

CS212

Softskills
Spring 2007

Soft Skills

- What are they?
 - Work skills
 - People skills
 - Communication skills
 - Writing
 - Speaking
 - Web/art/...
- Why are they important?
 - Jobs, careers
 - Getting
 - Maintaining

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Relevance

- Why are soft skills important for CS?
 - Public/popular perception, stereotypes
 - Realities
 - Career shifts, promotion
- Software engineering:
 - Programming in teams
 - Pair programming, extreme programming
 - Client, business relationships
 - Technical support, q/a, marketing
 - Business, consulting
 - Legal
- GDIAC plug :-)

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Motivation

- Common to ask technical and non-technical issues:
 - "Please talk about your teamwork experiences."
 - "How well do you work with other people?"
 - "Do you like working alone?"
 - "Did you ever have a teammate who did not contribute a fair share to a project. How did you deal with the matter?"
 - "How do you see yourself fitting into this corporate environment?"
- Scenarios:
 - "Your supervisor has made a mistake. How would you inform her/him?"
 - "You find that you do not get along with your teammates. What would you do?"
- Others?

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Management

- **Management:**
 - <http://www.pmi.org/projectmanagement/project.htm>
 - Project Management: *the application of knowledge, skills, tools and techniques to a broad range of activities in order to meet the requirements of the particular project*
- **Academic version:**
 - Resources: mainly time
 - Management: mainly shared, except in large groups
 - Scheduling: mainly due dates
 - Review: grades

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Management Schemes

- **TQM:**
 - <http://www.gslis.utexas.edu/~rpollock/tqm.html>
- **Matrix management:**
 - <http://www.strategicfutures.com/matrices.htm>
- **Six sigma:**
 - <http://www.ge.com/sixsigma>
 - <http://www.6-sigma.com>
- **QSC...**

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Leadership

The manager administers;
the leader originates.
The manager is a copy;
the leader is an original.
The manager maintains;
the leader develops.
The manager focuses on systems and structure;
the leader, on people.
The manager relies on control;
the leader inspires trust.

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More Leadership

The manager has a short-range view;
the leader, a long range perspective.
The manager asks how and when;
the leader, what and why.
The manager has an eye on the bottom line;
the leader on the horizon.
The manager accepts the status quo;
the leader challenges it.
The manager is the classic good soldier;
the leader, her/his own person.

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Teamwork

- Forming a team and duties: assign roles!
 - leader
 - secretary
 - other roles?
 - administration (names, emergency contact info)
 - meetings
- Group dynamics: later in this lecture
- Demonstration (presentations):
 - Think of it as performance
 - Practice!

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How To Lose

- Ten proven ways to make your group project harder (Adapted from Andrew Myers's *How to lose in CS 412*):
 - Designate one sucker in your group as master hacker to do all the work.
 - Decide that one member of your group is useless and don't invite them to group meetings.
 - Combine above techniques: decide that all group members are useless and you are the lone master hacker.
 - Have a different person implement each programming assignment.
 - Have everyone implement separate pieces of the system with no discussion of how they will fit together. Ideally, split the group into two or more factions.
 - Work extremely closely all the time, spending all your time talking amongst yourselves rather than doing actual implementation.
 - Don't start until three days before the assignment is due. Then pull three allnighters in a row.
 - Don't ask the staff any questions. What do they know?
 - Don't use any of the techniques for compiler building that you learn in this class. This works best if you don't attend class at all, so you avoid polluting your mind with the course material.

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Divorce

What should you do if you have been working with the same partner all semester, but no longer wish to continue the relationship? It's like any "breakup" you might face as with bandmates, significant others, friends, and lovers. There is no easy way to sever the ties, but some ways are better than others. What is the best thing to remember? Speak in terms of *I-statements*.

Delaying the inevitable will just worsen matters, so resolve to end the relationship as soon as possible. Talk with the person and explain in calm terms your reason(s) for needing to sever the relationship. For instance, you might say, "I'm sorry, but I need to work on my own or with another partner for the rest of the semester." If you find such conversations difficult, you might wish to practice what you will say in advance out loud.

If your soon-to-be ex-partner asks why, avoid you-statements. In general, statements starting with you are this and you are that encourage arguments and defensiveness because of the implied, perceived, or directed insult. Before using a you-statement, consider that each of us tends to love or hate things in others that we see reflected in ourselves. A you-statement speaks of oneself, so choose them with care....

Instead, try *I-statements*, such as saying, "I want to end the partnership because I'm not happy" or "I need a different partner to advance my CS degree," to lessen the blow and avoid a hurtful blame-game. Do not despair if you feel guilty afterwards. You are responsible for your own growth, which is painful, sometimes. Your ex-partner must also grow, so you may not only ultimately be helping yourself, but your partner as well.

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DIS Case Studies

- Oswego River's Murky Water:
 - contractors
 - professional ethics
 - concrete
 - motorboats
- Space Colonization:
 - problem members and coups
 - academic teams and suits
- My "W" and The Sub Shoppe
 - cooperative effort
 - reaping rewards from hard work...

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Group Dynamics

- **Group Dynamics:**
 - How people work together
 - <http://ctl.stanford.edu/Tomprof/postings/581.html>
- **Why groups?**
 - combine talents, wider pool of knowledge
 - Training
 - self-policing
- **Two components:**
 - the interaction of team members
 - the life cycle of a group
- **Common processes all groups encounter**
 - Forming, storming, norming, performing, adjourning

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Initial Stages

- **Forming:**
 - caution
 - excitement
 - formality
- **Storming:**
 - personalities (and quirks) arise
 - develop models of communication and working
 - possible conflicts
 - the art of the "I statement"

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Middle-To-Later Stages

- **Norming:**
 - conflict resolution
 - roles clarify
 - finding ways to work
- **Performing:**
 - energy spent on working, not fighting
 - trust, respect
 - industry: "self-directed work teams"
- **Adjourning:**
 - separation anxiety
 - sadness
 - saying good-bye...

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More Group Advice

- The "Dazzling Dozen":
 1. Clear mission
 2. Informal atmosphere
 3. Lots of discussion
 4. Active listening
 5. Trust and openness
 6. Disagreement is OK
 7. Criticism is issue oriented, never personal
 8. Consensus is the norm
 9. Effective leadership
 10. Clarity of assignments
 11. Shared values and norms of behavior
 12. Commitment

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