfhandle
```

Console I/O

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Unknown directive type "function".

```
.. function:: kbhit()

    Return ``True`` if a keypress is waiting to be read.
```

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Unknown directive type "function".

```
.. function:: getch()

    Read a keypress and return the resulting character as a byte string.
    Nothing is echoed to the console.  This call will block if a keypress
    is not already available, but will not wait for :kbd:`Enter` to be
    pressed.  If the pressed key was a special function key, this will
    return ``'\000'`` or ``'\xe0'``; the next call will return the keycode.
    The :kbd:`Control-C` keypress cannot be read with this function.
```

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Unknown directive type "function".

```
.. function:: getwch()

    Wide char variant of :func:`getch`, returning a Unicode value.
```

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Unknown directive type "function".

```
.. function:: getche()

    Similar to :func:`getch`, but the keypress will be echoed if it
    represents a printable character.
```

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Unknown directive type "function".

```
.. function:: getwche()

    Wide char variant of :func:`getche`, returning a Unicode value.
```

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Unknown directive type "function".

```
.. function:: putch(char)
```

Print the byte string `*char*` to the console without buffering.

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Unknown directive type "function".

```
.. function:: putwch(unicode_char)
```

Wide char variant of `:func:`putch``, accepting a Unicode value.

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Unknown directive type "function".

```
.. function:: ungetch(char)
```

Cause the byte string `*char*` to be "pushed back" into the console buffer; it will be the next character read by `:func:`getch`` or `:func:`getche``.

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Unknown directive type "function".

```
.. function:: ungetwch(unicode_char)
```

Wide char variant of `:func:`ungetch``, accepting a Unicode value.

Other Functions

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Unknown directive type "function".

```
.. function:: heapmin()
```

Force the `:c:func:`malloc`` heap to clean itself up and return unused blocks to the operating system. On failure, this raises `:exc:`OSError``.