

# The Rundown

Tasks, Ethics, Highlights

## Objectives

### Textbook

- Revise or rewrite all 8 chapters

### Teaching Tools

- Create a set of teaching tools through the development and testing of new lecture slides
- Effectively use these tools and the text by teaching team members

### Problem Sets

- Exhaustive testing and revision of all chapter exercises

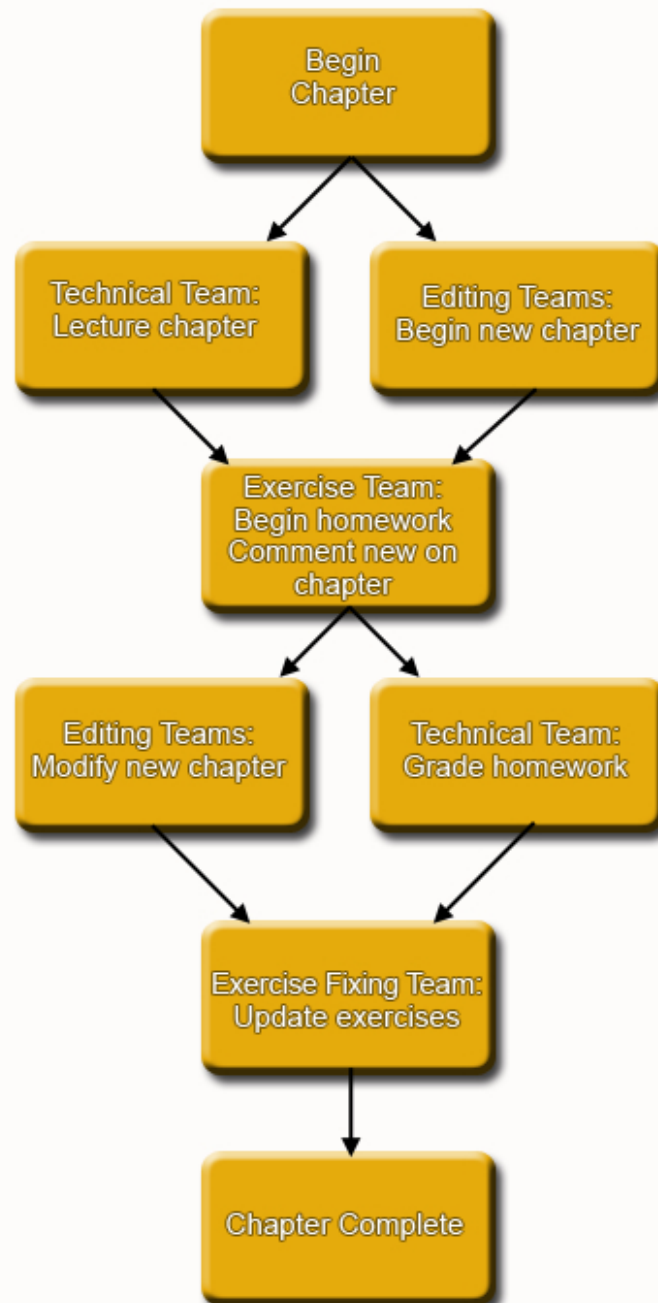
## Critical Barriers

- Difficult to write and edit 10 chapters in only 4 months
- Recognizing the need to modify team structure and efficient integration of this new structure -- allowing the addition of two new chapters
- Coming together as a team

## IPRO Highlights

- 14/14 Project Plan
- 16/16 Midterm Report
- 16/16 Ethics Document

## Development Cycle



### References:

[1] [http://radar.oreilly.com/archives/2006/07/state\\_of\\_the\\_computer\\_book\\_mar\\_4.html](http://radar.oreilly.com/archives/2006/07/state_of_the_computer_book_mar_4.html)

## IPRO 328

### Testing and Improving a New Text for Teaching Computer Science



### Today's CS Textbooks

Teach only about programming languages, and neglect the most important aspect of computer science: the **algorithmic approach** to problem solving. Large texts scare new students with arcane and overly complex languages.

### Tomorrow's CS Textbook

This IPRO revised and rewrote a new edition of a textbook drafted by IIT's Dr. Grossman and Dr. Frieder. This book includes:

- Relevant text
- Chapter exercises
- Side bars and figures
- Introductions and appendices

### The Crowning Jewel

The Ruby language was chosen for:

- Power
- Ease of use
- No previous CS course textbook
- Intuitive nature
- Help new users learn computer programming
- Acceptance from major corporations like: **IBM, Cisco, Amazon, Qualcomm, Siemens, Cnet, NASA, BBC, and Yahoo!**
- 743% increase in Ruby book sales in 2006<sub>[1]</sub>

# Organization

The Structure behind the team

## Editing Team 1

**Katherine Hammes, Roman Kofman, Phillip Rymek, Harry Tran**

- Created and edited chapters 1 - 8 in the new version of the textbook
- Commented on chapters 9 and 10

## Editing Team 2

**Nicholas Bathum, Peter Schmitz**

- Created and edited chapters 9 and 10 in the new version of the textbook
- Commented on chapters 1 - 8

## Exercise Team

**David Allen, Nicholas Bathum, Seon Jeong, Noh Kwak, Vivek Patel, Peter Schmitz, Michael Tilatti**

- Learned Ruby using the textbook
- Completed homework to test effectiveness of the text
- Commented on all homeworks and chapters

## Technical Team

**Leland Johnson, Phillip Rymek**

- Created lecture slides and conducted class lectures
- Graded all the homeworks
- Commented on all chapters

## Exercise Fixing Team

**David Allen, Seon Jeong, Noh Kwak, Vivek Patel, Michael Tilatti**

- Modified, deleted, and created chapter exercises

# The Team

## The Team Behind the Text

In order to accomplish this literary feat, an intelligent and diverse team was required.

## IPRO 328 Team Members

### Students

David Charles Allen  
5th year Political Science  
Nicholas Bathum  
3rd year Computer Science  
Katherine Hammes  
3rd year Chemical Engineering  
Seon Jeong  
4th year Mechanical Engineering  
Leland Johnson  
4th year Computer Science  
Roman Kofman  
4th year Computer Science  
Noh Hyup Kwak  
4th year Electrical Engineering  
Vivek Patel  
3rd year Biochemistry  
Phillip Rymek  
3rd year Computer Science  
Peter Schmitz  
3rd year Computer Science  
Michael Tilatti  
3rd year Aerospace Engineering  
Harry Tran  
3rd year Biomedical Engineering

### Student Advisor

Yacin Nadji  
3rd year Computer Science

### Faculty Advisor

David Grossman

# IPRO Results:

The numbers to back up the words

**1100.9**

Person Hours

**12**

IPRO Team Members

**10**

Total Chapters

**3**

New Chapters

**189**

Total Exercises

**35**

New Exercises

**23**

Changed Exercises

**14**

Deleted Exercises

**1015**

Chapter Text  
Insertion/Deletions

## IPRO 328 Future Plans

To continue IPRO 328's success, the textbook will be used in a real world setting - an IIT classroom.