CSE403
Section 1:
The Fate of Software Projects
Learning = Practice + Feedback
Desirable Qualities in Teammates
Team-Building Conversations

First, Let’s Try the Technology
- In the space below, please write the first name of the person you’re sharing a machine with:
- Now, let them do the same:
- When done, submit using ‘Select All’ and then ‘Send Selection’.

The Fate of Software Projects in Industry: Question
- Under some reasonable definition of a “project” (you make it up), what would you guess is the percentage of software projects that fail (i.e., that don’t accomplish their goals)?
Choose the nearest approximation:
- 0-20%
- 20-40%
- 40-60%
- 60-80%
- 80-100%

The Fate of Software Projects in Industry: Answers
- Here is how undergraduate students in software engineering (CSE403) voted (left) vs. how graduate students (in CSE590ET) voted (right):
- Historically, 85% of software projects fail.

Chief Reasons for Software Project Failures: Question
- What might be the main reasons behind such a large percentage of software project failures?
State one reason that you and the person next to you think is prevalent.

Chief Reasons for Software Project Failures: Student Answers
- Other CSE403 students said:
  - Doing something without a clear customer base
  - Competition
  - Changes in the context (funding, priorities)
  - Lack of planning: poor module decomposition, poor risk analysis, lack of knowledge, lack of motivation
  - Entrepreneurial nature of software (unlike other engineering disciplines)
  - Too “rosy” assumptions (about future technology, etc.)
  - Poor communication
Chief Reasons for Software Project Failures: Student Answers

- Changing of requirements
- Misunderstanding of requirements
- Lack of clear specification
- Over-ambitious goals
- Original goals were unrealistic
- Poor understanding of goals
- Lack of a reasonable & structured software/feature plan
- Lack of planning
- Poor planning/research
- Cost overruns
- No commercial market for end product
- Complexity of software

Chief Reasons for Software Project Failures: What Professionals Say

- According to most professionals, the majority of software projects fail...
  - not because of technical deficiencies or problems
  - but because of underestimating or sometimes even completely ignoring the human aspect, including:
    - the relationship with the customers
    - regular and explicit communication between all stakeholders – managers, developers, testers, marketing, sales, customers
  - Examples:
    - Building a product that no one wants to buy
    - Sabotaging a product (for political reasons) that otherwise may have succeeded

Learning = Practice + Feedback

**Practice:**
- Project work
- Planning, communication
- Design, testing, documentation, coding
- Reflective writings
- Providing constructive comments to others

**Feedback:**
- From us
  - On project milestones
  - On reflective writings
  - During in-class discussions
- From student peers continually + as part of peer reviews
- From programming tools
- From guest lecturers (if you choose to ask them)

Desirable Qualities in Teammates

- What would you like your teammates to be?

Desirable Qualities in Teammates

- Students in previous CSE403 classes said they prefer teammates who were:
  - Motivated
  - Reliable
  - Putting team agenda before personal goals
  - Open-minded
  - Explicit and concise communication
  - Active, showing initiative
  - Flexible (not stuck into original expectations)
  - Organized (good time management)
  - Not necessarily "stars"
Personal Qualities that Managers Look for in Employees
- Dependable
- Trainable
- Proactive

“Star players” are a red flag!

Team Conversations
- Necessary to establish shared understanding among teammates.
  - See handout
- What are your team’s success criteria?

One-minute Feedback
- What one or two ideas discussed today captured your attention and thinking the most?

Questions?
- On homework
- On project
- On course
- ...

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