

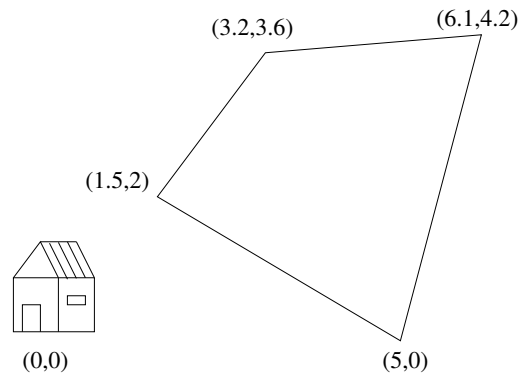
Programming Project #2

EGRE245 Spring 2015

Paddock Perimeter

1 Overview

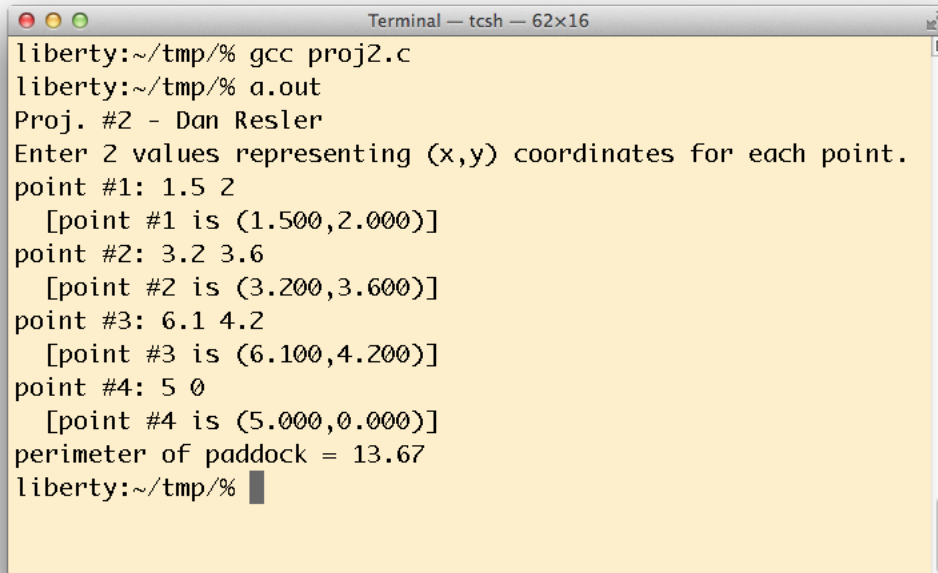
A farmer wishes to build a fence around an irregular 4-corner paddock. The farmer has measured the position of the four corners of the paddock as (x,y) coordinates relative to his house, as follows (don't worry about distance units!):



Write a program to input the 8 points representing the corners of the paddock and then print out the perimeter distance around the paddock using the formula for the distance between two points, i.e. $\sqrt{(x_1 - x_2)^2 + (y_1 - y_2)^2}$.

You should store your points as single-precision floating point values (i.e. using `float` variables). Echo print your points in the manner illustrated in the sample run below. Print the final distance rounded off to 2 decimal places. All output should be presented exactly like it appears in the sample fun below (with the exception of course that you will use your name rather than mine!).

2 Sample Run

A terminal window titled "Terminal — tcsh — 62x16" with a yellow background. It shows the execution of a C program. The user enters 'gcc proj2.c' and 'a.out'. The program prompts for coordinates for four points. The user enters: point #1: 1.5 2, point #2: 3.2 3.6, point #3: 6.1 4.2, and point #4: 5 0. The program outputs the coordinates in parentheses and calculates the perimeter of the paddock as 13.67.

```
liberty:~/tmp/% gcc proj2.c
liberty:~/tmp/% a.out
Proj. #2 - Dan Resler
Enter 2 values representing (x,y) coordinates for each point.
point #1: 1.5 2
    [point #1 is (1.500,2.000)]
point #2: 3.2 3.6
    [point #2 is (3.200,3.600)]
point #3: 6.1 4.2
    [point #3 is (6.100,4.200)]
point #4: 5 0
    [point #4 is (5.000,0.000)]
perimeter of paddock = 13.67
liberty:~/tmp/%
```

3 Deliverables

You should turn in a stand-alone, complete application program (your source code) containing a `main` function. Name your source code file `proj2XXXX.c` where `XXXX` is the last 4 digits of your student id number. For example, if your student id number is V12345678, your file will be named `proj25678.c`. Projects this term will be submitted via the web using a link off of the class web page (<http://danresler.net/egre245>). Make sure to document your code in the manner previously discussed in class. Note you need not turn in anything other than your source code text file!

Due date: Thursday, January 29