CS101C Homework 1

Part I: MetaPRL

Due: Monday, Apr 6, 2PM

Summary: Make sure that you have access to the running MetaPRL system in UGCS lab by the time we start using it in class.

Collaboration: For this part of the homework, feel free to get and give any help you want. The only restriction is that **you should be the only one typing anything in your account**.

Instructions.

1. If you do not have a UGCS accout, then request one at `http://www.cs.caltech.edu/cgi-bin/sysadmin/account_request.cgi`.
2. Login to UGCS.
3. Download the `http://nogin.org/cs101c/meta-prl.tar.bz2` file.
4. Unpack it (`tar -x --use-compress-program bzip2 -f meta-prl.tar.bz2`)
5. Go to the `meta-prl` directory and run `make opt`
6. Run the `editor/ml/mpxterm` script.

If everything works out, in step 6 you should get an `xterm` window with a MetaPRL greeting in it.

Note: if you are using your own machine and *not UGCS*, then see the download instructions on `http://metaprl.org/`. Please still use the cs101 version of MetaPRL (`http://nogin.org/cs101c/meta-prl.tar.bz2`), but edit (or just make empty) the `mk/config.local` file.

Submission instructions: Send am email to `cs101-admin@metaprl.org` with the *full* text of the MetaPRL greeting that you have received. Please include "`CS101 HW1`" in the message subject line.

Part II: Formal proofs (on paper)

Due: Monday, Apr 6, 2:55PM (firm)

Summary: Using the rules presented in the first lecture, write 3 formal proofs.

Collaboration: For this part of the homework, you can discuss the general principles and ideas of formal proofs, but you should work alone on the assigned proofs.

Submission instructions: Write up the proofs and bring to the lecture.

II.1 Prove the equivalence of $\neg(A \wedge B)$ and $\neg A \vee \neg B$.

II.2 Without using the "proof by contradition" rule, prove $\neg\neg(A \vee \neg A)$.