

[Schreibtisch](#) [Angebote](#)

Choose the correct statement(s).

- Usability describes if a product can be used to reach a certain goal or to perform a certain task.
- Usability relates to how well a product supports the user to reach a certain goal or perform a certain task.
- Usability relates to the quality and efficiency of a product.
- Likeability relates to how much people like using a product. This is never related to a product's usability.
- Likeability relates to how well a product supports the user to reach a certain goal or to perform a certain task. This is always related to a product's usability.
- Utility is essential.

Die bestmögliche Lösung lautet::

- Usability describes if a product can be used to reach a certain goal or to perform a certain task.
- Usability relates to how well a product supports the user to reach a certain goal or perform a certain task.
- Usability relates to the quality and efficiency of a product.
- Likeability relates to how much people like using a product. This is never related to a product's usability.
- Likeability relates to how well a product supports the user to reach a certain goal or to perform a certain task. This is always related to a product's usability.
- Utility is essential.



Schreibtisch ▾ Angebote ▾

In the exercise we discussed the paper "Affordance, Conventions and Design" by Donald Norman with the specific definition of behavior of users and the possible limitations.

Choose the correct statement(s).

- Not being able to move a cursor outside a screen is a physical constraint. X
- Being able to move the mouse to the scroll bar and drag it downwards by holding a mouse button in order to see objects located below the currently visible set is a cultural constraint. X
- Not being able to move a cursor outside a screen is a logical constraint. X
- Being able to move the mouse to the scroll bar and drag it downwards by holding a mouse button in order to see objects located below the currently visible set is a physical constraint. X

Die bestmögliche Lösung lautet::

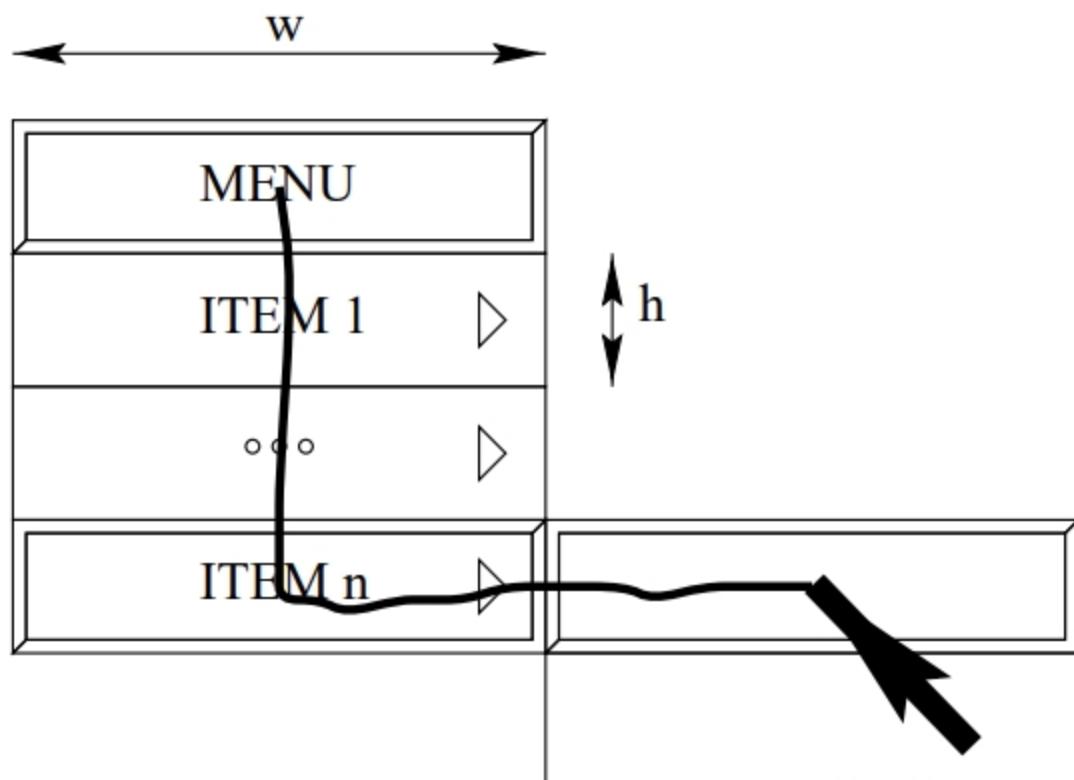
- Not being able to move a cursor outside a screen is a physical constraint.
- Being able to move the mouse to the scroll bar and drag it downwards by holding a mouse button in order to see objects located below the currently visible set is a cultural constraint.
- Not being able to move a cursor outside a screen is a logical constraint.
- Being able to move the mouse to the scroll bar and drag it downwards by holding a mouse button in order to see objects located below the currently visible set is a physical constraint.

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[ModI] Steering Law - Design Implication (5 points)

You gave the following answer:

Steering Law can cope with more complex trajectories than Fitts' Law and also considers boundaries like a tunnel that must not be left. When interacting with current GUIs, one often implicitly performs various path steering tasks. One example is menu selection, such as the one shown in the figure below.



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This path is composed of a vertical and a horizontal steering task. The vertical task consists of  $n$  elements each of height  $h$ . The respective tunnel width is  $w$ . After passing element  $n$ , the horizontal task is traveling the distance  $w$  through the tunnel of width  $h$ .

Formulate the Movement Time MT based on the given interaction.

**!! Please avoid whitespaces !!**

**!! Possible mathematical operators:** +, -, \*, /, sqrt(), ^,%

$$MT = \boxed{a + b * (n * h / 2w)}$$

From this equation, we can deduce a rule of thumb to improve the Movement Time that is dependent on the number of items  $n$  in the menu.

So MT is minimal when:

$$w = \boxed{n * h}$$

The best possible solution is:

$$MT = \boxed{a + b * (n * h / w) + a + b * (w / h) \text{ or } a + b * (n * h / w) + a + b (w / h) \text{ or } a + b (n * h / w) + a + b (w / h) \text{ or } a + b (nh / w) + a + b (w / h) \text{ or } a + b (n * h / w) + a + b * (w / h) \text{ or } a + b * (nh / w) + a + b * (w / h) \text{ or } a + b (nh / w) + a + b * (w / h) \text{ or } 2 * a + b * (nh / w + w / h) \text{ or } 2 * a + b (nh / w + w / h) \text{ or } 2a + b * (nh / w + w / h) \text{ or } 2a + b (nh / w + w / h)}$$

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The best possible solution is:

MT =  $a + b * (n * h / w) + a + b * (w / h)$  or  $a + b * (n * h / w) + a + b (w / h)$  or  $a + b (n * h / w) + a + b (w / h)$  or  $a + b (nh / w) + a + b (w / h)$  or  $a + b (n * h / w) + a + b * (w / h)$  or  $a + b * (nh / w) + a + b * (w / h)$  or  $a + b (nh / w) + a + b * (w / h)$  or  $a + b * (nh / w) + a + b * (w / h)$  or  $2 * a + b * (nh / w + w / h)$  or  $2 * a + b (nh / w + w / h)$  or  $2a + b * (nh / w + w / h)$  or  $2a + b (nh / w + w / h)$

From this equation, we can deduce a rule of thumb to improve the Movement Time that is dependent on the number of items n in the menu.

So MT is minimal when:

w =  $\sqrt{n} * h$  or  $h * \sqrt{n}$

You have achieved 1 out of 5 possible points.



Assign the correct descriptions to the different **types of slips** users can make.

Capture errors	passt zu	Two actions with common start point, the more familiar one captures the unusual (driving to work on Saturday instead of the supermarket)	<input checked="" type="checkbox"/>
Description errors	passt zu	You think of something and that influences your action (e.g. saying come in after picking up the phone)	<input checked="" type="checkbox"/>
Data driven errors	passt zu	Using data that is visible in a particular moment instead of the data that is well-known (calling the room number you see instead of the phone number you know by heart)	<input checked="" type="checkbox"/>
Associate action errors	passt zu	Performing an action that is close to the action that one wanted to perform (putting the cutlery in the bin instead of the sink)	<input checked="" type="checkbox"/>
Loss-of-Activation error (forgetting)	passt zu	In a given environment you decided to do something but when leaving then you forgot what you wanted to do. Going back to the start place you remember	<input checked="" type="checkbox"/>
Mode error	passt zu	You forget that you are in a mode that does not allow a certain action or where a action has a different effect	<input checked="" type="checkbox"/>



See slides 4\_2020\_05\_20 Principles\_Complete.

Die bestmögliche Lösung lautet::

Capture errors	passt zu	Two actions with common start point, the more familiar one captures the unusual (driving to work on Saturday instead of the supermarket)
Description errors	passt zu	Performing an action that is close to the action that one wanted to perform (putting the cutlery in the bin instead of the sink)
Data driven errors	passt zu	Using data that is visible in a particular moment instead of the data that is well-known (calling the room number you see instead of the phone number you know by heart)
Associate action errors	passt zu	You think of something and that influences your action (e.g. saying come in after picking up the phone)
Loss-of-Activation error (forgetting)	passt zu	In a given environment you decided to do something but when leaving then you forgot what you wanted to do. Going back to the start place you remember
Mode error	passt zu	You forget that you are in a mode that does not allow a certain action or where a action has a different effect

Sie haben 1 von 3 möglichen Punkten erreicht.



Schreibtisch ▾

Angebote ▾

Fitts' Law can be used to predict movement times for pointing devices.

(a)  $MT = b + a * \log_2\left(\frac{D}{W}\right)$

(b)  $MT = D + W * \log_2\left(\frac{a}{b}\right)$

(c)  $MT = D + W * \log_2\left(\frac{b}{a}\right)$

(d)  $MT = a + b * \log_2\left(\frac{W}{D}\right)$

(e)  $MT = a + b * \log_2\left(\frac{D}{W}\right)$

(f)  $MT = D + W * \log_2\left(1 - \frac{a}{b}\right)$

(g)  $MT = D - W * \log_2\left(1 + \frac{a}{b}\right)$

(h)  $MT = b - a * \log_2\left(1 + \frac{D}{W}\right)$

(i)  $MT = a + b * \log_2\left(1 + \frac{D}{W}\right)$

(j)  $MT = b - a * \log_2\left(1 - \frac{D}{W}\right)$

Choose the correct formula (a - j) describing Fitt's Law.

 i 

Simply put, Fitts' Law formula says:



Schreibtisch ▾

Angebote ▾

Choose the correct formula (a - j) describing Fitt's Law.

Simply put, Fitts' Law formula says:

The more severe the constraints are, the slower we move.

Choose the correct explanation for the term called "ID".

ID is the Index of Difficulty and refers to the target distance and width.

To make a precise prediction of movement time for a new pointing device (e.g. a new tracking ball) using Fitts' Law you need to experimentally determine the parameters "a" and "b". What do these parameters "a" and "b" stand for?

a is the offset and b is the slope. -

Choose how a possible experiment to evaluate "a" and "b" could look like? (The first gap refers to the first step to take)

First: Build UI with varying distance and width of the target.

Second: Measure Movement Time (MT) until target is reached (repeat 100 times for each subject).

Third: Linear regression over all subjects in the ID-MT graph and read a and b.



Schreibtisch ▾

Angebote ▾

Check the correct statement(s) about **task analysis**.

- Task analysis is typically used to analyze work processes and interactions. ✓
- Task analysis is typically used to analyze the preferences of potential user groups. ✓
- The granularity and level of detail should be suitable for the analyzed task. ✗
- The more granularity and level of detail can be achieved, the better. ✗



See slides 8\_2020\_06\_24\_Analysis.

Die bestmögliche Lösung lautet::

- Task analysis is typically used to analyze work processes and interactions.
- Task analysis is typically used to analyze the preferences of potential user groups.
- The granularity and level of detail should be suitable for the analyzed task.
- The more granularity and level of detail can be achieved, the better.

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There are five different kind of design rules that can be weighted in two different categories.  
Put the five classes of design rules at the correct locations on the plot, as it was presented in the lecture.

1

2

3

4

5

6

7

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Design rules:

1. Principles or principles
2. Golden rules or golden rules or Goldnerules or goldenrules or Golden rules and heuristics or Golden rules and heuristics or Golden rules & heuristics or Golden rules / heuristics or Golden rules heuristics
3. Standards or standards
4. Design pattern or design pattern or Designpattern or designpattern or Design patterns or design patterns
5. Style guides or style guides

Categories (axis labels):

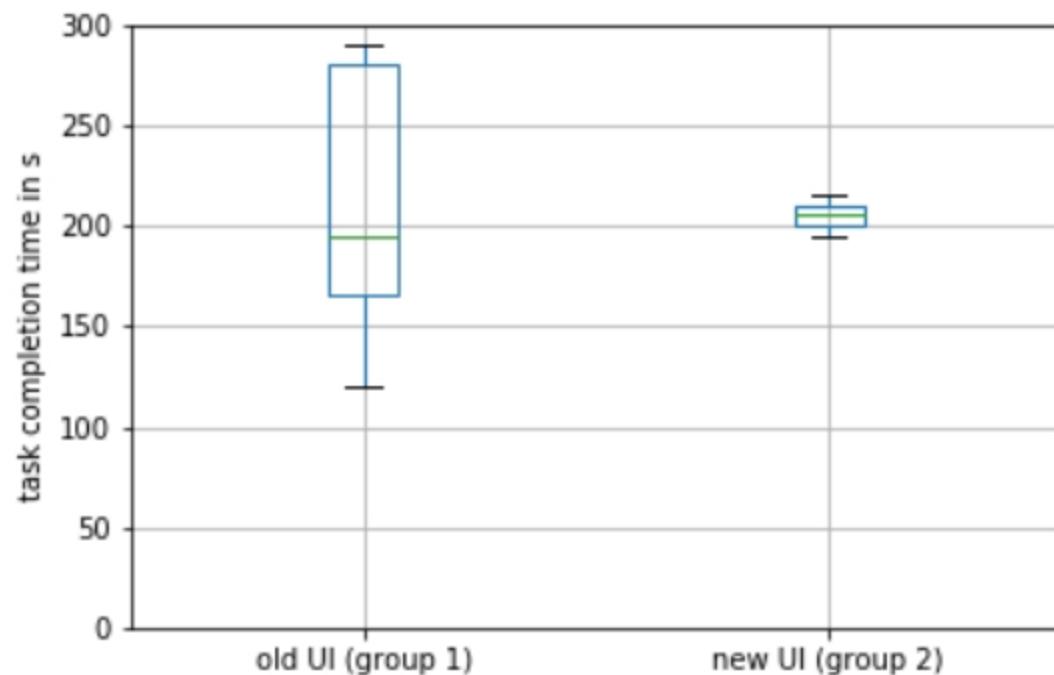
6. increasing generality
7. increasing authority

You have achieved 4 out of 5 possible points.

Imagine you are the boss of a small company and, of course, you want your employees to work as efficiently as possible. Therefore, you conducted a study in which all employees were asked to try a new UI for a frequently used program. Half of them performed some specified tasks with the old UI (group 1) and the other half with the new UI (group 2). The respective task completion time was measured.

Below is a box plot of the results.

Mark the correct conclusions you can draw from the results shown.



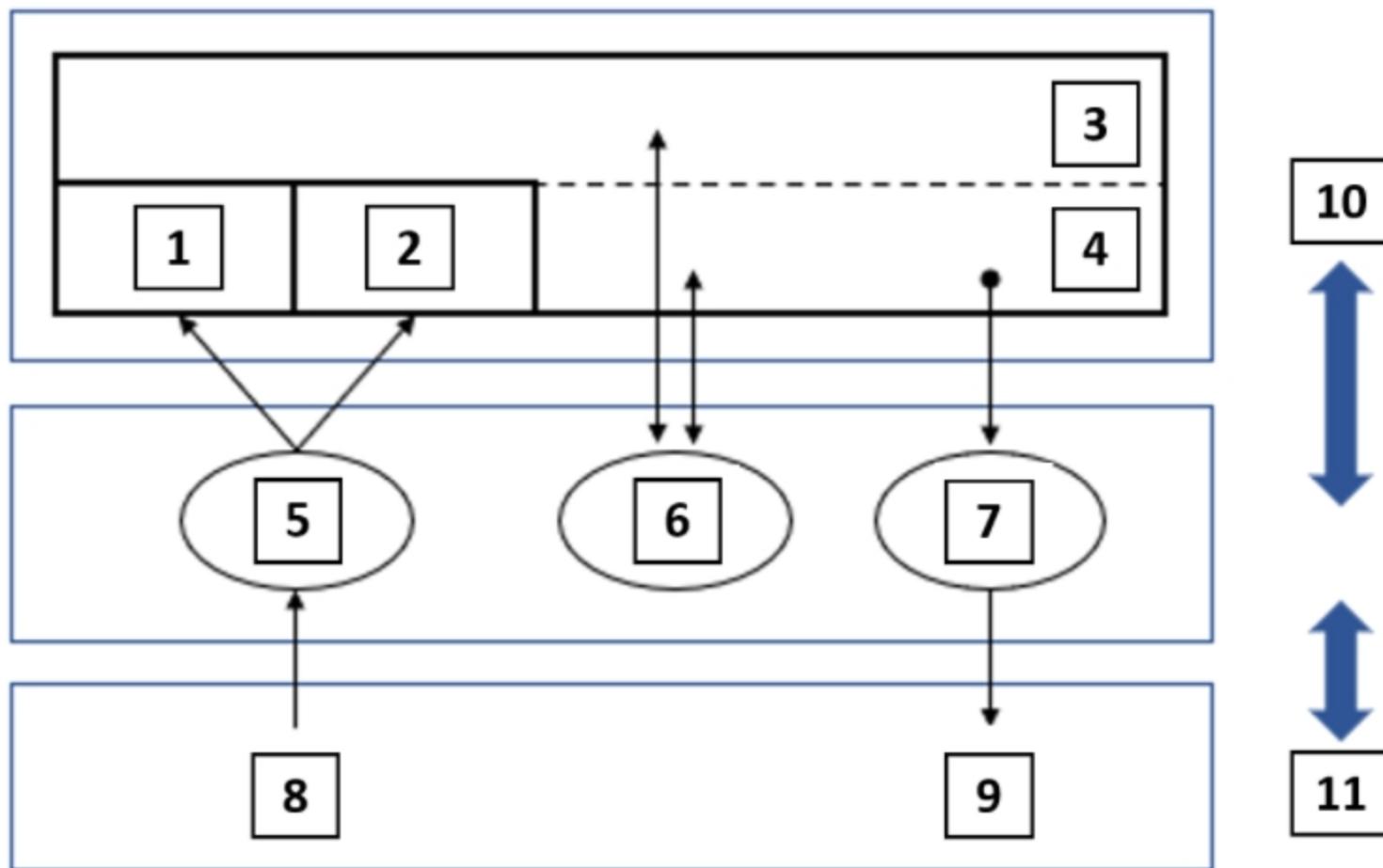
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- You have used a between-group design for your study. ✓
- You have used a within-group design for your study. ✓
- You chose to use the new design (group 2) from now on because the median of the task completion time may be longer but the variance is much smaller. ✓
- You chose to stay with the old design (group 1) because the median of the task completion time is smaller, which means that all of your employees work faster with the old design. ✓
- The green line in the box plot shows the average task completion time. ✓
- The green line of the box plot shows the middle value of the data. ✓

The best possible solution is:

- You have used a between-group design for your study.
- You have used a within-group design for your study.
- You chose to use the new design (group 2) from now on because the median of the task completion time may be longer but the variance is much smaller.
- You chose to stay with the old design (group 1) because the median of the task completion time is smaller, which means that all of your employees work faster with the old design.
- The green line in the box plot shows the average task completion time.
- The green line of the box plot shows the middle value of the data.

Complete the **Model Human Processor** by choosing the missing terms for the respective gaps.



1. Visual store oder Auditory store
2. Visual store oder Auditory store
3. Long term memory
4. Working memory
5. Perceptual processor
6. Cognitive processor
7. Motor processor
8. eyes, ears
9. arms, wrists, fingers, etc.
10. Memory
11. Input/Output

Sie haben 4.5 von 5.5 möglichen Punkten erreicht.



Schreibtisch ▾ Angebote ▾

A siren is a loud noise-making device. In previous years, it happened that not everyone could hear the siren. That is why the siren was adapted so that the sound covers a spectrum of frequencies. Select the correct statement(s).

- The perceived loudness of the siren is independent of the frequency. ✓
- Older people require higher sound pressure, especially at higher frequencies. ✗
- Hair cells are irreparable. This contributes to the fact that the threshold of hearing changes in life. ✓
- The perceived loudness of the siren is dependent of the frequency. ✓

Die bestmögliche Lösung lautet::

- The perceived loudness of the siren is independent of the frequency.
- Older people require higher sound pressure, especially at higher frequencies.
- Hair cells are irreparable. This contributes to the fact that the threshold of hearing changes in life.
- The perceived loudness of the siren is dependent of the frequency.

—STUDON— Schreibtisch

Schreibtisch - Angebote -

An interference between two tasks should be calculated by using the Wickens Model. The demand vectors (a) and the conflict matrix (b) of the two tasks are given.

	$V_f$	$V_a$	$A_s$	$A_v$	$C_s$	$C_v$	$R_s$	$R_v$	
(a) Rural curve driving	1	2	0	0	1	0	2	0	1
Auditory IVT	0	0	0	2	0	2	0	2	2



Schreibtisch ▾

Angebote ▾

- Give the missing values in the demand vectors (position 1 and 2 in figure a, **!!numbers with decimal point!!**).
  - 1:
  - 2:
- Calculate the total demand (TD) from both vectors (**!!numbers with decimal point!!**).
  - TD =
- Apply the two demand vectors to the conflict matrix and calculate the total conflict (TC) (**!!numbers with decimal point!!**).
  - TC =
- Scale the total conflict for a maximum conflict of 20.

Give the maximum total demand (Max TD), the resulting scaling factor (Scaling) and the scaled total conflict (STC) (**!!numbers with decimal point!!**).

- Max TD =
- Scaling =
- STC =

- Calculate the total interference (TI) between the two tasks (**!!numbers with decimal point!!**).
  - TI =



Schreibtisch ▾

Angebote ▾

[ModI] Fitts' Law applied (2) (3 Punkte)

Sie haben die folgende Antwort gegeben:



(Figure 1)



Assume a scenario in which ten multi-digit numbers are added using the keyboards shown in Figure 1. The last digit of all numbers is always 0.

1. Which of the two interfaces (A, B) is faster according to Fitts's Law?

A

2. Give two reasons why the layout is faster.

Two big buttons present at two ends increase tunnel width, which reduces movement time.

Numerics are frequently used to enter a ten-digit number. Small 0 button will take less movement time.



Schreibtisch ▾ Angebote ▾

Die bestmögliche Lösung lautet::

1. Which of the two interfaces (A, B) is faster according to Fitts's Law?

B

2. Give two reasons why the layout is faster.

distance between 0 and + is smaller oder 0 and + buttons are larger

distance between 0 and + is smaller oder 0 and + buttons are larger

Sie haben 0 von 3 möglichen Punkten erreicht.



[Proto] Prototype design applied (3 points)

You gave the following answer:

Let's suppose you want to develop a tool to help elderly people monitor and manage their health and daily tasks. You want to develop a UI that is tailored to this user group. You are still at the very beginning of your considerations and therefore you have quite little money available in this initial phase.

To test your ideas, you are developing a prototype of the UI.

What should you consider in the process regarding the given circumstances? Mark the correct statements.

- You could choose a high-fidelity prototype because they are cheap and easy to develop.
- You could consider doing a "Wizard of Oz" experiment because you are able to test quite complex interactions quickly.
- You could choose a high-fidelity and functional prototype because that is a good way to get feedback about the look and feel of your UI. With this feedback you can further improve your UI to meet the needs of elderly people.
- You could choose a throw-away paper prototype because such a prototype is suitable if you need a cheap way of testing your initial ideas.
- You could choose a vertical prototype to test whether the way you have implemented the key feature of your UI works for the targeted user group.
- You could choose a horizontal prototype to test whether all the functionalities of your UI design are working correctly.

The best possible solution is:

The best possible solution is:

- You could choose a high-fidelity prototype because they are cheap and easy to develop.
- You could consider doing a "Wizard of Oz" experiment because you are able to test quite complex interactions quickly.
- You could choose a high-fidelity and functional prototype because that is a good way to get feedback about the look and feel of your UI. With this feedback you can further improve your UI to meet the needs of elderly people.
- You could choose a throw-away paper prototype because such a prototype is suitable if you need a cheap way of testing your initial ideas.
- You could choose a vertical prototype to test whether the way you have implemented the key feature of your UI works for the targeted user group.
- You could choose a horizontal prototype to test whether all the functionalities of your UI design are working correctly.

You have achieved 0 out of 3 possible points.





Schreibtisch ▾ Angebote ▾

## HCI Exam Summer 2021

Final Exam for the 14th of September 2021

◀ Zurück zur Übersicht des Durchlaufs

[Princ] Principles to support Usability (by Dix) (3 Punkte)

Sie haben die folgende Antwort gegeben:

Assign the correct descriptions and the respective components to the given **principles to support Usability** by Dix et al.

Learnability	passt zu	The ease with which new users can begin effective interaction and achieve maximal performance	<input checked="" type="checkbox"/>
Learnability	passt zu	Predictability, Synthesizability, Familiarity, Generalizability, Consistency	<input checked="" type="checkbox"/>
Flexibility	passt zu	The multiplicity of ways the user and system exchange information	<input checked="" type="checkbox"/>
Flexibility	passt zu	Dialogue initiative, Multithreading, Task migratability, Substitutivity	<input checked="" type="checkbox"/>
Robustness	passt zu	The level of support provided to the user in determining successful achievement and assessment of goal-directed behavior	<input checked="" type="checkbox"/>
Robustness	passt zu	Observability, Recoverability, Task conformance, Responsiveness	<input checked="" type="checkbox"/>



Schreibtisch ▾ Angebote ▾

Die bestmögliche Lösung lautet::

Learnability	passt zu	The ease with which new users can begin effective interaction and achieve maximal performance
Flexibility	passt zu	The multiplicity of ways the user and system exchange information
Robustness	passt zu	The level of support provided to the user in determining successful achievement and assessment of goal-directed behavior
Learnability	passt zu	Predictability, Synthesizability, Familiarity, Generalizability, Consistency
Flexibility	passt zu	Dialogue initiative, Multithreading, Task migratability, Substitutivity
Robustness	passt zu	Observability, Recoverability, Task conformance, Responsiveness

Sie haben 3 von 3 möglichen Punkten erreicht.





Schreibtisch ▾ Angebote ▾

[ModI] Buying a train ticket (2 Punkte)

Sie haben die folgende Antwort gegeben:

You want to buy a train ticket at a ticket machine at Nuremberg main station.

The following interaction took place:

You entered the desired destination.

You chose the suitable connection.

You checked and verified the details.

You inserted your credit card and entered the PIN.

You collected your train ticket.

You collected your credit card.

Which of the following statement(s) is/are correct?

- The outer goal is satisfied after collecting the credit card. ✗
- The GOMS model could have been used to get an early understanding of the interaction. ✗
- There is an increased risk of forgetting your credit card. ✗
- This interaction is a good example for the use of the KLM model. ✗



Schreibtisch ▾

Angebote ▾

- The GOMS model could have been used to get an early understanding of the interaction. ×
- There is an increased risk of forgetting your credit card. ×
- This interaction is a good example for the use of the KLM model. ×

Die bestmögliche Lösung lautet::

- The outer goal is satisfied after collecting the credit card.
- The GOMS model could have been used to get an early understanding of the interaction.
- There is an increased risk of forgetting your credit card.
- This interaction is a good example for the use of the KLM model.

Sie haben 0 von 2 möglichen Punkten erreicht.





Schreibtisch ▾

Angebote ▾

Which of the following statements regarding **Bonferroni correction** are correct?

- We typically use Bonferroni correction when multiple groups are compared. X
- We typically use Bonferroni correction when only two groups are compared. X
- Bonferroni correction is used to yield compensation for increased likelihood of performing a Type I error. ✓
- Bonferroni correction is used to yield compensation for increased likelihood of performing a Type II error. ✓



See slides 6\_2020\_06\_03\_Evaluation.

Die bestmögliche Lösung lautet::

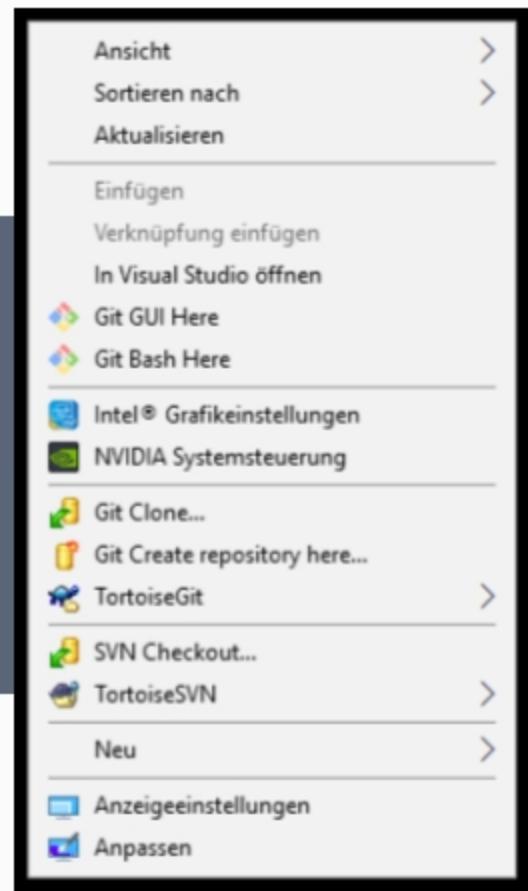
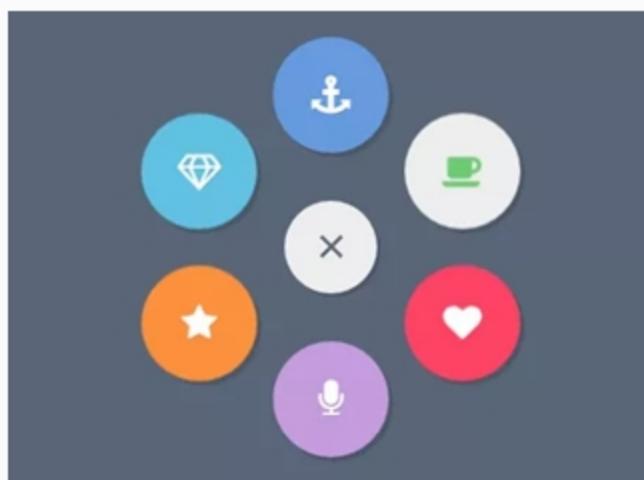
- We typically use Bonferroni correction when multiple groups are compared.
- We typically use Bonferroni correction when only two groups are compared.
- Bonferroni correction is used to yield compensation for increased likelihood of performing a Type I error.
- Bonferroni correction is used to yield compensation for increased likelihood of performing a Type II error.



Schreibtisch ▾

Angebote ▾

Look at the following circular and linear pop up menus. On right clicking the mouse the circular pop up menu opens at the central cross while the linear menu opens at the top element "Ansicht". So the mouse cursor is either on the cross (circular menu) or at "Ansicht" (linear menu). Having Fitts' Law in mind which of the following statement(s) is/are correct?





Schreibtisch ▾

Angebote ▾

- The circular pop up menu benefits in terms of target distance. X
- The circular pop up menu saves space. X
- All elements in the circular pop up menu can be accessed equally well. ✓
- All elements in the linear menu can be accessed equally well. ✓
- The linear pop up menu would improve accessibility of the upper items if - on right clicking - the mouse cursor was already at the level of the center. X
- At each element of the circular pop up menu another circular menu could open and increase the access speed. X

Die bestmögliche Lösung lautet::

- The circular pop up menu benefits in terms of target distance.
- The circular pop up menu saves space.
- All elements in the circular pop up menu can be accessed equally well.
- All elements in the linear menu can be accessed equally well.
- The linear pop up menu would improve accessibility of the upper items if - on right clicking - the mouse cursor was already at the level of the center.
- At each element of the circular pop up menu another circular menu could open and increase the access speed.



Sie haben 0 von 3 möglichen Punkten erreicht.



Schreibtisch ▾

Angebote ▾

You take part in an HCI-related study in which you have to solve various tasks in a virtual labyrinth. For this, you have to wear a head-mounted display (HMD). Select the correct statement(s).

- By presenting exactly the same image to each eye, you can see the labyrinth in three-dimensions through the HMD.
- The "illusion of depth" makes it possible to perceive a 3D labyrinth with the HMD.
- Stereovision is how each eye may see an object from different angles, but the brain combines these angles to form a 3D image.
- A one-eyed person cannot assess the depth of the labyrinth because stereoscopic vision is only possible with two intact eyes.

Die bestmögliche Lösung lautet::

- By presenting exactly the same image to each eye, you can see the labyrinth in three-dimensions through the HMD.
- The "illusion of depth" makes it possible to perceive a 3D labyrinth with the HMD.
- Stereovision is how each eye may see an object from different angles, but the brain combines these angles to form a 3D image.
- A one-eyed person cannot assess the depth of the labyrinth because stereoscopic vision is only possible with two intact eyes.

Sie haben 0 von 2 möglichen Punkten erreicht.



Schreibtisch ▾ Angebote ▾

[Tech] Input device taxonomy by Card (3 Punkte)

Sie haben die folgende Antwort gegeben:

Use the input device taxonomy defined by Card to classify the depicted smartphone (2 keys on the right side, touch surface).



Mark the correct one of the given options.



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Select the correct statements about how to create a **focus group**.

- Focus groups are usually not representative. 
- You should only include people in a focus group who have the same professional background and are also at the same level in the company hierarchy so that everyone has a similar perspective. 
- Rather use larger groups to gather more opinions. 
- Too large groups don't allow to involve all participants. 



See slides 8\_2020\_06\_24\_Analysis.

The best possible solution is:

- Focus groups are usually not representative.
- You should only include people in a focus group who have the same professional background and are also at the same level in the company hierarchy so that everyone has a similar perspective.
- Rather use larger groups to gather more opinions.
- Too large groups don't allow to involve all participants.

Choose the correct statement(s).

- When performing the Stroop test, the participants are asked to name the font color of a printed color-word and not naming the actual word (e.g. if the word "blue" is written in red font, the correct answer would be "red"). ✖
- When performing the Stroop test, the participants are asked to name the actual meaning of a printed color-word and not naming its font color (e.g. if the word "blue" is written in red font the, correct answer would be "blue"). ✖
- If the font color and the actual meaning of the printed color-word do not match, participants take longer to give the correct answer and make more mistakes because naming the font color takes more attention than reading the word. ✓
- If the font color and the actual meaning of the printed color-word do not match, participants are faster to give the correct answer and make less mistakes because reading the word takes longer than simply naming the font color. ✓

Die bestmögliche Lösung lautet::

- When performing the Stroop test, the participants are asked to name the font color of a printed color-word and not naming the actual word (e.g. if the word "blue" is written in red font, the correct answer would be "red").
- When performing the Stroop test, the participants are asked to name the actual meaning of a printed color-word and not naming its font color (e.g. if the word "blue" is written in red font the, correct answer would be "blue").
- If the font color and the actual meaning of the printed color-word do not match, participants take longer to give the correct answer and make more mistakes because naming the font color takes more attention than reading the word.
- If the font color and the actual meaning of the printed color-word do not match, participants are faster to give the correct answer and make less mistakes because reading the word takes longer than simply naming the font color.

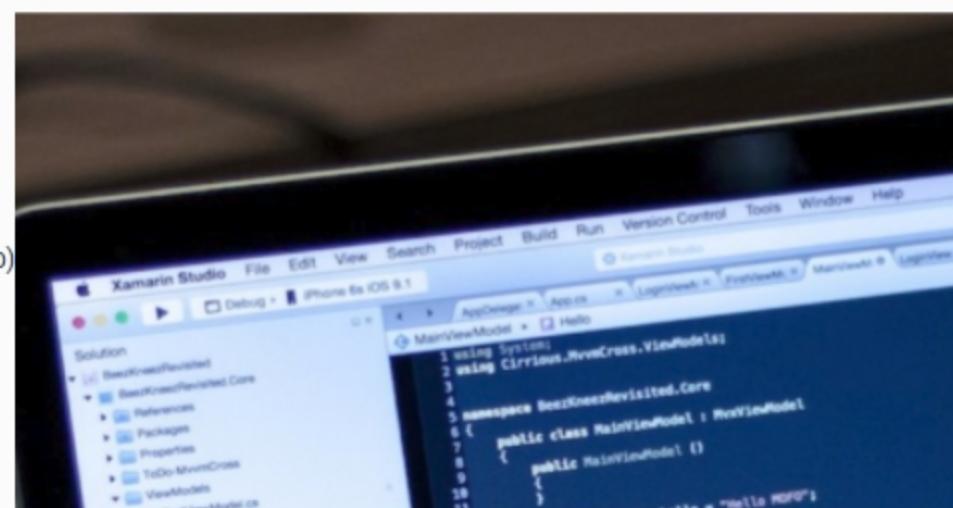
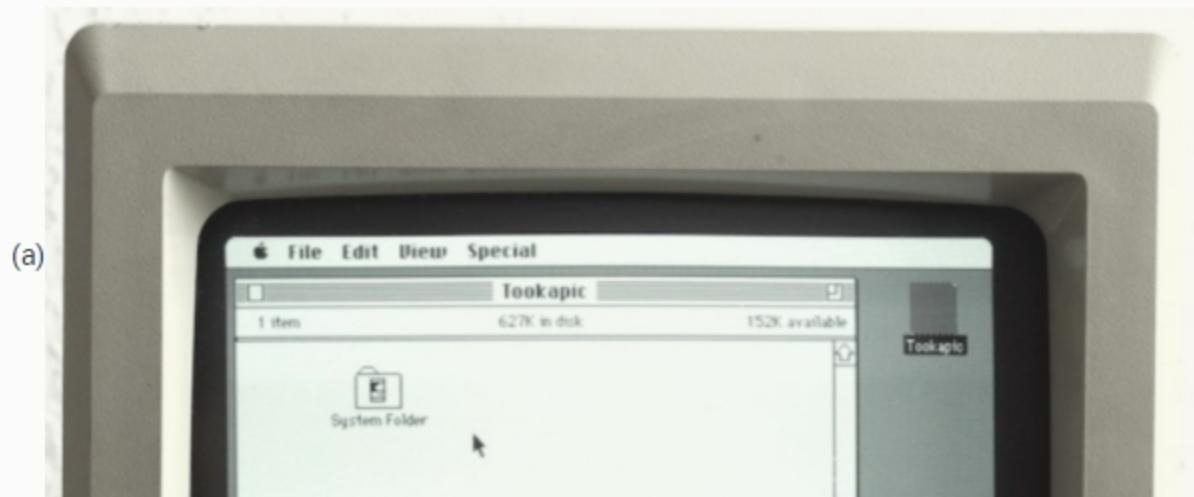


Schreibtisch ▾

Angebote ▾

An important rule for designing of a User Interface is the strive for consistency. There are three different levels of consistency.

Look at the images below, there you can see two different versions of the Apple operating system from 1980 (a) and 2010 (b).





Schreibtisch ▾

Angebote ▾

Which of the following statement(s) is/are correct?

- Lexical Consistency is achieved by placing the Apple Logo always at the top left. X
- Syntactic Consistency is achieved by the same ordering of "File Edit View". ✓
- Lexical Consistency is achieved by using the same words like "File Edit View". X
- Semantic Consistency is achieved by giving the words the same meaning in terms of interaction. "File" provides options regarding the current file. ✓
- Syntactic Consistency is achieved by providing a "Help" option. ✓
- Semantic Consistency is achieved by using red color for closing an application. ✓

Die bestmögliche Lösung lautet::

- Lexical Consistency is achieved by placing the Apple Logo always at the top left.
- Syntactic Consistency is achieved by the same ordering of "File Edit View".
- Lexical Consistency is achieved by using the same words like "File Edit View".
- Semantic Consistency is achieved by giving the words the same meaning in terms of interaction. "File" provides options regarding the current file.
- Syntactic Consistency is achieved by providing a "Help" option.
- Semantic Consistency is achieved by using red color for closing an application.





Schreibtisch ▾

Angebote ▾

Die bestmögliche Lösung lautet::

Horizontal prototype	passt zu	Actual functionalities are not implemented
Horizontal prototype	passt zu	Helps to evaluate/test navigation, feature placement, accessibility, overall user interface concept, and user preferences
Vertical prototype	passt zu	Full functionality and performance of a "slice" or small part of the system
Vertical prototype	passt zu	Details of the function/feature are implemented
Vertical prototype	passt zu	Helps to test the optimal design for a feature and evaluate its usability



Sie haben 0 von 2.5 möglichen Punkten erreicht.





Schreibtisch ▾ Angebote ▾

Choose the correct statement(s) describing the 8 Golden Rules of Shneiderman.

- Shortcuts: to improve speed for experienced users by providing shortcuts on different levels (e.g. keyboard shortcuts, printer presets) ✓
- Closure: sequences of (non-instantaneous) actions should have a beginning, middle, and end ✗
- Locus of control: user should feel to be in control of the system, but system should initiate actions ✗
- Error handling: basically all actions should be reversible, e.g by providing UNDO functions and allowing undo of groups of actions ✓

Die bestmögliche Lösung lautet::

- Shortcuts: to improve speed for experienced users by providing shortcuts on different levels (e.g. keyboard shortcuts, printer presets)
- Closure: sequences of (non-instantaneous) actions should have a beginning, middle, and end
- Locus of control: user should feel to be in control of the system, but system should initiate actions
- Error handling: basically all actions should be reversible, e.g by providing UNDO functions and allowing undo of groups of actions

Sie haben 0 von 2 möglichen Punkten erreicht.

# —STUDON— writing desk ▾ offers ▾

Complete the given statement about the **steering law** by filling the gaps with the missing words and give the equation for MT.

The time to acquire a target through a  tunnel  is a function of the  width  and  space  of the tunnel and depends on the  pointing system .

**Equation:**

Movement Time MT =   $a + b * (D / W)$

! See slides 5\_2020\_05\_27 Models .

The best possible solution is:

The time to acquire a target through a  tunnel is a function of the  length or width and  width or length of the tunnel and depends on the  pointing system .

**Equation:**

Movement Time MT =   $a + b * D / W$  or  $a + bD / W$  or  $a + b D / W$  or  $a + b D / W$  or  $a + b D / W$  or  $a + b * (D / W)$  or  $a + b * (D / W)$



Select the correct statement(s) about **diary studies**.

- Users are typically asked to record the date and time of an event, where they are, information about the event of significance, and ratings about how they feel, etc. ✓
- Users are asked to document significant events or problems for example during the use of the system ✓
- Users are asked to document the interactions with cameras ✓
- Diary studies can be used for tasks that are done very quickly or hard to observe ✓
- Diary studies can be used when only a selective date is required ✓
- The user can also get a tape recorder and a list of questions to avoid handwritten notes ✓

Die bestmögliche Lösung lautet::

- Users are typically asked to record the date and time of an event, where they are, information about the event of significance, and ratings about how they feel, etc.
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Schreibtisch ▾

Angebote ▾

During Corona, a group of VR enthusiasts decided to develop a novel VR application to facilitate home office work. Their motivation is parents who need to take care of children while working at home.

Their idea: monitors are projected in the peripheral field of view and can be pulled into the central field of view using eye tracking if needed. The keyboard is completely absent and is replaced with voice commands.

Thus, both hands are free and the employee is not tied to a desk.

They design a business model and present it to various sponsors.

Which of the following statement(s) might they have been told:

- VR is not suitable for this kind of application. X
- To this day there are no wireless VR devices. So you would be limited in space. X
- AV would do the trick. Then you could even think of driving the car and collecting the kids from school while having the headset on. ✓
- AR can enhance the experience by also adding the real world to your view. ✓

Die bestmögliche Lösung lautet::

- VR is not suitable for this kind of application.
- To this day there are no wireless VR devices. So you would be limited in space.
- AV would do the trick. Then you could even think of driving the car and collecting the kids from school while having the headset on.
- AR can enhance the experience by also adding the real world to your view.

# —STUD ON— writing desk ▾ offers ▾

A study shows an experiment in which the reaction time of goalkeepers is measured. They are asked to press a button as soon as a symbol appears on a white screen. The data, except for a few outliers, are all within a range of 400 - 600 milliseconds. In the study, the median was calculated to evaluate the reaction time.

Why was the median chosen in the study? What disadvantages could the median have?

Choose the correct explanations.

- The median is relatively unaffected by outliers. ✓
- The median is not very stable. ✗
- The median is resistant to sampling variation. ✗
- The median considers every score, therefore it is the most accurate summary of the data. ✗
- The median is very much affected by outliers. ✓
- The median can be used with numerical data but not with nominal data. ✗

The best possible solution is:

- The median is relatively unaffected by outliers.
- The median is not very stable.
- The median is resistant to sampling variation.
- The median considers every score, therefore it is the most accurate summary of the data.
- The median is very much affected by outliers.
- The median can be used with numerical data but not with nominal data.

**—STUDON—** writing desk ▾ offers ▾

Virtual environment	match with	User is totally immersed	<input checked="" type="checkbox"/>
Virtual environment	match with	Completely synthetic world	<input checked="" type="checkbox"/>
Virtual environment	match with	Possibility to step out of bounds of physical reality	<input checked="" type="checkbox"/>
Real-World Environment	match with	Constrained by laws of physics	<input checked="" type="checkbox"/>
Real-World Environment	match with	Consisting of real objects	<input checked="" type="checkbox"/>
Mixed Reality Environment	match with	Augmented Reality & Augmented Virtuality	<input checked="" type="checkbox"/>
Mixed Reality Environment	match with	Real and virtual objects are presented together	<input checked="" type="checkbox"/>

The best possible solution is:

Virtual environment	match with	User is totally immersed
Virtual environment	match with	Completely synthetic world
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