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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:

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

    int pannumber = 90;
    char str[256];
    int tiltnumber = 90;
    char str2[256];
    char panchar = 0xA5;
    char tiltchar = 0xA5;

    while (tiltchar != 0x00) {
        printf ("Enter the pan number: ");
        gets ( str );
        printf ("\n");
        pannumber = atoi ( str );

        printf ("Enter the tilt number: ");
        gets ( str2 );
        printf ("\n");

        tiltnumber = atoi ( str2 );
        panchar = (char) pannumber;
        tiltchar = (char) tiltnumber;
        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);
    return (fd);
}
```

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:

```cpp
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   asked Apr 7 '11 at 13:45
    Peter Mortensen   Zac
    7,651 8 55 89   **404** 4 14 30

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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

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

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   answered Apr 7 '11 at 13:57

Peter Mortensen   **Martin Beckett**
7,651 8 55 89   **61.4k** 8 108 193

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

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

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