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## Close() filedescriptor using Qt in Linux



Background information:

I have been writing code to control a device attached by a USB cable but emulating an RS-232 serial port.

The device in question is an Arduino microcontroller controlled servo pan and tilt stage (but that's not important).

I have managed to write characters to the USB emulated serial port using the C++ language with the g++ compiler set in [NetBeans](#) IDE using the following code:

```
#include <stdlib.h>
#include <stdio.h> /* Standard input/output definitions */
#include <string.h> /* String function definitions */
#include <unistd.h> /* UNIX standard function definitions */
#include <fcntl.h> /* File control definitions */
#include <errno.h> /* Error number definitions */
#include <termios.h> /* POSIX terminal control definitions */

/*
 * 'open_port()' - Open serial port 1.
 *
 * Returns the file descriptor on success or -1 on error.
 */

int
open_port(void)
{
    int fd; /* File descriptor for the port */

    fd = open("/dev/ttyUSB0", O_RDWR | O_NOCTTY | O_NDELAY);
    if (fd == -1)
    {
        /*
         * Could not open the port.
         */

        perror("open_port: Unable to open /dev/ttyUSB0 - ");
    }
    else
        fcntl(fd, F_SETFL, 0);

    int pnumber = 90;
    char str[256];
    int tiltnumber = 90;
    char str2[256];
    char nchar = 0xA5;
```

This works fine : (The "UUUU" chars are used to handshake with the sketch running on the arduino and the next two chars set the servo angle).

Question:

I have tried to do the same thing using [Qt Creator](#) with two graphical sliders which have values between 0 and 180 which are converted to chars and sent as above.

This also works BUT when compiling with Qt creator IDE it doesn't like the close(fd); command. If I comment this line out the program works but eventually it complains about too many files being open.

Qt code:

```

void MainWindow::TiltValueChangedHandler() {
    tiltValue = ui->verticalSlider->value();
    panValue = ui->horizontalSlider->value();
    ui->label_3->setText(QString::number(tiltValue));
    ui->label_4->setText(QString::number(panValue));

    panValue++; // To prevent the error when 0 is sent over serial to range
is effectively 1 to 181.

    int fd; /* File descriptor for the port. */

    fd = open("/dev/ttyUSB0", O_RDWR | O_NOCTTY | O_NDELAY);
    if (fd == -1)
    {
        /*
         * Could not open the port.
         */

        perror("open_port: Unable to open /dev/ttyUSB0 - ");
    }
    else
        fcntl(fd, F_SETFL, 0);

    char panchar = (char) panValue;
    char tiltchar = (char) tiltValue;

    int n = 0;
    char mydata[] = { 'U' , 'U' , 'U' , 'U' , panchar , tiltchar };
    n = write(fd, mydata, 6);
    if (n < 0)
        fputs("write() of 6 bytes failed!\n", stderr);

    // close(fd);
    // above line has to be commented out or will not compile but file not
does not close!
    return;
}

```

The Qt compiler error when close(fd) isn't commented out is:

error: no matching function for call to 'MainWindow::close(int&)'

c++ linux qt serial arduino

edited Apr 16 '11 at 13:40



Peter Mortensen

7,651 8 55 89

asked Apr 7 '11 at 13:45



Zac

404 4 14 30

1 Sounds like a namespace conflict. Try ::close(fd). – Duck Apr 7 '11 at 13:56

1 One more thing: usually we call Qt in this form. QT is usually QuickTime. – Naszta Apr 7 '11 at 19:30

[add a comment](#)

## 2 Answers

Use:

```
::close(fd);
```

to use global close function against `QWidget::close`

answered Apr 7 '11 at 13:57



[Naszta](#)

4,420 10 28

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Thanks this is correct and now compiles! however I'm not sure I understand why the blank before `::close(fd);` isn't this just saying `close(fd)` belongs to the current object scope? – [Zac](#) Apr 7 '11 at 14:02

- 
- 1 without `::` it tries to use `QWidget's bool close(void);` method. When you add `::` you declare to use `close` from global namespace. – [Naszta](#) Apr 7 '11 at 14:04

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thanks, only occur with class inherit from `QWidget`. – [netawater](#) Jun 2 '13 at 13:30

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You may be missing `stdio.h` from [Qt Creator](#).

edited Apr 16 '11 at 13:39



[Peter Mortensen](#)

7,651 8 55 89

answered Apr 7 '11 at 13:57



[Martin Beckett](#)

61.4k 8 108 193

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No sorry about not being clear, I had a whole series of imports above this function. – [Zac](#) Apr 7 '11 at 14:03

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Especially when `close()` is defined in `unistd.h` – [BatchyX](#) Apr 16 '11 at 13:58

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