Agile Processes
In-Class Assessment I
2019-2020

Please read the following rules before answering the questions.
- All questions are compulsory.
- Please read the questions properly -- they may be either descriptive answers questions or multiple-choice questions.
- There may be multiple correct options for the multiple-choice questions. You need to identify the <u>exact correct options</u> to be awarded the full marks. Otherwise, you will be awarded zero (0) for that particular question
- Marks for each question are written towards the end of each question.
- This is an open-book assessment, and you are allowed to consult your notes during the assessment.
- Please compose your answers in any software, and save them as .PDF file.
- The .PDF file should be uploaded in the CS moodle before 14th November 2019, 5PM Beijing time.

Q 1:
How would you characterize a user story as opposed to a use case? Explain. *(9 marks)*

Q 2:
Which of the following statements are consistent with what the proponents of the Agile Manifesto advocate? Select all that apply. *(7 marks)*

(a) We value customer collaboration over contract negotiation.
(b) We value working software over comprehensive documentation.
(c) We value following a plan more than responding to change.
(d) We value processes and tools more than individuals and interactions.

Q3:
Which of the following statements appear in the twelve principles represented in the Agile Manifesto? Check all that apply. *(7 marks)*

(a) The best architectures, requirements, and designs emerge from unorganized teams.
(b) At regular intervals, the team reflects on how to be more effective. Then tunes and adjusts its behavior accordingly.
(c) Simplicity (the art of maximizing the amount of work done) is essential.
(d) Working software is the primary measure of progress.

Q4:

Who said "That's been one of my mantras: focus and simplicity. Simple can be harder than complex: you have to work hard to get your thinking clean to make it simple. But it's worth it in the end because once you get there, you can move mountains"? *(7 marks)*

    (a) Antoine de Saint-Exupéry.
    (b) Bill Gates.
    (c) Kent Beck.
    (d) Steve Jobs.

Q5: Observing a software team's practices

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 distributed 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 into 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."

Based on what Tom said, what do you conclude? Check all that apply. *(7 marks)*

   (a) Tom describes a typical agile organization of his software project.
   (b) Tom describes what looks like a waterfall organization of his software project.
   (c) The customer seems to be involved throughout the whole project lifecycle.
   (d) 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.
   (e) The development team appears to be self-organized, in the sense that developers decide which tasks to pick for themselves.
   (f) Tom's testing team seems to apply test-driven development.
   (g) Tom's teams appear to be able to maintain a sustainable pace.
   (h) 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.

Q6: Picking user stories

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.

Which of the following scheduling of user story implementations is possible? Check all that apply. *(7 marks)*

   (a) 1, 2, 3, 4
   (b) 1, 3, 2, 4
   (c) 4, 2, 3, 1
   (d) 4, 3, 2, 1
   (e) No order is possible because of mutual interdependencies between stories.

Q7:

Which of the following is the suggested list of meetings that should take place in a Scrum team? *(7 marks)*

    (a) Daily meeting, requirements meeting, design meeting, sprint meeting.
    (b) Daily meeting, planning meeting, review meeting, design meeting.
    (c) Daily meeting, planning meeting, retrospective meeting, review meeting.
    (d) Daily meeting, planning meeting, sprint meeting, review meeting.

Q8:

Which of the following questions should a developer answer during a daily meeting in Scrum? Check all that apply. *(7 marks)*

    (a) What did you do yesterday?
    (b) What will you do today?
    (c) What will you do tomorrow?
    (d) Did you encounter any bug in your code?
    (e) Did you encounter any bug in someone else's code?
    (f) Are there any impediments in your way?

Q9:

Which of the following are the goals of the pair programming practice according to XP? Check all that apply. *(7 marks)*

    (a) Take initiative when the other member of the pair is stuck.
    (b) Teach each other the fundamentals of programming.
    (c) Make your thinking process explicit.
    (d) Hold each other accountable to team practices.

Q10:

What is the Agile Manifesto? *(7 marks)*
    (a) A pamphlet designed to attract the software world's attention to 24 principles of "good" software development.
    (b) A document signed by a group of software consultants designed to attract the software world's attention to 12 principles of "good" software development.
    (c) A pamphlet designed to attract the software world's attention to 12 examples of "bad" software development.
    (d) A document signed by a group of software consultants designed to attract the software world's attention to some design patterns that proved to be good in the previous 12 years of software development.

Q11:

Which of the following statements are consistent with what the proponents of the Agile Manifesto advocate? Check all that apply. *(7 marks)*

    (a) We value processes and tools more than individuals and interactions.
    (b) We value working software more than comprehensive documentation.
    (c) We value responding to change more than following a plan.
    (d) We value customer collaboration more than contract negotiation.

Q12:

Which of the following are considered traditional manager responsibilities? Check all that apply. *(7 marks)*

    (a) Interview customers about requirements.
    (b) Develop the infrastructure.
    (c) Write unit tests.
    (d) Write user interface tests.
    (e) None of the above.

Q13:

Which of the following are considered traditional manager responsibilities? Check all that apply. *(7 marks)*

    (a) Provide an interface with higher management.
    (b) Coach.
    (c) Mentor.
    (d) Enforce rules and methodology.

Q14:

Which are typical responsibilities of a self-organizing team according to Scrum? Check all that apply. *(7 marks)*

    (a) Can do everything within guidelines to achieve goal.
    (b) Decide whether work results are satisfactory.
    (c) Demo work results to product owner.
    (d) Select iteration goal and work results.