

```
1: // $Id: isatty.cpp,v 1.14 2015-01-07 15:06:54-08 - - $
2:
3: //
4: // NAME
5: //     isatty - check if cin, cout, and cerr are ttys
6: //
7: // SYNOPSIS
8: //     isatty
9: //
10: // DESCRIPTION
11: //     Examines the file descriptors associated with cin, cout,
12: //     and cerr and says whether or not they are ttys. Redirection
13: //     to/from a pipe or file will make them not.
14: //
15:
16: #include <cerrno>
17: #include <cstdio>
18: #include <cstdlib>
19: #include <cstring>
20: #include <iostream>
21: #include <string>
22:
23: using namespace std;
24:
25: #include <libgen.h>
26: #include <unistd.h>
27:
28: // Declare standard file descriptors.
29: enum class FD {CIN = 0, COUT = 1, CERR = 2};
30:
31: int exit_status = EXIT_SUCCESS;
32: string exec_name = "";
33:
34: void report (string filename, FD filedес) {
35:     errno = 0;
36:     bool istty = isatty (int (filedes)) != 0;
37:     if (errno != 0) {
38:         cerr << exec_name << ": " << filename << ": fd " << int (filedes)
39:             << ": " << strerror (errno) << endl;
40:         exit_status = EXIT_FAILURE;
41:     }else {
42:         char* name = ttyname (int (filedes));
43:         cout << filename << (istty ? " is" : " is not") << " a tty";
44:         if (name != nullptr) cout << " named " << name;
45:         cout << endl;
46:     }
47:
48: }
49:
50: int main (int argc, char **argv) {
51:     (void) argc; // SUPPRESS: warning: unused parameter 'argc'
52:     exec_name = basename (argv[0]);
53:     report ("cin", FD::CIN);
54:     report ("cout", FD::COUT);
55:     report ("cerr", FD::CERR);
56:     return exit_status;
57: }
58:
```

```
59: //TEST// ./isatty 1>isatty.out 2>isatty.err
60: //TEST// catnv isatty.cpp.log isatty.out isatty.err >isatty.lis
61: //TEST// rm -v isatty.cpp.log isatty.out isatty.err
62: //TEST// mkpspdf isatty.ps isatty.cpp* isatty.lis
63:
```

```
1: -rw-----. 1 302 Jan  7 15:06 isatty.cpp.log
2: -rw-----. 1 110 Jan  7 15:06 isatty.err
3: -rw-----. 1   0 Jan  7 15:06 isatty.out
4:
5: =====
6: File: isatty.cpp.log
7: -----
8:      1  @@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@ mkc: starting isatty.cpp
9:      2  isatty.cpp:
10:     3  $Id: isatty.cpp,v 1.14 2015-01-07 15:06:54-08 - - $
11:     4  g++ -g -O0 -Wall -Wextra -rdynamic -std=gnu++11 isatty.cpp -o is
atty -lglut -lGLU -lGL -lX11 -lrt -lm
12:     5  rm -f isatty.o
13:     6  @@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@ mkc: finished isatty.cpp
14: =====
15:
16:
17: =====
18: File: isatty.out
19: -----
20: =====
21:
22:
23: =====
24: File: isatty.err
25: -----
26:      1  isatty: cin: fd 0: Invalid argument
27:      2  isatty: cout: fd 1: Invalid argument
28:      3  isatty: cerr: fd 2: Invalid argument
29: =====
30:
```