

✓ **IS-104, general information**

**Course code:** IS-104

**Course name:** Digital Interaction Design

**Date:** 30.11.18

**Duration:** 3 hours

**Resources allowed:** Bilingual dictionaries

**Notes:**  
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The professors sometimes ask for exam answers to be used for teaching purposes, but in order for this to take place, the university needs your consent.

**Do you grant the University of Agder permission such permission?**

**Select one alternative**

Yes

No

**1 IS-104, Question 1.1**

Identify which of the following is INCORRECT (more than one can be incorrect). In the space provided, first note the incorrect statement(s) (a,b,c,d) and then, briefly explain what is wrong.

Structured interviews:

a) can be used for understanding what people want from a digital interaction solution.

b) use predefined questions that need to be followed.

c) allow interviewers to follow-up on unexpected responses exploring new topics.

d) always take more time to prepare, perform and process than questionnaire-based surveys.

**Fill in your answer here**

<p>Format -   B I U <math>x_2</math> <math>x^2</math>   <math>I_x</math>                     </p> <div style="border: 1px solid gray; height: 100px;"></div> <p style="text-align: right;">Words: 0/50</p>
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Maximum marks: 5

## 2 IS-104, Question 1.2

Identify which of the following is INCORRECT (more than one can be incorrect). In the space provided, first note the incorrect statement(s) (a,b,c,d) and then, briefly explain what is wrong.

The design principle of familiarity:

- a) is about using language and symbols that the intended audience will be familiar with.
- b) is important for interface learnability.
- c) is about ensuring that the interface is polite, friendly, and generally pleasant.
- d) can be used for the heuristic evaluation of a user interface.

Fill in your answer here

Format -   <b>B</b> <i>I</i> <u>U</u> $x_2$ $x^2$   $I_x$               $\Omega$      $\Sigma$   ABC
Words: 0/50

Maximum marks: 5

## 3 IS-104, Question 1.3

Identify which of the following is INCORRECT (more than one can be incorrect). In the space provided, first note the incorrect statement(s) (a,b,c,d) and then, briefly explain what is wrong.

A Hierarchical Task Analysis (HTA):

- a) focuses on physical and observable actions.
- b) requires analyzing in terms of goals, operators, methods, and selection rules.
- c) can be visualized with hierarchical charts presenting a sequence of tasks, subtasks and actions.
- d) can include optional subtasks.

Fill in your answer here

Format -   <b>B</b> <i>I</i> <u>U</u> $x_2$ $x^2$   $I_x$               $\Omega$      $\Sigma$   ABC
Words: 0/50

Maximum marks: 5

#### 4 IS-104, Question 2.1

Read the following statement (which is in bold letters). In your answer, first state if the statement is correct or incorrect and then explain your answer briefly.

**In a digital interaction design project, evaluation always comes at the end and is performed for assessing finished systems.**

Fill in your answer here

Format | **B** | *I* | U |  $x_2$  |  $x^2$  |  $I_x$  | | | | | | |  $\Omega$  | | |  $\Sigma$  | ABC |

Words: 0/50

Maximum marks: 5

#### 5 IS-104, Question 2.2

Read the following statement (which is in bold letters). In your answer, first state if the statement is correct or incorrect and then explain your answer briefly.

**Using wireframes together with navigation maps can be more effective than using only wireframes to communicate design ideas for a new website.**

Fill in your answer here

Format | **B** | *I* | U |  $x_2$  |  $x^2$  |  $I_x$  | | | | | | |  $\Omega$  | | |  $\Sigma$  | ABC |

Words: 0/50

Maximum marks: 5

**6 IS-104, Question 2.3**

Read the following statement (which is in bold letters). In your answer, first state if the statement is correct or incorrect and then explain your answer briefly.

**In a controlled experiment where we want to evaluate the impact of alternative button positions on the speed of completing a task, the independent variable will be the completion time measured and the dependent variable will be the different positions of the button tried out.**

Fill in your answer here

Format | **B** | *I* | U |  $x_2$  |  $x^2$  |  $I_x$  | | | | | | |  $\Omega$  | | |  $\Sigma$  | ABC |

Words: 0/50

Maximum marks: 5

**7 IS-104, Question 3.1**

What are the differences between (a) a Cognitive Walkthrough and (b) a Cooperative Evaluation of a user interface? Describe how you would set up and perform a Cognitive Walkthrough and how you would set up and perform a Cooperative Evaluation of a user interface.

Fill in your answer here

Format | **B** | *I* | U |  $x_2$  |  $x^2$  |  $I_x$  | | | | | | |  $\Omega$  | | |  $\Sigma$  | ABC |














Words: 0/400

Maximum marks: 15

**8 IS-104, Question 3.2**

Why is usability important for user interfaces? Provide at least three different reasons.

Fill in your answer here

Format | **B** | *I* | U |  $x_2$  |  $x^2$  |  $I_x$  |  |  |  |  |  |  |  |  |  |  |  |  | 

Words: 0/400

Maximum marks: 15

**9 IS-104, Question 4**

UiA uses an Employee Self Service application to refund expenses for travelling. Employees have access to this application for registering and monitoring travel expenses that are paid back by the University. For each travel, some general data need to be entered first (for instance, the start and end date of the travel, the destination, the reason for traveling). After this first step, the second step is to register specific expenses paid for the travel (e.g. flight tickets, hotel, etc.) and attach scanned copies of receipts.

Figure 1 shows the screen of this application that is used for registering specific expenses related to a selected trip. Users can register a new expense by selecting “ny post” and then adding information about the expense (e.g. the expense type (utgiftstype), amount (bilagsbeløp), currency (bilagsvaluta), date (bilagsdato), etc.).

Figure 2 shows how the screen looks like after registering information about three expense bills. To upload scanned copies of the expense receipts, the users have to click on the number that appears in a parenthesis in the column labelled “arkiverte bilag”. When clicking there, a pop-up window appears (Figure 3) for uploading the files of the scanned receipts. The users have to select the appropriate file and click the text “last opp bilde”.

**FIGURE 1:**

Ansatt selvbetjening

Innkurv

Oversikt

## Opprett Reiseregning

[Hjelp](#)

Medarbeider Vasilakopoulou Polyxeni ( 01017551 ) Skjema Innenlandsreise m/overnat. Startdato 05.11.2018 Sluttdato 07.11.2018

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Eksisterende kvitteringer ( 0 )

## Bilag for denne reiseregningen

Num...	Status	Utgiftstype	Bilagsbeløp	Bilagsvaluta	Bilagsdato	Beløp	Lokal valuta	Papirkv. finnes	Arkiverte bilag

FIGURE 2:

Ansatt selvbetjening

Innkurv

Oversikt

## Opprett Reiseregning

[Hjelp](#)

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Eksisterende kvitteringer ( 0 )

## Bilag for denne reiseregningen

Status	Utgiftstype	Bilagsbeløp	Bilagsvaluta	Bilagsdato	Beløp	Lokal valuta	Papirkv. finnes	Arkiverte bilag
●	Flyreise	1.000,00	Norske kroner	05.11.2018	1.000,00	Norske kroner	<input checked="" type="checkbox"/>	(0)
●	Hotell	10.000,00	Norske kroner	05.11.2018	10.000,00	Norske kroner	<input checked="" type="checkbox"/>	(0)
●	Gebyrer	100,00	Norske kroner	05.11.2018	100,00	Norske kroner	<input checked="" type="checkbox"/>	(0)
◇	▼	0,00	Norske kroner	05.11.2018	0,00	Norske kroner	<input checked="" type="checkbox"/>	(0)

FIGURE 3:

The screenshot shows a web application for creating a travel expense report. The main page is titled "Opprett Reiseregning" and has a progress bar with three steps: "1. Generelle data", "2. Registrer utgiftsbilag", and "3. Kontroller og send". A modal window titled "Vedlegg" is open, showing a table for adding attachments with columns for "Bilagsart" and a "Browse..." button. The background table lists expenses: Flyreise (1.000,00), Hotell (10.000,00), Gebyrer (100,00), and an empty row (0,00).

Take some time to study the user interface presented in Figures 1, 2 and 3. Think that you are an employee that wants to use it for the first time without having anyone nearby for help. After studying the user interface you are asked to:

a) Perform a heuristic evaluation using the principles of: Visibility, Familiarity and Affordance. In your answer you will need to be specific about the three principles and identify both positive and negative aspects of the user interface. Positive aspects are examples of the interface that follow a principle and negative aspects are examples of the interface that go against a principle. You can use examples from Figure 1 or Figure 2 or Figure 3 or all of them. The answer needs to include for each of the three principles: a short description of the principle's meaning and at least one negative and one positive example from the interface including a brief explanation showing how the principle is followed or not followed.

b) Propose a process for improving this user interface (presented in Figures 1, 2 and 3). In your answer you will need to specify what activities will have to be performed and in what sequence. For this, you will have to think in terms of the key activities of understanding, designing, envisioning, evaluating. Furthermore, you will need to specify how the users will be involved during the overall process. Be specific about user involvement explaining in which activities users will have to participate and what methods will have to be used for their involvement.

**Fill in your answer here**

Format
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**B**
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Words: 0

Maximum marks: 40

