

Learning to program

Learning to program

- One learns to program by doing.
 - Writing your own programs
 - Reading others programs
 - Studying good programs written by others
 - Getting lots of feedback about your own programs

Peer Evaluation

- You can't learn to program unless you write programs.
- You learn to write better programs by getting feedback.
- I can't give enough feedback to a class of any large size.
- Peer evaluation is utilizing students to provide feedback to other students about their programs.
- This is serious business
 - Both the program author and the peer evaluator can learn a lot from this practice.

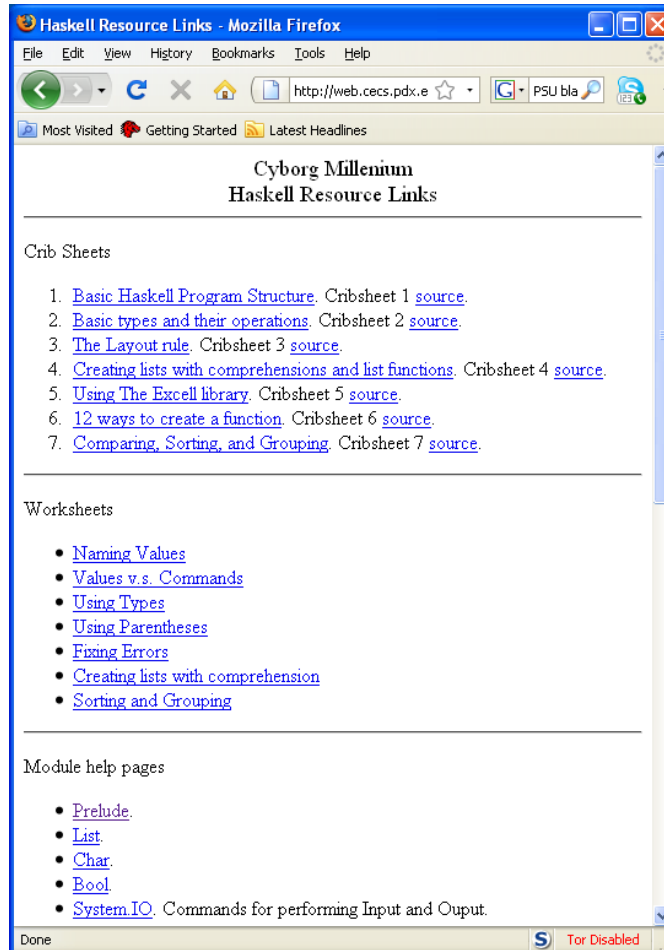
Pair programming

- Work in pairs.
- Two sets of eyes and brains is better than one.
- One person “drives” – works the keyboard.
- One person “navigates” – decides strategy and looks for errors.
- Switch roles at least every half hour.
- Think before you type!

Code walk throughs

- The author of a program explains his code line by line to a group evaluators.
- The evaluators
 - ask questions about what they don't understand
 - Suggest improvements to code
 - Suggest code restructuring
- Code structure (use of abstractions, functions, modules etc), comments, indentation are all subject to suggestion.

The programming resource link



In class programming worksheets

- We will often use worksheets in class
 - Go to the programming resource link page
 - Download the worksheet to your own computer
 - Work in pairs to complete the worksheet.
 - When your pair is finished. Get up from your table and find a pair that could use some assistance.
 - Over their shoulder (don't touch the computer!) help them to finish the worksheet
 - When everyone is standing we'll move on to the next unit.

Using resources

- Study the resources provided.
- Try and recognize what makes a program good.
- Learn the “structure” of programs. Many errors are silly misspellings or forgotten punctuation.
- **Always ask for help!** Many times another pair of eyes will immediately see what’s wrong.