

tcsetattr()

The `tcsetattr()` function sets the terminal attributes for the terminal device referred to by a file descriptor. It's defined in the "termios.h" system header.

```
#include <termios.h>
#include <unistd.h> // POSIX compliance

// "fd" is the file descriptor of the terminal device
// "optional_actions" modify when to apply changes
// "termios_p" terminal attributes to be set
int tcsetattr(int fd, int optional_actions, const struct termios *termios_p);
```

The "optional_actions" parameter may one of the following values:

- "TCSANOW" → Changes are applied immediately
- "TCSADRAIN" → Changes occur after all written output is transmitted
- "TCSAFLUSH" → Like "TCSADRAIN", but discards unread input

Returns 0 on success. In case of failure, returns -1 and sets "errno".

Example Usage

```
#include <stdio.h>
#include <termios.h>
#include <unistd.h>

int main(void)
{
    struct termios old_term, new_term;
    char c;

    // get current attributes
    tcgetattr(STDIN_FILENO, &old_term);
    new_term = old_term;
    // disable canonical mode and echo
    new_term.c_lflag &= ~(ICANON | ECHO);
    // apply changes immediately
    tcsetattr(STDIN_FILENO, TCSANOW, &new_term);
    printf("Raw input mode (press 'q' to quit):\n");
    while (read(STDIN_FILENO, &c, 1) == 1 && c != 'q')
        printf("You typed: %c\n", c);
    // restore original attributes
    tcsetattr(STDIN_FILENO, TCSANOW, &old_term);
    return (0);
}
```