Definition of Software Process

Tao Xie, Professor
Computer Science @ Illinois
Learning Objectives

By the end of this video, you will be able to
• Explain what is software process.
• Classify a given activity into its belonging activity group.
• Classify a given activity group into its belonging section.
• Name example software processes.
HOW TO WRITE GOOD CODE:

START PROJECT:

DO THINGS RIGHT OR DO THEM FIRST?

FAST

RIGHT

CODE WELL

ARE YOU DONE YET?

NO

NO, AND THE REQUIREMENTS HAVE CHANGED.

THROW IT ALL OUT AND START OVER.

GOOD CODE

DOES IT WORK YET?

NO

ALMOST, BUT IT'S BECOME A MASS OF KLUDGES AND SPAGHETTI CODE.

CODE FAST
Definition of Software Process

• A framework for the tasks that are required to build high-quality software (Pressman, 2009)

• A set of activities (a.k.a. activity group) performed towards a specific purpose (IEEE, 2006)
Activity Groups in IEEE 1074

- **Project Management**
  - Project initiation
  - Project planning
  - Project monitoring and control

- **Pre-development**
  - Concept exploration
  - System allocation
  - Software importation

- **Development**
  - Software requirements
  - Design
  - Implementation

5 sections
- 17 activity groups
- 69 activities

- Define and develop software requirements
- Define interface requirements
- Prioritize and integrate software requirements
Activity Groups in IEEE 1074 cont.

• **Post-Development**
  • Installation
  • Operation and support
  • Maintenance
  • Retirement

• **Support**
  • Evaluation
  • Software configuration management
  • Documentation development
  • Training
Many Software Processes

• Agile
  • eXtreme Programming (XP), Scrum...

• Plan-driven/formal
  • Waterfall, Spiral, Rational Unified Process (RUP), Cleanroom...

• Distributed, open-source
  • Bazaar...

• ...
References


The End