

```

#include <stdio.h>
#include <stdbool.h>
#include <math.h>

// Prototypes
double mag (double x, double y, double z);
double getDistanceFallen (double finalVelocity, double seconds);
bool closeTo (double tolerance, double target, double val);

int main () {

    bool fallen, falling;
    int dotI, exclamationI, time, startFall, stopFall;
    double x, y, z, acceleration, distanceFallen, fallTime;

    dotI = 0;
    exclamationI = 0;
    fallen = false;

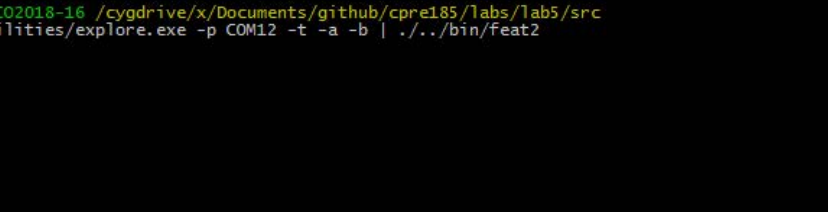
    printf("OK, I'm now receiving data.\n");
    printf("I'm waiting");
    while (!fallen) {

        scanf("%d, %lf, %lf, %lf, %d, %d, %d, %d, %d", &time, &x, &y, &z);
        acceleration = mag(x, y, z);

        // Prints the right number of dots after "I'm waiting"
        if (dotI > 20) {
            printf(".");
            fflush(stdout);
            dotI = 0;
        }

        // The Esplora is falling if the magnitude of it's acceleration is no longer close to 1
        if (!closeTo(0.25, 1, acceleration)) {
            printf("\n\tHelp me! I'm falling");
            startFall = time;
            falling = true;
            while (falling) {
                // Print exclamations marks while the Esplora is falling
                if (exclamationI > 12) {
                    printf("!");
                    fflush(stdout);
                    exclamationI = 0;
                }
                scanf("%d, %lf, %lf, %lf, %d, %d, %d, %d, %d", &time, &x, &y, &z);
                acceleration = mag(x, y, z);
                // The Esplora is no longer falling when the magnitude of it's acceleration is
                close to 1
                if (closeTo(0.25, 1.0, acceleration)) {
                    falling = false;
                    stopFall = time;
                    fallen = true;
                }
            }
        }
    }
}

```



The screenshot shows a Windows command prompt window with a blue title bar. The title bar text is `/cygdrive/x/Documents/github/cpre185/labs/lab5/src`. The window contains the following text:

```
cmbrooks@C02018-16 /cygdrive/x/Documents/github/cpre185/labs/lab5/src
$ ../../utilities/explore.exe -p COM12 -t -a -b | ../../bin/feat2
LEFT
BACK
UP
LEFT
FRONT
UP
FRONT
UP
FRONT
DOWN
FRONT

cmbrooks@C02018-16 /cygdrive/x/Documents/github/cpre185/labs/lab5/src
$ |
```

The text is displayed in a green monospaced font on a black background. The window has standard Windows window controls (minimize, maximize, close) in the top right corner.