CS 350, slide set 4

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Team member request

- See form on class web site
  - Under “Blank Forms,” **Group Request Form**
  - Word (if you don’t have word, create text version)
- Mail to cmo by Wed. Feb. 23
- You need to provide some description of your background
- You can **request** some group members
  - Target: 5 member groups
  - Talk to others before putting their names on your form
  - You need not identify all 5 people to request

Reading

- PSP text, ch. 7, 8, 9, 10

Topics

- Time Management
- Managing Commitments
- Managing Schedules
- Project Plans

Commitments - contracts

- Define what will be done
- How to determine when it's complete
- Who will do it
- When it is to be done
- Compensation for doing it
- Who pays

Commitments - 2

- Analyze before committing
  - Have a reason to believe you can perform based on more than hope
- Need a plan
  - How much time is needed? When will you spend the time?
- Document the agreement
- If unable to meet commitment, promptly tell others

Example – software project for Admissions, pp. 89-91

1. Understand what's needed
   - Decide what is to be "delivered"
     - Source code, documentation, training?
   - Decide if you can do it
   - And, perhaps, how inevitable modifications will be handled
2. Estimate effort required
3. Find the necessary time
   - Based on complete Weekly Time Summary
4. Discuss schedule, salary

Job protection through planning

- Repeated industry stories of engineer using PSP data to substantiate time requirements for assigned task when management started with unreasonable deadline

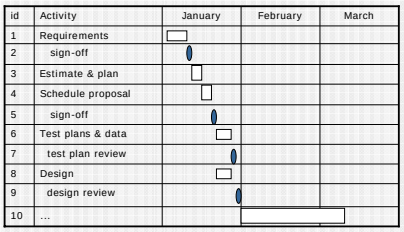
Dangers of over committing

- Work exceeds time available
- Misplaced priorities
  - Tendency to work on easy stuff first
- Poor work quality
- Loss of trust, loss of respect

More bad news

- Working harder usually not the solution
- If you don't know how much work remains to be done in a project, you're probably already in trouble.
- If you need good luck to complete on time, you probably won't get it.
- If estimates are wrong, they're probably low.

Basic tools: Gantt chart



id	Activity	January	February	March
1	Requirements			
2	sign-off			
3	Estimate & plan			
4	Schedule proposal			
5	sign-off			
6	Test plans & data			
7	test plan review			
8	Design			
9	design review			
10	...			

Schedule basics

- Each person knows what he/she is supposed to do
- Each person commits to tasks
- Interdependencies among tasks identified & documented
- Schedule reviewed to assure no omissions

Measurable checkpoints at deadlines

- Good examples:
  - Test plan approved
  - Code complete and compiles without error
  - Code passed detailed review
  - All test cases passed
- Poor examples:
  - You have designed the program
  - Coding is 90% complete
  - Code has passed 90% of test cases

Tracking plans

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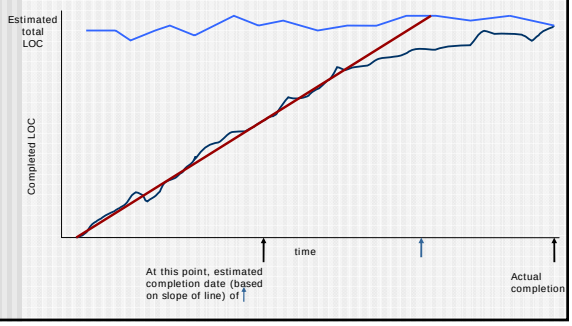
planned
actual

Lessons from Brooks: The Mythical Man-Month



Midterm Exam

- In two parts:
  - Take-home part will be posted on class web site by Wednesday evening; must be turned in with in-class exam.
  - In-class part Feb. 28.
  - Sample old exams available on class web site.
  - Should cover PSP text and slides through Chapter 14

Earned Value Tracking

- Start list of tasks to be completed
- Estimate time required for each task
- Sum these times
- For each task, divide its estimated time by the project total time; convert to percentage. This is “planned value.”
- Only after you complete each task, you “earn” its planned value. Keep a running total of these “earned values.”
- Key point: no value is “earned” until task to totally complete.

Earned Value Example

Week	Planned Value	Earned Value	Projected Value
1	3.2	4.1	
2	6.4	4.1	
3	9.6	7.2	
4	12.8	9.6	
5	15.0		12.0
6			14.4
.			16.8
.			19.2
.			21.6
			…