Homework #3
MATLAB/Programming

In this homework you will design your own Psychtoolbox experiment. It offers you incredible flexibility and control in designing studies. Your experiment will do exactly what you say – nothing more and nothing less.

HELPFUL TIPS:

- Psychtoolbox fills the screen, making it difficult to debug during runtime errors. The 'sca' command closes all screen windows. Using a try-catch with sca command will allow you to close open screens if an error occurs, then run 'lasterror' to get debugging help (this is already programmed in skeleton.m near the end).
- When programming, do things in little pieces and test as you go. Take the first part of the code where you load the stimuli and put that in a separate script. Make sure that works, then add to that little by little, testing very small pieces of the experiment as you go. That way if something breaks, you will have a good idea of what caused it. Take your time and think about what you are doing.

Assignment:

1. Install psychtoolbox: psychtoolbox.org/PsychtoolboxDownload
    - Read instructions carefully. There are some things that need to be done like running matlab as admin, restarting, etc. that will make your install not work if not done right.
2. Run 'help Psychdemos' for some examples. Run DotDemo to make sure it works.
3. Plan your experiment:
    - What is your experiment task?
    - Will there be feedback or not? How about breaks? How many blocks?
    - Are participants given unlimited or fixed time? Do they respond at all?
    - What kind of stimuli are you using? Sounds? Pictures? Videos?
    - How will you explain the task? Examples? A scripts?
    - Should there be practice, and how long should that go?
4. Program your experiment
    - You may start with a psychtoolbox script ('edit DotDemo', then saveas 'myExperiment.m'), a blank script, or the skeleton.m script that I provided. Skeleton has code to:
        - Loading image file names, creating big lists of stimuli, creating a matrix of category labels (1 or 2). You will have to modify for your stimuli and experiment.
        - Looping through trials, show stimulus, wait for response or a quit key
        - Export results to text file, show blank feedback screen until keypress

Homework++:

If these are too easy, go back and do the homework ++ from the previous 2 homeworks.