

Note that we can use redirection to discard the output of `canopen` and simply test the status value it returns.

## Temporary Files

```
FILE *tmpfile(void);
char *tmpnam(char *s);
```

Real-world programs often need to create temporary files—files that exist only as long as the program is running. C compilers, for instance, often create temporary files. A compiler might first translate a C program to some intermediate form, which it stores in a file. The compiler would then read the file later as it translates the program to object code. Once the program is completely compiled, there's no need to preserve the file containing the program's intermediate form. `<stdio.h>` provides two functions, `tmpfile` and `tmpnam`, for working with temporary files.

**tmpfile** `tmpfile` creates a temporary file (opened in "wb+" mode) that will exist until it's closed or the program ends. A call of `tmpfile` returns a file pointer that can be used to access the file later:

```
FILE *temp_ptr;
...
temp_ptr = tmpfile(); /* creates a temporary file */
```

If it fails to create a file, `tmpfile` returns a null pointer.

Although `tmpfile` is easy to use, it has a couple of drawbacks: (1) we don't know the name of the file that `tmpfile` creates, and (2) we can't decide later to make the file permanent. If these restrictions turn out to be a problem, the alternative is to create a temporary file using `fopen`. Of course, we don't want this file to have the same name as a previously existing file, so we need some way to generate new file names; that's where the `tmpnam` function comes in.

**tmpnam** `tmpnam` generates a name for a temporary file. If its argument is a null pointer, `tmpnam` stores the file name in a static variable and returns a pointer to it:

```
char *filename;
...
filename = tmpnam(NULL); /* creates a temporary file name */
```

Otherwise, `tmpnam` copies the file name into a character array provided by the programmer:

```
char filename[L_tmpnam];
...
tmpnam(filename); /* creates a temporary file name */
```

In the latter case, `tmpnam` also returns a pointer to the first character of this array. `L_tmpnam` is a macro in `<stdio.h>` that specifies how long to make a character array that will hold a temporary file name.