

## Exam in course 1MD034, System design with a user perspective

Location: Danmarksgatan 30 sekt 1

Time: <sup>2023</sup>~~2022~~-03-10, 14:00 - 19:00

Your anonymous exam code:

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Term and year when you were first registered for the course	Study programs (or similar)
Time for submission	Table number

### INSTRUCTIONS

Check that you have received the correct exam information! No helping material is allowed. The entire exam must always be submitted and the cover page must be completed even if no questions have been completed. Write your anonymous exam code on each sheet. Do not write on the back of the pages and do not use a red pencil. The exam will NOT be corrected if you have not registered for the course. The final result (points and grades) will be displayed at Studium after the result has been reported to Ladok.

### FREE TEXT QUESTIONS

Answer the questions within the space provided on the sheets. Inconsistent answers and answers with irrelevant information may lead to point deductions.

### MULTIPLE-CHOICE QUESTIONS

In multiple-choice questions, select all correct options. Selection of each wrong alternative may lead to point deductions (the minimum points in a question is 0). If you think that an answer option can be interpreted in several ways, mark the answer option and use the area below the question to clarify how you interpreted it.

### POINTS AND SCORE AND PRELIMINARY RATING LIMITS

In the exam, two types of points are given. The triangles  $\triangle$  (total of 34 points) correspond to basic knowledge in the course and the squares  $\square$  (14 in total) implementation and analysis.

- For grade 3, 25  $\triangle$  points are required.
- For grade 4, 28  $\triangle$  points and 8  $\square$  points are required.
- For grade 5, 32  $\triangle$  points and 10  $\square$  points are required.

### POINTS OBTAINED

25

$\triangle$	1	2	3	4	5	6	7	8	9	10	11	$\Sigma$
$\square$									9	10	11	

Grade:



Your anonymous exam code:

1. What questions should be addressed during a daily Scrum?

Note: Each wrong answer will lead to point deductions (the minimum points in a question is 0)



- ☐ What is preventing me or the team from meeting the goal?
  - ☐ What should I do tomorrow?
  - ☐ What should I do today?
  - ☐ Who will lead the work on the next task?
  - ☐ What did I do yesterday?
  - ☐ Which task/tasks from the Product backlog should we include in the sprint?
  - ☐ What did I do today?
- 

2. When is a so-called Product backlog in Scrum finished?



3. At which point in the scrum cycle does the project team handle new requirements?





**Your anonymous exam code:**

4. Briefly describe "Hierarchical Task Analysis". Describe the major steps to perform it as we discussed in the lecture on "Prototyping & User-centered design".



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5. What is the difference between low-fidelity vs high-fidelity prototypes?





Your anonymous exam code:

6. What is Expert evaluation/usability testing? Describe two advantages and two disadvantages of expert-based, compared to the user-based usability evaluation.

(2 points for definition, 1 point per advantage/disadvantage (max 4 points))



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7. Participatory Heuristic Evaluation:

Note: each wrong answer will lead to point deductions (the minimum points in a question is 0)

- ☐ Can only be used to test the usability of the "final" product
- ☐ A participant and usability expert perform an evaluation together
- ☐ Half of your users test one version while the other half tests the other one
- ☐ Only UX experts perform it





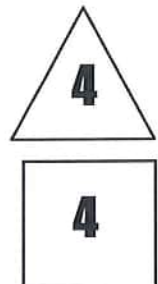


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8. Describe two examples of so-called dark patterns in system design and motivate why each example is ethically questionable to implement.  
(1 point per example, 1 point per motivation)



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9. Briefly describe how to conduct the two evaluation methods "think-aloud protocol" and "heuristic evaluation". Compare the pros and cons of the methods and give examples of when it is appropriate to use which method (give one example for each method).  
(2 triangle points per evaluation method, 4 square points for comparing pros and cons with examples. Use the next page also)





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Q.9.....



Your anonymous exam code:

**10. This task tests understanding of higher grades and is only corrected if the sum of tringle tasks reaches the pass mark.**

**5**

Usability is defined in ISO 9241-210 (2010) as "[The] extent to which a system, product or service can be used by specified users to achieve specified goals with effectiveness, efficiency and satisfaction in a specified context of use". Compare this definition of usability with designing for positive friction, as described in the video by Per Axbom. Explain what he means by positive friction, and describe and motivate in what way(s) positive friction goes hand in hand with the definition of usability and/or contradict the definition of usability. Provide examples to illustrate your conclusions.

(1 point for description, 4 points for argumentation and motivation)



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11. Part B for this question tests understanding of higher grades and is only corrected if the sum of tringle tasks reaches the pass mark. Briefly describe five of the ten heuristics/principles for interaction design that was presented in the paper by Nielsen and Molich. Use the heuristics/principles you have described to identify potential usability problems in the interface pictured below (figure A is the search area in Digitala Vetenskapliga Arkivet, figure B shows some details and figure C are excerpts from the "help information"). Motivate why you believe that you either have or have not, identified usability problems.

- A. 1 tringle point per heuristic described  
B. 1 square point per motivation/use of the heuristics)

Figure. A

Fritext

- OCH -

ELLER INTE

Sök

?

Begränsa sökningen ytterligare

Fulltext ☐ Endast dokument med fulltext i DIVA

Utgivningsår Från Till

Organisation(id) -

Ämneskategori(id)

Bläddra

Uppsatsnivå -

Forskning på konstnärlig grund -

Externt samarbete -

Sök

Figure B

Duplicera

- OCH -

Ansvarig organisation(id)

Auktoritetspost, id

Disputationsdatum

Examinator

Examinator, id

Externt samarbete

Forskning på konstnärlig grund

Forskningsfinansier

Fritext

Ämneskategori(id)

Figure C

OCH - ELLER - INTE

Inom varje sökblock OCH. Sökning på flera publikationstyper som inte innehåller samma fält.

Exempel: Vill söka på artiklar med status "publicerade" samt rapporter som saknar "status" fältet. Om man söker i ett block slår får man endast träff på publicerade artiklar, men inga rapporter.

Lägg till två sökblock. I det första väljer man artikel som publikationstyp och publicerad som status. Därefter lägger man till ett nytt block genom att trycka på ELLER-knappen. I det blocket väljer man rapport som publikationstyp. På det sättet får man artiklar som är publicerade, plus rapporter. (Om man sedan vill begränsa sökningen till Övrigt vetenskapligt så väljer man det i den nedersta blocket, det med rubriken "Begränsa sökningen ytterligare").





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Q.10 .....



Your anonymous exam code:

Q.10....

