

Distributed and Outsourced Software Engineering (DOSE)

Assignment 3: Interface Specifications using Contracts

(10 points of 100)

Deadline: Wednesday, November 14th - 5 pm (Zurich time)

Commit the files at to the repository

https://github.com/DOSE-ETH/dose2012/tree/master/src/dose_2012/group_n

where n is your group number.

1. Questionnaire

Each team should have collected the time expended in Assignment 2. Please fill in the questionnaire for Assignment 2 (Requirements) here:

<http://tinyurl.com/dose2012-questionnaire2>

Remember:

- **Only ONE person fills in the questionnaire, providing her TEAM's data.**
- **Follow the input-format suggested at each question.**

After Assignment 3, we will ask you to fill out another questionnaire on how much time you've expended for communication and preparing the assignment. Thus, please keep track of that data throughout the duration of this assignment.

2. Reading Assignment

Read the following paper to learn about contracts and API design:

The Role of Contracts in Distributed Development; *Martin Nordio, Roman Mitin, Bertrand Meyer, Carlo Ghezzi, Elisabetta Di Nitto and Giordano Tamburelli*; In Proceedings of SEAFOOD 2009 (Software Engineering Advances for Offshore and Outsourced Development). 2009; available at:

http://se.ethz.ch/~meyer/publications/tools/contracts_seafood.pdf

3. API

All groups have to develop the API of their game. In particular, each team has to define the API of their component. The APIs have to be written in Eiffel using Design by Contract¹. Use contracts to improve interface specifications by providing meaningful pre-, post-conditions and invariants. The API in the form of Eiffel classes has to be added to the project at:

https://github.com/DOSE-ETH/dose2012/tree/master/src/dose_2012/group_n

where n is your group number.

Make sure that all teams in your group agree on the interfaces defined by the contracts.

¹ See http://en.wikipedia.org/wiki/Design_by_contract
http://www.eiffel.com/developers/design_by_contract.html