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/* Lab 4 Wrapper Program */

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

#define TRUE 1

/* Put your function prototypes here */
double mag (double x, double y, double z);
int minutes (int millis);
int seconds (int millis);
int millis (int millis);

int main(void) {
    int t;
    double ax, ay, az;

    while (TRUE) {
        scanf("%d,%lf,%lf,%lf", &t, &ax, &ay, &az);

/* CODE SECTION 0
        printf("Echoing output: %5.3d, %3.4lf, %3.4lf, %3.4lf\n", t, ax, ay, az);    */

/* CODE SECTION 1
        printf("At %d ms, the acceleration's magnitude was: %lf\n",
            t, mag(ax, ay, az));    */

/* CODE SECTION 2 */
        printf("At %d minutes, %d seconds, and %d milliseconds it was: %lf\n",
            minutes(t), seconds(t), millis(t), mag(ax,ay,az));

        fflush(stdout);
    }

return 0;
}

/* Put your functions here */
double mag (double x, double y, double z) {
    double magnitude = sqrt(pow(x, 2) + pow(y, 2) + pow(z, 2));
    return magnitude;
}

int minutes (int time) {
    int minsLeft = time / 60 / 1000; // Converts ms to minutes
    return minsLeft;
}

int seconds (int time) {
    int secsLeft = time / 1000;
    int minsUsed = minutes(time) * 60; // Converts minutes already used to seconds
    secsLeft -= minsUsed; // Discounts time already reported
    return secsLeft;
}

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}

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int millis (int time) {
    int msLeft = time;
    int minsUsed = minutes(msLeft) * 60 * 1000; // Converts minutes already reported to
    milliseconds
    msLeft -= minsUsed; // Discounts time already reported
    int secsUsed = seconds(msLeft) * 1000; // Converts seconds already reported to milliseconds
    msLeft -= secsUsed; // Discounts time already reported
    return msLeft;
}
```