

### Homework 3 – Advanced Software Engineering (2019/20)

**Deadline:** Nov. 27<sup>th</sup>, 2019 at 10:59 AM.

Solution code **MUST** be submitted to Moodle as a single `surname_name_hw3.zip` file.

All submissions will be checked for plagiarism. Plagiarised solutions will be awarded an F(0) grade.

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**Exercise** – Each group should split their *Dice with Microservices* monolith codebase into a set of microservices. Each group is free to set their objectives on how (much) to decompose the monolith codebase into microservices. All group members must cooperate on the same GitHub repositories (one per microservice), implementing both code and tests.

Each microservice API must be described with OpenAPI. Each microservice must come with a suitable `Dockerfile` to run it. A `docker-compose.yml` file should be provided to run the whole microservice-based application *Dice with Microservices*.

Only the group leader must submit a single zip file that contains:

1. a zipped copy `codebase.zip` of the submitted codebase, containing the all GitHub repositories used by the group (source code, OpenAPI spec and tests included), and the instructions on how to run the whole application with Docker Compose, and
2. a pdf file `report.pdf` containing the group report, obtained by filling the provided `report.docx` form.

Each team member (including the leader) must submit to Moodle:

3. a pdf file `learning_journal.pdf` containing the completed self-evaluation learning journal.

**During the first lab after the homework delivery deadline, each group should be prepared to demo their project to the class.**