

CS1112 Fall 2010 Project 3 Part 1 due Thursday 10/7 at 11pm

(Part 2 will appear in a separate document. Both parts have the same submission deadline.)

You must work either on your own or with one partner. You may discuss background issues and general solution strategies with others, but the project you submit must be the work of just you (and your partner). If you work with a partner, you and your partner must first register as a group in CMS and then submit your work as a group.

Objectives

Completing this project will solidify your understanding of user-defined functions and vectors. You will also do more graphics.

1 Cornell Tennis Center

Complete Problem **P5.3.7** in *Insight* (page 126). Be sure to read *Insight* §5.3 first—it'll help you with this problem! You will submit three m-files in CMS: a function file `DrawTennisCourt.m`, a script file `TennisCenter.m`, and a function file `DrawRectNoLine.m`.

`DrawTennisCourt` draws *one* tennis court as specified in the problem statement in the book. Relative to the example in §5.3, `DrawTennisCourt` has a similar role as the function `DrawFlag`. Your script `TennisCenter` has the role of setting up the figure window and drawing the “tennis center” (by calling your function `DrawTennisCourt`), which is the role played by the script `Eg5_3` in §5.3. In your script use the figure window setup commands that are used in `Eg5_3` (the first four commands). Additionally, use the command `hold off` at the end of the script.

Download the function `DrawRect` from the course website—*Insight*→*Code and Data* (see section 5.3). While you can specify the color for filling the rectangle, `DrawRect` outlines the rectangle in black, which doesn't look right for our tennis court drawing. You will modify `DrawRect` so that it does not outline the colored rectangle. This can be done simply by modifying the last statement in `DrawRect`, which calls the built-in function `fill`, to be

```
fill(x,y,c,'line','none')
```

Change the function name in the function header to be `DrawRectNoLine` and save the modified function in a file `DrawRectNoLine.m`. Call `DrawRectNoLine` instead of `DrawRect` in drawing the tennis court.

Project 3 Part 2 will appear in a separate document. It is also due on 10/7 at 11pm.