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

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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

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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

<table>
<thead>
<tr>
<th>Activity</th>
<th>January</th>
<th>February</th>
<th>March</th>
</tr>
</thead>
<tbody>
<tr>
<td>Requirements</td>
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<tr>
<td>Sign-off</td>
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<tr>
<td>Schedule proposal</td>
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<tr>
<td>Sign-off</td>
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<tr>
<td>Test plans &amp; data</td>
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<td>Test plan review</td>
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<tr>
<td>Design review</td>
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</tbody>
</table>

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

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**Tracking plans**

<table>
<thead>
<tr>
<th>Activity</th>
<th>March</th>
<th>February</th>
<th>March</th>
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<td>Sign-off</td>
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<td>Estimate &amp; Data</td>
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<td>Schedule proposal</td>
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<td>Sign-off</td>
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<td>Test plan &amp; Data</td>
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</table>

- **planned**
- **actual**

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**Lessons from Brooks: The Mythical Man-Month**

*Graph showing estimated and actual LOC over time.*
**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**

<table>
<thead>
<tr>
<th>Week</th>
<th>Planned Value</th>
<th>Earned Value</th>
<th>Projected Value</th>
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<tr>
<td>1</td>
<td>3.3</td>
<td>4.1</td>
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<td>2</td>
<td>6.4</td>
<td>4.1</td>
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<tr>
<td>3</td>
<td>9.6</td>
<td>7.2</td>
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<tr>
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avg. of 2.4/week