Examples

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The following example uses the **fgetwc** subroutine to read wide character codes from a file:

```
#include <stdio.h>
#include <locale.h>
#include <stdlib.h>

main()
{
    wint_t  retval;
    FILE    *fp;
    wchar_t *pwcs;

    (void)setlocale(LC_ALL, "");

    /*
    **  Open a stream.
    */
    fp = fopen("file", "r");

    /*
    **  Error Handling if fopen was not successful.
    */
    if(fp == NULL){
        /*  Error handler  */
    }else{
        /*
        **  pwcs points to a wide character buffer of BUFSIZ.
        */
        while((retval = fgetwc(fp)) != WEOF){
            *pwcs++ = (wchar_t)retval;
               /*  break when buffer is full  */
```

```
            }
        }
        /*  Process the wide characters in the buffer  */
    }
```

The following example uses the **getwchar** subroutine to read wide characters from standard input:

```
#include <stdio.h>
#include <locale.h>
#include <stdlib.h>

 main()
{
    wint_t  retval;
    FILE    *fp;
    wchar_t *pwcs;

    (void)setlocale(LC_ALL, "");

    index = 0;
    while((retval = getwchar()) != WEOF){
        /*  pwcs points to a wide character buffer of BUFSIZ.  */
        *pwcs++ = (wchar_t)retval;
        /*  break on buffer full  */
    }
    /*  Process the wide characters in the buffer  */
}
```

The following example uses the **ungetwc** subroutine to push a wide character onto an input stream:

```
#include <stdio.h>
#include <locale.h>
#include <stdlib.h>

main()
{
    wint_t  retval;
```

```
    FILE    *fp;

    (void)setlocale(LC_ALL, "");
    /*
    **  Open a stream.
    */
    fp = fopen("file", "r");

    /*
    **  Error Handling if fopen was not successful.
    */
    if(fp == NULL){
        /*  Error handler  */

    else{
        retval = fgetwc(fp);
        if(retval != WEOF){
            /*
            **  Peek at the character and return it to the stream.
            */
            retval = ungetwc(retval, fp);
            if(retval == EOF){
                /*  Error on ungetwc  */
            }
        }
    }
}
```

The following example uses the **fgetws** subroutine to read a file, one line at a time:

```
#include <stdio.h>
#include <locale.h>
#include <stdlib.h>

main()
{
    FILE    *fp;
    wchar_t *pwcs;

    (void)setlocale(LC_ALL, "");
```

```
    /*
    **  Open a stream.
    */
    fp = fopen("file", "r");

    /*
    **  Error Handling if fopen was not successful.
    */
    if(fp == NULL){
        /*  Error handler  */
    }else{
        /*  pwcs points to wide character buffer of BUFSIZ.  */
        while(fgetws(pwcs, BUFSIZ, fp) != (wchar_t *)NULL){
            /*
            **  pwcs contains wide characters with null
            **  termination.
            */
        }
    }
}
```

The following example uses the **fputwc** subroutine to write wide characters to an output stream:

```
#include <stdio.h>
#include <locale.h>
#include <stdlib.h>

main()
{
    int     index, len;
    wint_t  retval;
    FILE    *fp;
    wchar_t *pwcs;

    (void)setlocale(LC_ALL, "");

    /*
    **  Open a stream.
    */
    fp = fopen("file", "w");
```

```
    /*
    **  Error Handling if fopen was not successful.
    */
    if(fp == NULL){
        /*  Error handler  */
    }else{
        /*  Let len indicate number of wide chars to output.
        **  pwcs points to a wide character buffer of BUFSIZ.
        */
        for(index=0; index < len; index++){
            retval = fputwc(*pwcs++, fp);
            if(retval == WEOF)
                break;  /*  write error occurred  */
                        /*  errno is set to indicate the error. */
        }
    }
}
```

The following example uses the **fputws** subroutine to write a wide character string to a file:

```
#include <stdio.h>
#include <locale.h>
#include <stdlib.h>

main()
{
    int     retval;
    FILE    *fp;
    wchar_t *pwcs;

    (void)setlocale(LC_ALL, "");

    /*
    **  Open a stream.
    */
    fp = fopen("file", "w");

    /*
    **  Error Handling if fopen was not successful.
    */
    if(fp == NULL){
```

```
            /*  Error handler  */

        }else{
            /*
            **  pwcs points to a wide character string
            **  to output to fp.
            */
            retval = fputws(pwcs, fp);
            if(retval == -1){
                /*  Write error occurred                */
                /*  errno is set to indicate the error  */
            }
        }
    }
```

Parent topic:

→ Wide character input/output subroutines