**Homework Assignment 2**

**Q1: Organizational or Technical principles?** (8 points possible)

Select the correct category (organizational or technical) for each agile principle listed below.

1. Accept change:

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b) Bottom of Form

Produce minimal software:

Top of Form



1. Bottom of Form
2. Develop iteratively:

Top of Form



d) Bottom of Form

Maintain a sustainable pace:

Top of Form



1. E) Bottom of Form
2. Treat tests as a key resource:

Top of Form



1. F)fBottom of Form
2. Put the customer at the center:

Top of Form



Bottom of Form

1. Let the team self-organize:

Top of Form



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1. Express requirements through scenarios:

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**Q2: Organizational or Technical principles?** (7 points possible)

Select the correct category (organizational or technical) for each agile principle listed below.

1. Do not start any new development until all tests pass:



1. Develop only code and tests:

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1. Freeze requirements during iterations:

Top of Form



Bottom of Form

1. Test first:

Top of Form



Bottom of Form

1. Produce minimal functionality:

Top of Form



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1. Produce only the product requested:

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1. Produce frequent working iterations:

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**Q3: Involving the customer** (1 point possible)

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Which Scrum role is responsible for accepting or rejecting the result of an iteration in a project?

Product manager

Requirements manager

Requirements master

Product owner

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**Q4: The manager's new role** (1 point possible)

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Which among the following are manager responsibilities in the agile approach? Check all that apply.

Decide which developer should do what.

Make sure team spirit is high.

Encourage progress.

Remove impediments.

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### Q5: Eliminating waste (1 point possible)

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The Lean approach has an emphasis on removing "waste". Which of the following items constitute waste according to Lean? Check all that apply.

Defects not caught by tests and reviews.

Doing overtime.

Customer waiting.

Design documents.

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**Q6: Eliminating more waste** (1 point possible)

Top of Form

The Lean approach has an emphasis on removing "waste". Which of the following items constitute waste according to Lean? Check all that apply.

High management involvement.

Handoffs.

Customer involvement.

Seeking information.

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**Q7: Regression tests** (1 point possible)

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What is a regression test suite in the context of a software project?

A collection of tests used to generate a system failure on purpose in pre-determined software elements.

A collection of tests that never failed in the history of the project.

A collection of tests used to make sure that faults which never occurred before do not appear in the code of newly implemented features.

 A collection of tests including tests that failed in the history of the project, to make sure that faults that already occurred in the past do not occur again when implementing new features.

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**Q8: User stories** (1 point possible)

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What is a user story according to Scrum?

A specification of what does a user wants and why.

Something a user wants.

A collection of pictures expressing the customer's needs.

An informal chat between the customer and the developers about what the system should do.

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**Q9: Humanity** (1 point possible)

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The XP approach suggests to recognize that software is developed by people. What should the developers be offered in their working environment according to XP? Check all that apply.

Safety.

Belonging.

An accelerated career path for those who wish to work more, especially on week-ends.

Accomplishment.

### Q10: Multiple design (1 point possible)

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What is the multiple design approach suggested by the Lean method about?

Assigning the same problem to different teams, sequentially.

Assigning the same problem to different teams, in parallel.

Assigning different problems to different teams, sequentially.

Assigning different problems to different teams, in parallel.

**Q11: Observing a software team's practices** (2 points possible)

You are invited to visit, as an observer, a team working on a software project.

Tom, the project manager, describes to you how his team works:

"... to start with, our business representatives, together with our requirements experts, discuss with the customer what the system should do, and then write it down in the form of a requirements document.

The business representatives also agree on deadlines and prices and stipulate a contract. In our case, we will be paid every time we deliver something to the customer, e.g. documents, code, or working functionality.

The requirements document is then passed to our team of analysts which write the analysis document. The document, when ready, is passed to the design team, which creates the design document.

I then personally distribute to the development team the various tasks, consisting of the functionalities to implement. Developers also take care of deploying the code to a test server so that it can be tested before going in production.

The testers, who form a team on their own, write tests for all the functionalities that appear in the requirements document. Each test consists in a sequence of steps providing an interaction between a user and the system, and the expected result.

We are planning to be done with the requirements document in two months. After that we should be done with the analysis document in one month, and it should take another month for the design document. Therefore, after four months we will start developing code.

According with our estimates we should be done with the implementation in seven months. After another month devoted to testing and bug-fixing, we should be able to show the whole system to the customer.

I am confident we will achieve a good result, and this is both because I have teams composed by smart people, and because I value people a lot. For example, one rule we have that everybody likes and sticks to is: no overtime, for no reason. In my experience this reduces stress, makes people focus more on their normal daily working hours, and lets them have a life beyond their jobs."

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Based on what Tom said, what do you conclude? Check all that apply.

Tom describes a typical agile organization of his software project.

Tom describes what looks like a waterfall organization of his software project.

The customer seems to be involved throughout the whole project lifecycle.

All the documents to be delivered act as levels of indirection between the actual requirements and the code that is supposed to implement them, increasing the likelihood of misunderstandings.

The development team appears to be self-organized, in the sense that developers decide wich tasks to pick for themselves.

Tom's testing team seems to apply test-driven development.

Tom's teams appear to be able to maintain a sustainable pace.

Tom's teams run the risk of realizing late (e.g. during the implementation) that certain assumptions made in the requirements, analysis, and/or design documents are not correct, with consequent delays in the project schedule.

**Q12: Picking user stories** (1 point possible)

In Scrum and some other agile approaches, as explained in the lecture, the team picks backlogged user stories one after the other as team members become available, a process which assumes that there are few or no interdependencies between user stories.

For the sake of this example, consider these four user stories:

1. As a customer, I want to talk via telephone to one of the company's salespersons when I am interested in buying one of the company's products.

2. As a customer, I want to be asked if I am satisfied with the quality of a product I have purchased from the company.

3. As a customer, I want to use my laptop to chat with the company's technical support when I have issues using one of the company's products.

4. As a salesperson, I want to be able to activate my personal voice mail at any time on my company's cell phone.

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Which of the following scheduling of user story implementations is possible? Check all that apply.

1, 2, 3, 4

1, 3, 2, 4

4, 2, 3, 1

4, 3, 2, 1

No order is possible because of mutual interdependencies between stories.

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