

## Op:ctype.h

ctype.h - character types

```
#include <ctype.h>
```

**Contents** [1 DESCRIPTION](#) [2 APPLICATION USAGE](#) [3 RATIONALE](#) [4 FUTURE DIRECTIONS](#) [5 RELATED](#)  
[6 COPYRIGHT](#) [7 CATEGORY](#)

### DESCRIPTION

Some of the functionality described on this reference page extends the ISO C standard. Applications shall define the appropriate feature test macro (see the System Interfaces volume of IEEE Std 1003.1-2001, Section 2.2, The Compilation Environment) to enable the visibility of these symbols in this header.

The following shall be declared as functions and may also be defined as macros. Function prototypes shall be provided.

```
int  isalnum(int);
int  isalpha(int);

int  isascii(int);

int  isblank(int);
int  iscntrl(int);
int  isdigit(int);
int  isgraph(int);
int  islower(int);
int  isprint(int);
int  ispunct(int);
int  isspace(int);
```

```
int    isupper(int);
int    isxdigit(int);

int    toascii(int);

int    tolower(int);
int    toupper(int);
```

The following are defined as macros:

```
int    _toupper(int);
int    _tolower(int);
```

*The following sections are informative.*

#### **APPLICATION USAGE**

None.

#### **RATIONALE**

None.

#### **FUTURE DIRECTIONS**

None.

#### **RELATED**

`<locale.h>`, the System Interfaces volume of IEEE Std 1003.1-2001, `isalnum()`, `isalpha()`, `isascii()`, `iscntrl()`, `isdigit()`, `isgraph()`, `islower()`, `isprint()`, `ispunct()`, `isspace()`, `isupper()`, `isxdigit()`, `mblen()`, `mbstowcs()`, `mbtowc()`, `setlocale()`, `toascii()`, `tolower()`, `_tolower()`, `toupper()`, `_toupper()`, `wcstombs()`, `wctomb()`

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