swprintf returns a negative value if the number of wide characters to be written is n or more, which differs from the behavior of both sprintf and snprintf.

vswprintf   vswprintf is equivalent to swprintf, with arg replacing the variable argument list of swprintf. Like swprintf, which is similar—but not identical—to sprintf and snprintf, the vswprintf function is a combination of vsprintf and vsnprintf. If an attempt is made to write n or more wide characters, vswprintf returns a negative integer, in a manner similar to swprintf.

Wide-Character Input/Output Functions

```
wint_t fgetwc(FILE *stream);
wchar_t *fgetws(wchar_t * restrict s, int n,
                FILE * restrict stream);
wint_t fputwc(wchar_t c, FILE *stream);
int fputws(const wchar_t * restrict s,
           FILE * restrict stream);
int fwide(FILE *stream, int mode);
wint_t getwc(FILE *stream);
wint_t getwchar(void);
wint_t putwc(wchar_t c, FILE *stream);
wint_t putwchar(wchar_t c);
wint_t ungetwc(wint_t c, FILE *stream);
```

The functions in this group are wide-character versions of the character input/output functions found in <stdio.h> and described in Section 22.4. Table 25.12 shows the correspondence between the <stdio.h> functions and their wide-character counterparts. As the table shows, fwide is the only truly new function.

Table 25.12
Wide-Character Input/
Output Functions and
Their <stdio.h>
Equivalents

<wchar.h> *Function*	<stdio.h> *Equivalent*
fgetwc	fgetc
fgetws	fgets
fputwc	fputc
fputws	fputs
fwide	–
getwc	getc
getwchar	getchar
putwc	putc
putwchar	putchar
ungetwc	ungetc

Unless otherwise indicated, you can assume that each <wchar.h> function listed in Table 25.12 behaves like the corresponding <stdio.h> function. However, one minor difference is common to most of these functions. To indicate an error or end-of-file condition, some <stdio.h> character I/O functions return EOF. The equivalent <wchar.h> functions return WEOF instead.