

# 02JSKOV - HUMAN COMPUTER INTERACTION

WRITTEN EXAM – 2020-01-29

Closed-book exam: no notes or other material are allowed. Allowed Time: 60 minutes.

The responses should be easy to read (write clearly!) and reasonably short (around 5-10 lines long).

1.

Consider a web form for a pharmaceutical website, that requires the user to provide the following information: a list of drugs (up to 3-5 max), their quantities, the ID code of the purchaser (*codice fiscale*), the method of payment, the pick-up location.

Draw a low-quality wireframe prototype for the web form, including all relevant UI controls and information fields.

Possible solution

The wireframe shows a web form titled "Place your order" on a grid background. The form is divided into several sections:

- Search/Add:** A text input field with a "NOTE: with autocomplete" and an "Add" button.
- Cart:** A table listing items with quantity, name, and price. The total is 10,40 €.
- Client ID:** A text input field.
- Payment method:** Three radio buttons, each followed by a text input field.
- Pick-up location:** A dropdown menu.
- Buttons:** "Cancel" and "Order" buttons at the bottom right.

Quantity	Drug Name	Quantity	Unit Price	Total Price	Action
1	Aspirin	12 cp	3,80 €	3,80 €	X
3	Maalox	24 cp	2,20 €	6,60 €	X
			<b>Total:</b>	<b>10,40 €</b>	

## 2.

Define “counterbalancing” in the context of user studies and describe when you need it and one way to achieve it.

### Possible solution

Counterbalancing is a technique for organizing the trials for a within-subjects user study, to reduce the “practice” effect (transfer of learning) by presenting different tasks in different order to different subjects.

It consists of dividing the set of users in N groups, where N is usually equal to the number of levels to be tested. Each of the group is subministered the set of N levels in a different order, such that each sequence task A -> task B occurs the same number of times as task B -> task A (for any A, B). This can be achieved with balanced Latin Squares.

## 3.

Describe the main findings of eye tracking studies that may help us to understand how people read and how to organize the text in a page.

### Possible solution

Eye tracking studies show that users do not *read* a web page, but rather they *scan* it. They tend to read only the titles (section headings), the left column (first words of each row), the beginning of paragraphs (first words in the first line). Headings and paragraphs are identified visually, based on their font, spacing and alignment.

Considering these results, webpage authors should organize text in short sentences and easy to recognize blocks. Visual styles that remind menus, decorations, or ads should be avoided.

## 4.

Describe the main differences between *interviews* and *surveys* in the needfinding phase.

### Possible solution

Some differences are:

- Interviews: allow follow-up questions, more time-consuming, can be personalized, can be delivered in the context, ...
- Surveys: have a wider reach, provide structured data, less expensive, more repeatable, ...