ECE453/CS447/ECE653/CS647/SE465
Notes on Assignment/Lab 1 (v1)

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This document explains how to set up a working environment for Question 4. I've chosen to use Vagrant to make it easy to set up your environment. I've tested these instructions on Debian GNU/Linux as well as Windows. They should work on a Mac as well.

Install the following software:

- you should already have git, since you cloned the `a1` repository;
- virtualbox (`https://www.virtualbox.org/wiki/Downloads`); you don't need the extension pack or SDK;
- vagrant (`https://www.vagrantup.com/downloads.html`).

You should have an `a1` directory after cloning the provided git repository as described in the main document. In that directory, you will find a `q4` subdirectory, which contains a `Vagrantfile`, `bootstrap.sh`, and the `distribute` app.

Next, you need to get vagrant to build your virtual machine.

- Go to the `q4` subdirectory, and

  ```
  $ vagrant up
  ```

  This initializes your virtual machine and downloads the `isin` sample code into the virtual machine. potential pitfall: you may get a cryptic error about "VT-x not available". In that case, you need to go to your computer's BIOS settings and enable virtualization extensions. (See `http://superuser.com/questions/22915/how-do-i-enable-vt-x` for information.)

- Start an `ssh` seesion into the virtual machine you've just set up:

  ```
  $ vagrant ssh
  ```

  potential pitfall: `ssh` may not be set up/in the PATH on your (Windows) computer. Either put it there (git includes ssh), or ssh directly into your virtual machine:

  ```
  > ssh vagrant@localhost -p 2222 -i <address-vagrant-ssh-tells-you>
  ```

Great! Now you have a working virtual machine. The next steps are inside the virtual machine. Complete the `isin` installation:

- change to the `isin` directory:

  ```
  $ cd isin
  ```

- give yourself admin access by editing the `username` in `isin/fixtures/isin_users.json` (recommendation: use `vim` or install emacs in your virtual machine with `sudo apt-get install emacs`);

- install the user table into the database:

  ```
  $ python manage.py loaddata isin_users
  ```

- run the test cases I've included:

  ```
  $ python manage.py test --settings=isin.test_settings
  ```

  Look at the coverage statistics.
  Tip: The test cases are at `isin/tests.py`.

- run the app itself:

  ```
  $ python manage.py runserver 10.0.2.15:8000
  ```

  and, on your own computer, connect to `http://localhost:4567` in a web browser. Update functionality is located at `http://localhost:4567/u`.

Challenge: can you think of some functionality that I've not tested in the `isin` test cases?

You will also find the `distribute` code in `/home/vagrant/distribute`; the VM should link to your main `a1` repository. You shouldn't need to do any setup for `distribute`. Your task for Q4 is to write test cases for that code.