

Project

A.A. 2009/10

01BIF



SoftEng
<http://softeng.polito.it>

Tesine

- Heating System Testing
- MISRA-C 2004 Testing

Heating System

Tesina

- People
 - ◆ Groups max 3 persons
- Object
 - ◆ Test and modification of Software developed by other people
 - Junit, JFCunit, Cobertura, Maven, Muclipse, Eclipse
 - ◆ Under configuration management
 - Subversion
 - http://softeng.polito.it/repoStudents/heating_system_project/01BIF_2009-2010/

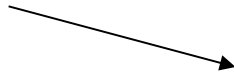
HeatingSystem

Evolute 'thermostat'

- GUI
 - ◆ Proramming and monitoring (user side)
- Embedded
 - ◆ Sensors, actuators
 - ◆ You must build stubs (examples provided)

Infrastructure

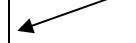
Access: groups, prof



Docs and libs
(HeatSystem.jar
HeatSystem.pdf)



Access: group_x



Docs and code of the group
(stub, tests, other...)



URLs

- ◆ Common SVN:
- ◆ http://softeng.polito.it/repoStudents/heating_system_project/01BIF_2009-2010/course_repository/
- ◆ Group SVN
- ◆ http://softeng.polito.it/repoStudents/heating_system_project/01BIF_2009-2010/group_xx

Process

- Checkout of the project directly from Eclipse
- Work directly on your own Working Copy
 - ◆ Define and document checkin checkout policies (local process)
 - ◆ Give semantic to atomic commit

Phases

- 0 - Software setup and checkout(in eclipse)
- 1 - Project Management
- 2 - Acceptance test (black box)
- 3 - Unit test, integration test and design review (white box)
- 4 - Defects fixing
- 5 - Post mortem

Deliverables

- Deliverables are orange colored in following slides

Deadlines

- 1 - Project Management
- 2 - Acceptance Test (black box)
- 3 - Unit test, integration test(white box)
- 4 - Update, design review
- 5 - Post mortem

0 Software Setup and checkout

- Follow steps in Appendix A of “instructions” and import you project directly in Eclipse

1 Project Management

- Input
 - ◆ Project Plan Templates, examples
- Output
 - **D1 Project Plan** :project plan document, time and cost estimation

Tools

- GanttProject. MS Project. Visio.
 - ◆ Gantt
- MS Excel
 - ◆ Data analysis, charts

2 Acceptance Tests

- Input
 - Requirements
 - executable, instructions, installation
- Output
 - D2 test report (using maven reports)
 - D3 defect list
 - D4 physical system stubs

Tools

- (SVN)
 - ◆ Access via web, eclipse, svn client
- JUnit
 - ◆ tests
- JFCUnit
 - ◆ Test GUI without source code
- Maven
 - ◆ Project Management, project build, test, report.

3a Unit Test, integration

- Input

- Requirements specification
- Source code

- Output

- D2a test report
- D3a defect list (xml)
- D5 integration strategy followed : integration sequence of the classes
- D4a stubs and drivers (it extends D4)

4 Defects correction and regression testing

- Input
 - ◆ Software (HeatSystem.jar), with .java
 - ◆ Software design
- Output
 - D6 Source code modified
 - D7 New design

Tools

- Omondo
 - ♦ UML <-> Java
- Cobertura
 - ♦ White box test support
- Maven
 - ♦ Project management, build, test, report

Muclipse

Mutation testing

?Other useful tools you would like to use

Tools

- GanttProject. MS Project. Visio.
 - ♦ Gantt
- MS Excel
 - ♦ Data analysis, chart

5 Post Mortem

- Input
 - all input/output documents of the previous phases
- Output
 - **D8 Post mortem**: measures and analysis