Software Engineering

AY 2018-2019

04GSPOV

SOftEng

http://softeng.polito.it

Lecturers

- Maurizio Morisio
  - Dip. Automatica e Informatica
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- Luca Ardito
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Schedule

Lecture	Tuesday	11.30 - 14.30	Room 12
	Wednesday	11.30 - 14.30	Room 12
	Thursday	17.30 - 19.00	Room 2P

Consultation

- in classroom
- send email to schedule appointment

Web site

Web

http://softeng.polito.it/courses/04GSP

- communications
- teaching material

Slack

- https://goo.gl/NqWmbw

Outline

- Software engineering, motivation and issues
- Requirements
  - UML
- Design
  - UML
- Verification and Validation
  - inspections, testing

Organization

- Lectures/ examples / exercises in class
- One project to be developed in group (max 4 students)

- Final exam
  - See past exams on web site

Evaluation

- Final exam: 33 points
  - GradeFinalExam >= 18
- Project: 33 points
  - GradeProject >= 18

- Final grade
  - GradeFinalExam *0,6 + GradeProject * 0,4

References

- Bruegge Dutoit, Object Oriented Software Engineering
  - also Sommerville, Pfleeger, Pressman, Shach
- Martin Fowler, UML Distilled

Beyond the SE basics

How does Sw development work in practice?

- Modern teams organize with agile practices

Quality is a key component in engineering practice, how does is work in Sw engineering?

- Software analytics allow measuring and controlling Sw projects

Evolution is intrinsic in software, how do you tame it?

- Advanced debugging methods, log analysis, reverse engineering techniques

Software Engineering II

Professor: Marco Torchiano

A practical, project-oriented course to learn how software is crafted in modern teams

Let's try in practice

- Software Scrum
- Elephant carpaccio
- Planning poker
- Software smells

Project

Goal

- Apply a state of the art software engineering process to a (small) project
  - Use of tools
  - Use of techniques
  - Use of process

Constraints

- Project must be developed in parallel with course
- Object of development is the same for all teams
  - Discussion in team is essential
  - Copying between teams is forbidden
    - Antiplagiarism tools will be applied
- All communications only via defined tools (mostly the Git repository, or Slack)

Steps

1. Define your team
   - https://goo.gl/forms/cWORGfpIwn1Hu1Hl1
   - By march 9
2. Set up your repository
   - After March 9, you will receive an email (@polito account) for setting up your account and team repository
3. Access object of development on repository
4. Produce various deliverables

Object of development

- La Tazza

- An existing application that helps to manage the sale and the supply of capsules.

To be produced

- Requirements document
- Test suite, GUI level
- Test suite, API level
- Design document (reverse)
- Code
- Test suite – unit level, integration level
- Change1 (fix a defect)
- Change2 (new function)
- Change3 (change function)