Introduction to Software Engineering – list 3
Use-case model and use-case specification

1. Propose a use-case diagram for a university library system. Identify actors and their needs, and write the use-case diagram. Define textual use-case specification for selected use-cases.

2. Rewrite selected textual use-case specifications from ex. 1 to activity diagrams.

3. Propose a use-case model (use-case diagram, textual specification for at least 2 use-cases, activity diagrams for at least 2 use-cases) on the base of list of needs and features for Questionnaire system:

Need 1: Questionnaire planning
1. Definition of a questionnaire template - A system must allow to define a questionnaire template (a ready to use set of questions; question types: closed questions, short answer (one word, one number), scale).
2. Definition of target audience – a system must allow to define a group of people to be questioned; a group can be created, deleted, edited or imported from Education system.
3. Questionnaire planning – a system must allow to plan a questionnaire, i.e. to assign a group of target audience to the specific template; define the dates the questionnaire should be performed (from, to), and send e-mails to the targeted people with link to the questionnaire

Need 2: Carrying out questionnaires
4. Questionnaire filling – a system must allow a targeted person to fill-in a questionnaire
5. Questionnaire saving – a system should allow to save partially filled-in questionnaire
6. Questionnaire continuation – a system should allow to return back to fill-in a questionnaire

Need 3: Results analysis
7. Basic statistics for closed question – a system must calculate basic statistics for closed questions (for quantify questions: min, max, avg, std dev, for qualify questions: (percentage) number of particular answers)
8. Results visualization – a system may visualize results for closed questions with charts of different types (at least: pie chart and column chart)