

**This homework is due January 26, 2016, at Noon.**

This homework is simply administrative, meant to collect some basic information, and make sure you are comfortable with submitting homework and running iPython notebooks. Actual homeworks will start next week.

1. **Account Setup** If you haven't already done so, please login to your instructional account (using your account form), register yourself, and update your password. Please also practice submitting the dummy homework, as described in the above instructions.

**Solution:** Full credit for performing the above steps.

**2. Background**

- (a) What is your name?

**Solution:** Elad Alon

- (b) Tell us about yourself. Where are you from, what are your hobbies, etc.

**Solution:** I was born in Israel but spent most of my life here in the Bay Area. "Hobby" wise I'm a bit of a foodie and love exploring new restaurants/places, and I also like physical exercise of most any type (these days mostly going to the gym, but snowboarding and hiking are pretty typical for me too). I also have been known to play an occasional video game.

- (c) What would you like to learn from this course?

**Solution:** I'd like to learn from this class not only how we can best teach the material, but which aspects get you most excited about the powerful and useful nature of the ideas/approaches we are teaching you.

- (d) What would you like to learn from courses in the EECS department before you graduate?

**Solution:** Back when I first started as an undergrad I wanted to be a computer architect. At some point someone told me "It's really important to understand how computers are actually built," and so I took a VLSI circuit design class (similar to EECS151 here) and ended up shifting my emphasis to circuits.

- (e) What is a technology that you would like to see invented in the next  $\sim 20$  years? What might be needed to realize this?

**Solution:** The list of technologies I'd like to see invented is too long to include in an exhaustive manner here, so I'll just pick one of my favorites. In particular, I would like to see technologies that democratize access to the Internet such that anyone/anywhere can get a high-bandwidth, reliable connection without having to pay a service provider.

- (f) Tell us about your academic background. What math and physics courses have you taken in high-school?

**Solution:** In high school, I took Math BC and basic mechanics/electrostatics.

- (g) What platform do you use (Mac/Linux/Windows)?

**Solution:** I use Windows, but get the feeling that I am a dying breed.

- (h) In your opinion, what is the reason behind the iPhone's success?

**Solution:** A lot of people will probably say that the ability to access the internet made the iPhone succeed, but there were actually a number of phones before that which had that capability (and never took off in the same way). In my opinion, the main initial success of the iPhone was driven by its multi-touch capacitive touchscreen technology and the extremely simple/intuitive interface that they developed around it. The app-store is probably the next "technology" (in some sense business strategy) that made smartphones a success, but I'd still argue that the touchscreen was the real initial driver.

**3. Getting to know iPython** In this problem, you will exercise the basics of working with iPython notebooks. These basics include loading a notebook, editing the code therein, executing it and extracting the results of the execution.

- (a) The staff of EE16A prepared a piece of art in order to welcome you to the course. However, after creating it, the staff had a disagreement on what the piece depicts. We need your help to settle the confusion.

The notebook **prob0.ipynb** contains code that generates the art piece in question. Load the iPython notebook and execute it. Then identify this object, and draw it yourself (by hand). Attach the drawing to your solutions.

**Solution:** The code draws a flower.

(Any hand-drawn representation of a flower is fine.)

- (b) The same notebook contains code that sums up the numbers 0 through 10. You are asked to modify the code such that it sums the numbers 0 through 112. Report the result of the execution of the updated code. In addition, submit the updated notebook in a file named **hw0.ipynb**.

**Solution:** The result of the execution is:

The sum is 6328

The code is in iPython notebook sol0.ipynb