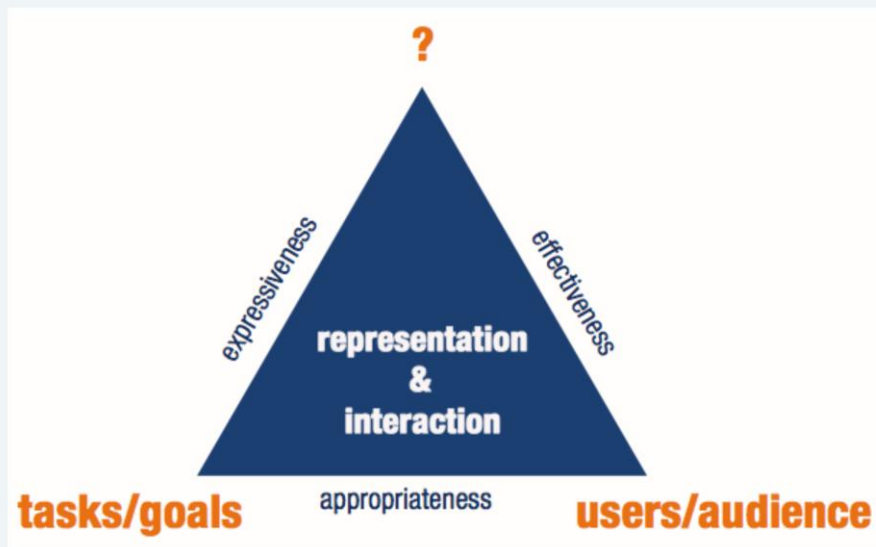Verbleibende Zeit 0:39:21

Frage 1

Antwort gespeichert

Erreichbare Punkte: 3,00

⚑ Frage markieren

What is the missing component (on the top corner) in the visualization design triangle?

Wählen Sie eine Antwort:

- ○ a. screen resolution
- ○ b. visual perception
- ○ c. appropriateness
- ◉ d. data
- ○ e. budget

Meine Auswahl widerrufen

Frage 2

Antwort gespeichert

Erreichbare Punkte: 3,00

⚑ Frage markieren

Which one of the following purposes can be seen as directed search and the goal is to verify or reject hypotheses?

Wählen Sie eine Antwort:

- ○ a. Presentation
- ◉ b. Confirmation / Confirmative Analysis
- ○ c. Exploration / Explorative Analysis

Meine Auswahl widerrufen

Frage 3

Antwort gespeichert

Erreichbare Punkte: 3,00

⚑ Frage markieren

Who is widely considered as the inventor of most of the graphical forms widely used today (the line graph, bar chart, pie chart, and circle graph)?

- ○ a. Joseph Priestley
- ○ b. Jacques Barbeu-Dubourg
- ◉ c. William Playfair
- ○ d. Otto Neurath
- ○ e. Florence Nightingale

Meine Auswahl widerrufen

Frage 4

Antwort gespeichert

Erreichbare Punkte: 3,00

⚑ Frage markieren

How is the transformation between user and insight called?

Wählen Sie eine Antwort:

- ○ a. visual mapping
- ● b. cognition
- ○ c. projection
- ○ d. image
- ○ e. transformation

Meine Auswahl widerrufen

Frage 5

Antwort gespeichert

Erreichbare Punkte: 3,00

⚑ Frage markieren

Main goals of information design are to...

Wählen Sie eine oder mehrere Antworten:

- ☑ a. combine textual, visual, and other information to satisfy user's/audience's needs
- ☑ b. make complex information easier to understand
- ☐ c. make a glossy product
- ☐ d. design pretty pictures
- ☑ e. show data on mobile devices
- ☐ f. assist thinking

Frage 6

Antwort gespeichert

Erreichbare Punkte: 3,00

⚑ Frage markieren

The blind spot is ...

Wählen Sie eine Antwort:

- ● a. a location in the eye where the optic nerve is connected
- ○ b. the region in the eye with the sharpest vision
- ○ c. a region where light enters the eye
- ○ d. a location in the eye where optical illusions origniate
- ○ e. a region in the back of the brain

Meine Auswahl widerrufen

Frage 7

Antwort gespeichert

Erreichbare Punkte: 3,00

⚑ Frage markieren

Which of the following statements regarding color perception are true?

Wählen Sie eine oder mehrere Antworten:

- ☐ a. Colors can be perceived absolutely (objective measurement)
- ☑ b. Color is a preattentive attribute
- ☐ c. Color perception is enabled by the vast majority of photoreceptive cells on the retina
- ☑ d. Color vision is adaptive to ambient light
- ☑ e. Color is perceived depending on the surroundings

Frage 8

Antwort gespeichert

Erreichbare Punkte: 3,00

⚑ Frage markieren

Which of the following statements regarding preattentive processing are true?

Wählen Sie eine oder mehrere Antworten:

- ☑ a. The combination of two preattentive attributes is again perceived preattentively.
- ☐ b. Preattentive attributes are perceived very quickly because they don't need to be learned but are "hardwired" in the brain.
- ☐ c. Preattentive processing requires attention and works with short-term memory.
- ☑ d. Preattentive attributes are features of a visual scene that pop-out.
- ☑ e. Preattentive processing is fast and is performed in parallel, within 250ms.

Frage 9

Antwort gespeichert

Erreichbare Punkte: 3,00

⚑ Frage markieren

Visual perception is...

Wählen Sie eine Antwort:

- ○ a. a sequential process from eye to brain (bottom-up).
- ○ b. a sequential process from brain to eye (top-down).
- ⦿ c. a combination of bottom-up and top-down processes.

  Meine Auswahl widerrufen

Frage 10

Antwort gespeichert

Erreichbare Punkte: 3,00

⚑ Frage markieren

Which of the following statements about visual variables are true?

Wählen Sie eine oder mehrere Antworten:

- ☑ a. The ranking of visual variables is equally valid for different types of data (quantitative-ordinal-qualitative).
- ☐ b. Color hue is well-suited for quantitative data.
- ☐ c. Area is a better choice than length for encoding quantitative data.
- ☑ d. Position is most accurately perceived.
- ☑ e. Color hue is well-suited for qualitative data.

Frage 11

Antwort gespeichert

Erreichbare Punkte: 3,00

⚑ Frage markieren

Understanding how bar chart works, the following can be said to be true:

Wählen Sie eine oder mehrere Antworten:

- ☐ a. the ordering of the bars has no effect on the readability of the graph
- ☑ b. when representing an average as a bar, an extra line spawning from the top of the bar can be used to also encode the variance
- ☑ c. other shapes can be used to display the same information, and even drawings of objects, as long as they do not distort the understanding of the data
- ☑ d. when visualizing a small data series with no temporal aspect, a bar chart can be used instead of a line chart since the points don't need to be connected
- ☑ e. when representing an average as a bar, the width of the bar can be used to also encode the variance

Frage 12

Antwort gespeichert

Erreichbare Punkte: 3,00

⚑ Frage markieren

Which of the following are the most basic graphical objects used to encode quantitative values?

Wählen Sie eine oder mehrere Antworten:

☐ a. small multiples

☑ b. lines

☐ c. glyphs

☑ d. bars

☑ e. points

Frage 13

Antwort gespeichert

Erreichbare Punkte: 3,00

⚑ Frage markieren

Which relationship is associated with following words: change, fluctuate, decrease, trend

Wählen Sie eine Antwort:

◉ a. time-series

○ b. ranking

Meine Auswahl widerrufen

Frage 14

Antwort gespeichert

Erreichbare Punkte: 3,00

⚑ Frage markieren

The cycle plot is used to

Wählen Sie eine oder mehrere Antworten:

☐ a. indicate correlation between multiple dimensions

☐ b. visualize and compare spatial data

☑ c. identify the periodic pattern and the trend in individual groups

☑ d. visualize periodic time series

☐ e. compare data points within the same periodic group

Frage 15

Antwort gespeichert

Erreichbare Punkte: 3,00

⚑ Frage markieren

When showing data about thousands of people traveling between a few regions, which of the approaches can provide meaningful insights on the data:

Wählen Sie eine oder mehrere Antworten:

☐ a. two pie charts, one representing regions by the amount of exits, and one by the amount of arrivals

☐ b. two world maps, one representing the exit regions, another representing the arrival regions, and arrows between them representing each person's trajectory

☑ c. two maps showing only the relevant regions, with regions colored using a color scale according to amount of people exiting, and arriving, respectively

☐ d. a world map with many arrows over the regions, each arrow connecting the exit and arrival region of an individual person

☑ e. a matrix where each line,row represents leaving->arriving, so that each index of the matrix contains the count of people moving in that direction, and color-coded so that the larger the value in the matrix, the more intense the color

Frage 16

Antwort gespeichert

Erreichbare Punkte: 3,00

⚐ Frage markieren

Which of the following visual variables are suited to encode ordinal data?

Wählen Sie eine oder mehrere Antworten:

- ☑ a. brightness
- ☐ b. shape
- ☑ c. color hue

Frage 17

Antwort gespeichert

Erreichbare Punkte: 3,00

⚐ Frage markieren

Information Visualization can be defined as: "**the process of transforming data, information, and knowledge into visual form**".

Given this definition, select the correct statements

Wählen Sie eine oder mehrere Antworten:

- ☐ a. **Knowledge** are measurements with an associated meaning.
- ☑ b. **Data** are input signals to sensory and cognitive processes
- ☐ c. **Knowledge** are facts and statistics collected together for analysis.
- ☑ d. **Knowledge** comprises data, information and the cognitive machinery needed to take decisions.

Frage 18

Antwort gespeichert

Erreichbare Punkte: 3,00

⚐ Frage markieren

Information Visualization is...

Wählen Sie eine oder mehrere Antworten:

- ☑ a. the use of computer-supported, interactive representations of concrete data to amplify cognition.
- ☐ b. the use of paper-based, visual representations of (abstract) data to amplify cognition.
- ☑ c. the use of computer-supported, interactive, visual representations of (abstract) data to amplify cognition.

Frage 19

Antwort gespeichert

Erreichbare Punkte: 3,00

⚐ Frage markieren

Select the correct statements regarding the **Knowledge Crystallization Process**

Wählen Sie eine oder mehrere Antworten:

- ☑ a. The result of the Knowledge Crystallization Process can be new knowledge, a representation or a decision
- ☑ b. During the Knowledge Crystallization Process the user should not consider the task
- ☐ c. In the Knowledge Crystallization Process the knowledge that is proven effective, and objective is discarded
- ☑ d. The result of the Knowledge Crystallization Process is a concise representation of the data
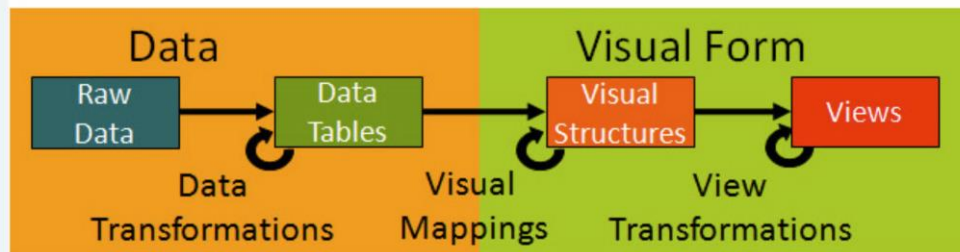
Frage **20**

Antwort
gespeichert

Erreichbare
Punkte: 3,00

⚑ Frage
markieren

At which transformation steps in the Visualization Reference Model is user interaction appropriate?

Wählen Sie eine oder mehrere Antworten:

- ☐ a. at data transformations and visual mappings
- ☑ b. at all three transformation steps
- ☐ c. at view transformations and data transformations
- ☐ d. at visual mappings and view transformations

Frage **21**

Antwort
gespeichert

Erreichbare
Punkte: 3,00

⚑ Frage
markieren

Mark the **TRUE** sentences. Node-link diagram...

Wählen Sie eine oder mehrere Antworten:

- ☑ a.   ... provides an overview of the data structure
- ☐ b.   ... it is not indicated for Path-finding tasks
- ☑ c.   ... can be used to visualize hierarchies
- ☐ d.   ... scales well due to limited occlusion
- ☑ e.   ... is a popular method to visualize networked data

Frage **22**

Antwort
gespeichert

Erreichbare
Punkte: 3,00

⚑ Frage
markieren

Scatter plots...

Wählen Sie eine oder mehrere Antworten:

- ☑ a.   ...are used to visualize correlation between 2 variables
- ☑ b.   ...can visualize additional variables by using color, shape, size, or texture
- ☑ c.   ...encode values with the most precisely perceived visual attribute: position
- ☐ d.   ...are commonly used to visualize hierarchies and networks
- ☑ e.   ...can be animated to show temporal trends

Frage 23

Mark the **TRUE** sentences about the use of 3D in multivariate data representation.

- ☐ a. None of the others.
- ☐ b. 3D visualizations are uncommon as they require high computational power to deliver a satisfying interactive experience.
- ☑ c. 3D views provide good support for interactive features (e.g., rotation. selection, scaling).
- ☐ d. 3D visualization of charts provides visualization which might suffer from low precision, but not occlusion.
- ☑ e. 3D views are effective on representing models and physical locations.

Frage 24

Which of the following are considered graphical properties?

- ☐ a. Points
- ☑ b. Color
- ☐ c. Surfaces
- ☑ d. Texture
- ☐ e. Lines

Frage 25

Please mark the **TRUE** sentences about Horizon Charts.

- ☐ a. Individual variables are represented using line charts.
- ☑ b. Its function is mainly comparison of multiple variables over time.
- ☐ c. It follows a "time-to-time" representation of the temporal information.
- ☑ d. Quick, at-a-glance comparison is achieved with a positive/negative coloring.
- ☐ e. Individual variables are represented as scatterplots.

Frage 26

According to the Five Hat Racks principle, you should organize information when it should be compared across a common measure (e.g., highest to lowest) by...

Wählen Sie eine Antwort:

- ○ a. Location
- ○ b. Category
- ○ c. Alphabet
- ○ d. Time
- ⦿ e. Continuum/ Hierarchy

    Meine Auswahl widerrufen

Frage 27

Antwort gespeichert

Erreichbare Punkte: 3,00

⚑ Frage markieren

A combination of two different typefaces is concordant when they are...

Wählen Sie eine oder mehrere Antworten:

- ☐ a. using different typeface families
- ☐ b. very different in style, size, weight, etc.
- ☑ c. only one typeface family
- ☑ d. without much variety in style, size, weight, etc.

Frage 28

Antwort gespeichert

Erreichbare Punkte: 3,00

⚑ Frage markieren

When creating contrast with typography you can use...

Wählen Sie eine oder mehrere Antworten:

- ☑ a. Direction
- ☑ b. Form
- ☑ c. Size
- ☐ d. Alignment
- ☐ e. Conflict
- ☐ f. Wording

Frage 29

Antwort gespeichert

Erreichbare Punkte: 3,00

⚑ Frage markieren

Which 2 of the 4 basic design principles are used here (to transform the left document into the right one)?

Wählen Sie eine oder mehrere Antworten:

- ☑ a. Alignment
- ☐ b. Proximity
- ☑ c. Contrast
- ☑ d. Repetition

Frage **30**

Antwort
gespeichert

Erreichbare
Punkte: 3,00

⚑ Frage
markieren

Which fontstyle has the font in the picture?

Garamond

Wählen Sie eine Antwort:

○ a.   Modern

○ b.   Slab Serif

◉ c.   Oldstyle

○ d.   Decorative

○ e.   Sans Serif

○ f.   Script

Meine Auswahl widerrufen

Frage **31**
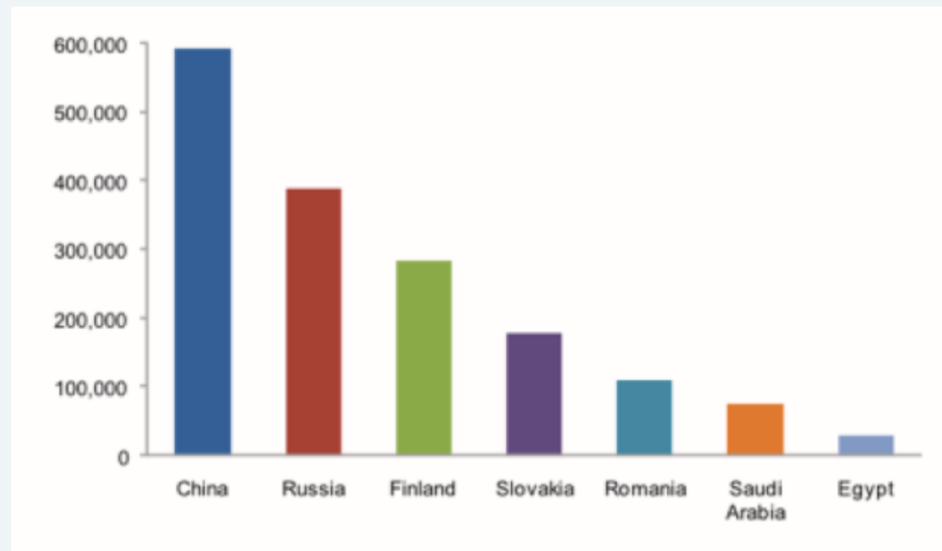
Antwort
gespeichert

Erreichbare
Punkte: 3,00

⚑ Frage
markieren

What kind of color coding is used in the following graph?

○ a.   Random

○ b.   Sequential

○ c.   Diverging

◉ d.   Categorical

○ e.   Qualitative

Frage 32

Antwort gespeichert

Erreichbare Punkte: 3,00

⚐ Frage markieren

Which delineation techniques were employed in this table?

		Jan	Feb	Mar	Apr	May	June	July	Aug	Sept	Oct	Nov	Dec
		Monthly accounting (euros) - raw data											
incoming	salaries	3130	3134	3112	3130	3130	3150	3150	3160	3148	3137	3147	3138
	family allowance	227	227	227	498	498	498	498	498	498	498	498	498
	other						1870						1756
	TOTAL	**3357**	**3361**	**3339**	**3628**	**3628**	**5518**	**3648**	**3658**	**3646**	**3635**	**3645**	**5392**
outgoing	mortgage	1130	1130	1130	1130	1130	1130	1130	1130	1202	1202	1202	1202
	food	400	380	403	406	375	397	384	406	420	430	350	330
	utilities	187	98	175	89	183	84	201	94	184	91	173	1003
	healthcare	130	126	140	1330	200	210	160	140	135	132	110	140
	childcare	200	210	198	207	210	210	0	0	300	305	310	240
	travel	300	300	300	300	300	300	200	180	300	320	320	320
	other	700	750	737	670	802	709	2600	1800	730	700	698	1004
	TOTAL	**3047**	**2994**	**3083**	**4132**	**3200**	**3040**	**4675**	**3750**	**3271**	**3180**	**3163**	**4239**
	BALANCE	**310**	**367**	**256**	**-504**	**428**	**2478**	**-1027**	**-92**	**375**	**455**	**482**	**1153**
	transferred to savings	250	250	250	0	250	2500	0	250	250	250	250	1000
	current savings balance	7200	7450	7700	7200	7450	9950	8800	8800	9050	9300	9550	10550
	children 'a charge'	2	2	2	3	3	3	3	3	3	3	3	3

Wählen Sie eine oder mehrere Antworten:

- ☐ a. Horizontal Fill Color
- ☑ b. Rules and Grids
- ☑ c. White Space
- ☑ d. Vertical Fill Color
- ☑ e. Grouping and Summaries

Frage 33

Antwort gespeichert

Erreichbare Punkte: 3,00

⚐ Frage markieren

Which of these principles are recommended when designing a good visualization?

Wählen Sie eine oder mehrere Antworten:

- ☑ a. maximize non-data ink
- ☐ b. revise and edit
- ☑ c. maximize the data-ink ratio
- ☐ d. minimize data density
- ☑ e. show data within context
- ☑ f. erase redundant data ink

Frage 34

Antwort gespeichert

Erreichbare Punkte: 3,00

⚐ Frage markieren

Which of the following are a table's data components?

Wählen Sie eine oder mehrere Antworten:

- ☐ a. Fill color
- ☐ b. White space and page breaks
- ☐ c. Rules and grids
- ☐ d. Complementary Text
- ☑ e. Table Cell Values
- ☑ f. Categorical Subdivisions

Frage 35

Antwort gespeichert

Erreichbare Punkte: 3,00

⚑ Frage markieren

When designing a visualization you should...

Wählen Sie eine oder mehrere Antworten:

- ☑ a. consider the tradeoff between the efforts required for creating and learning the visual representation and the benefits yielded by it
- ☐ b. be careful to maximize the lie-factor
- ☑ c. choose a visual representation that is effective for the task at hand and the human visual system
- ☑ d. be careful that the visualization encodes only data relations that actually exist in the data and no other data relations

---

Frage 36

Antwort gespeichert

Erreichbare Punkte: 3,00

⚑ Frage markieren

Interaction techniques facilitate ...

Wählen Sie eine Antwort:

- ○ a. active discourse with the data
- ◉ b. manipulating data
- ○ c. directing the users

Meine Auswahl widerrufen

Frage 37

Antwort gespeichert

Erreichbare Punkte: 3,00

⚑ Frage markieren

Interactions: User intents are:

Wählen Sie eine Antwort:

- ◉ a. What a user wants to achieve through a specific interaction technique
- ○ b. How a user interacts with visual representations
- ○ c. How a user sequences actions

Meine Auswahl widerrufen

Frage 38

Antwort gespeichert

Erreichbare Punkte: 3,00

⚑ Frage markieren

Highlighting attributes of text is supported by ...

Wählen Sie eine Antwort:
- ○ a. Readability Analysis [Oelke, et al. 2010]
- ○ b. ArcDiagrams [Wattenberg, 2002]
- ⦿ c. TagClouds / WordClouds

Meine Auswahl widerrufen

Frage 39

Antwort gespeichert

Erreichbare Punkte: 3,00

⚑ Frage markieren

Text and Documents: Weaknesses of TagClouds and WordClouds are

Wählen Sie eine oder mehrere Antworten:
- ☑ a. inaccurate size encoding (long words are bigger)
- ☐ b. show the structure of the text
- ☐ c. support pattern finding
- ☑ d. does not show the structure of the text
- ☑ e. may not facilitate comparison (unstable layout)

Frage 40

Antwort gespeichert

Erreichbare Punkte: 3,00

⚑ Frage markieren

TagCloud - WordClouds ...

Wählen Sie eine Antwort:
- ⦿ a. show word/concept importance through visual means
- ○ b. support pattern finding
- ○ c. summarize text over time and space

Meine Auswahl widerrufen

Frage 41

Antwort gespeichert

Erreichbare Punkte: 3,00

⚑ Frage markieren

Data wrangling is, ...

Wählen Sie eine Antwort:
- ⦿ a. a process of iterative data exploration and transformation that enables analysis.
- ○ b. a process to design concepts and tasks
- ○ c. a process to document analysis steps and further analysis

Meine Auswahl widerrufen

A design study is a project in which ...

Wählen Sie eine Antwort:

- ○ a. designers explore the parameter space visually
- ⦿ b. visualization researchers analyze a specific real-world problem faced by domain experts
- ○ c. experts elaborate about various visual knowledge discovery steps

    Meine Auswahl widerrufen

Formative and summative evaluation, is...

Wählen Sie eine Antwort:

- ○ a. When the cook reads the recipe the soup, that's formative; when the guests corrects the recipe of the soup, that's summative.
- ○ b. When the cook composes the soup, that's formative; when the guests eat the soup, that's summative.
- ⦿ c. When the cook tastes the soup, that's formative; when the guests taste the soup, that's summative.

    Meine Auswahl widerrufen

The main ingredients of evaluation are ...

Wählen Sie eine oder mehrere Antworten:

- ☐ a. artifacts
- ☐ b. text explorations
- ☑ c. findings
- ☐ d. exploring the visual exploration space
- ☑ e. data, users, and tasks

Nested Model by [Munzner, 2009] consists of ...

Wählen Sie eine oder mehrere Antworten:

- ☑ a. data/operation abstraction design
- ☑ b. domain problem characterization
- ☐ c. algorithm design
- ☐ d. reading abstraction design
- ☑ e. involving a (human) observer
- ☑ f. encoding/interaction technique design

Hier nochmals die Unformatierte Lösung mit den Ergebnissen:

188.917 Informationsdesign und Visualisierung (VU 2,0) 2023S

Begonnen am	Donnerstag, 15. Juni 2023, 11:15
Status	Beendet
Beendet am	Donnerstag, 15. Juni 2023, 12:25
Verbrauchte Zeit	1 Stunde 10 Minuten
Bewertung	**108,50** von 135,00 (**80,37**%)
Feedback	You have successfully passed the exam, congratulations!

Frage 1

Vollständig
Erreichte Punkte 3,00 von 3,00
⚐ Frage markieren

Fragetext

What is the missing component (on the top corner) in the visualization design triangle?
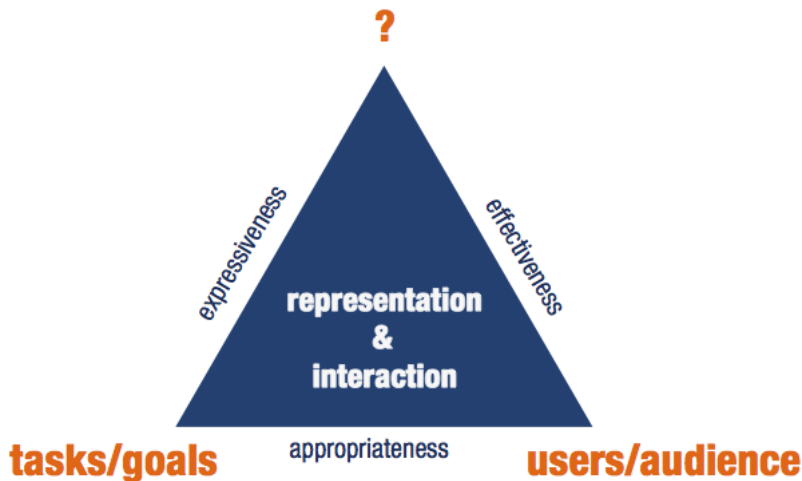
Wählen Sie eine Antwort:

○ a.
screen resolution

○ b.
visual perception

○ c.
appropriateness

◉ d.
data

○ e.
budget

Frage 2

Vollständig
Erreichte Punkte 3,00 von 3,00
⚐ Frage markieren

Fragetext

Which one of the following purposes can be seen as directed search and the goal is to verify or reject hypotheses?
Wählen Sie eine Antwort:

○ a.
Presentation

◉

b.

Confirmation / Confirmative Analysis

○

c.

Exploration / Explorative Analysis

Frage 3

Vollständig
Erreichte Punkte 3,00 von 3,00
⚐ Frage markieren

Fragetext

Who is widely considered as the inventor of most of the graphical forms widely used today (the line graph, bar chart, pie chart, and circle graph)?

○

a.

Joseph Priestley

○

b.

Jacques Barbeu-Dubourg

◉

c.

William Playfair

○

d.

Otto Neurath

○

e.

Florence Nightingale

Frage 4

Vollständig
Erreichte Punkte 3,00 von 3,00
⚐ Frage markieren

Fragetext

How is the transformation between user and insight called?

Wählen Sie eine Antwort:

○

a.

visual mapping

◉

b.

cognition

○

c.

projection

○

d.

image

○

e.

transformation

Frage 5

Vollständig
Erreichte Punkte 1,00 von 3,00
⚐ Frage markieren

Fragetext

Main goals of information design are to...
Wählen Sie eine oder mehrere Antworten:

☑
a.
combine textual, visual, and other information to satisfy user's/audience's needs

☑
b.
make complex information easier to understand

☐
c.
make a glossy product

☐
d.
design pretty pictures

☑
e.
show data on mobile devices

☐
f.
assist thinking

Frage 6

Vollständig
Erreichte Punkte 3,00 von 3,00
⚑ Frage markieren

Fragetext

The blind spot is ...

Wählen Sie eine Antwort:

◉
a.
a location in the eye where the optic nerve is connected

○
b.
the region in the eye with the sharpest vision

○
c.
a region where light enters the eye

○
d.
a location in the eye where optical illusions origniate

○
e.
a region in the back of the brain

Frage 7

Vollständig
Erreichte Punkte 3,00 von 3,00
⚑ Frage markieren

Fragetext

Which of the following statements regarding color perception are true?
Wählen Sie eine oder mehrere Antworten:

☐
a.
Colors can be perceived absolutely (objective measurement)

☑
b.
Color is a preattentive attribute

☐
c.
Color perception is enabled by the vast majority of photoreceptive cells on the retina

☑
d.
Color vision is adaptive to ambient light

☑
e.
Color is perceived depending on the surroundings

Frage 8

Vollständig
Erreichte Punkte 2,00 von 3,00
⚑ Frage markieren

Fragetext

Which of the following statements regarding preattentive processing are true?

Wählen Sie eine oder mehrere Antworten:

☑
a.

The combination of two preattentive attributes is again perceived preattentively.

☑
b.

Preattentive attributes are perceived very quickly because they don't need to be learned but are "hardwired" in the brain.

☐
c.

Preattentive processing requires attention and works with short-term memory.

☑
d.

Preattentive attributes are features of a visual scene that pop-out.

☑
e.

Preattentive processing is fast and is performed in parallel, within 250ms.

Frage 9

Vollständig
Erreichte Punkte 3,00 von 3,00
⚐ Frage markieren

Fragetext

Visual perception is...
Wählen Sie eine Antwort:
○
a.
a sequential process from eye to brain (bottom-up).
○
b.
a sequential process from brain to eye (top-down).
◉
c.
a combination of bottom-up and top-down processes.

Frage 10

Vollständig
Erreichte Punkte 3,00 von 3,00
⚐ Frage markieren

Fragetext

Which of the following statements about visual variables are true?

Wählen Sie eine oder mehrere Antworten:
☐
a.
The ranking of visual variables is equally valid for different types of data (quantitative-ordinal-qualitative).
☐
b.
Color hue is well-suited for quantitative data.
☐
c.
Area is a better choice than length for encoding quantitative data.
☑
d.
Position is most accurately perceived.
☑
e.
Color hue is well-suited for qualitative data.

Frage 11

Vollständig
Erreichte Punkte 1,00 von 3,00
⚐ Frage markieren

Fragetext

Understanding how bar chart works, the following can be said to be true:
Wählen Sie eine oder mehrere Antworten:
☐

a.

the ordering of the bars has no effect on the readability of the graph

☐

b.

when representing an average as a bar, an extra line spawning from the top of the bar can be used to also encode the variance

☑

c.

other shapes can be used to display the same information, and even drawings of objects, as long as they do not distort the understanding of the data

☑

d.

when visualizing a small data series with no temporal aspect, a bar chart can be used instead of a line chart since the points don't need to be connected

☑

e.

when representing an average as a bar, the width of the bar can be used to also encode the variance

Frage 12

Vollständig
Erreichte Punkte 3,00 von 3,00
▽ Frage markieren

Fragetext

Which of the following are the most basic graphical objects used to encode quantitative values?

Wählen Sie eine oder mehrere Antworten:

☐
a.
small multiples

☑
b.
lines

☐
c.
glyphs

☑
d.
bars

☑
e.
points

Frage 13

Vollständig
Erreichte Punkte 3,00 von 3,00
▽ Frage markieren

Fragetext

Which relationship is associated with following words: change, fluctuate, decrease, trend
Wählen Sie eine Antwort:
◉

a.
time-series
◯

b.
ranking

Frage 14

Vollständig
Erreichte Punkte 3,00 von 3,00
▽ Frage markieren

Fragetext

The cycle plot is used to

Wählen Sie eine oder mehrere Antworten:

☐

a.

indicate correlation between multiple dimensions

☐

b.

visualize and compare spatial data

☑

c.

identify the periodic pattern and the trend in individual groups

☑
d.

visualize periodic time series

☑
e.

compare data points within the same periodic group

Frage 15

Vollständig
Erreichte Punkte 2,00 von 3,00
⚐ Frage markieren

Fragetext

When showing data about thousands of people traveling between a few regions, which of the approaches can provide meaningful insights on the data:
Wählen Sie eine oder mehrere Antworten:

☐
a.
two pie charts, one representing regions by the amount of exits, and one by the amount of arrivals

☐
b.
two world maps, one representing the exit regions, another representing the arrival regions, and arrows between them representing each person's trajectory

☑
c.
two maps showing only the relevant regions, with regions colored using a color scale according to amount of people exiting, and arriving, respectively

☐
d.
a world map with many arrows over the regions, each arrow connecting the exit and arrival region of an individual person

☑
e.
a matrix where each line,row represents leaving->arriving, so that each index of the matrix contains the count of people moving in that direction, and color-coded so that the larger the value in the matrix, the more intense the color

Frage 16

Vollständig
Erreichte Punkte 1,50 von 3,00
⚐ Frage markieren

Fragetext

Which of the following visual variables are suited to encode ordinal data?
Wählen Sie eine oder mehrere Antworten:

☑
a.
brightness

☐
b.
shape

☑
c.
color hue

Frage 17

Vollständig
Erreichte Punkte 3,00 von 3,00
⚐ Frage markieren

Fragetext

Information Visualization can be defined as: "**the process of transforming data, information, and knowledge into visual form**".

Given this definition, select the correct statements

Wählen Sie eine oder mehrere Antworten:

☐
a.

Knowledge are measurements with an associated meaning.

☑
b.
Data are input signals to sensory and cognitive processes

☐
c.

Knowledge are facts and statistics collected together for analysis.

☑
d.

Knowledge comprises data, information and the cognitive machinery needed to take decisions.

Frage 18

Vollständig
Erreichte Punkte 1,50 von 3,00
⚐ Frage markieren

Fragetext

Information Visualization is...
Wählen Sie eine oder mehrere Antworten:

☑
a.

the use of computer-supported, interactive representations of concrete data to amplify cognition.

☐
b.

the use of paper-based, visual representations of (abstract) data to amplify cognition.

☑
c.

the use of computer-supported, interactive, visual representations of (abstract) data to amplify cognition.

Frage 19

Vollständig
Erreichte Punkte 0,00 von 3,00
⚐ Frage markieren

Fragetext

Select the correct statements regarding the **Knowledge Crystallization Process**

Wählen Sie eine oder mehrere Antworten:

☐
a.

The result of the Knowledge Crystallization Process can be new knowledge, a representation or a decision

☑
b.

During the Knowledge Crystallization Process the user should not consider the task

☐
c.

In the Knowledge Crystallization Process the knowledge that is proven effective, and objective is discarded

☑
d.

The result of the Knowledge Crystallization Process is a concise representation of the data
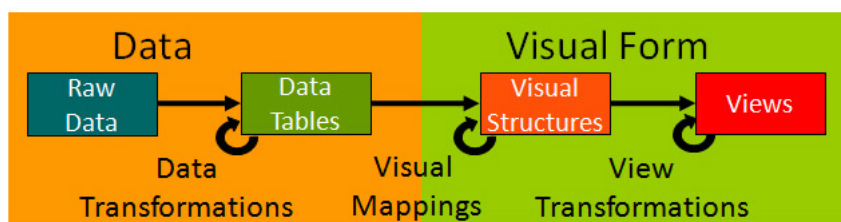
Frage 20

Vollständig
Erreichte Punkte 3,00 von 3,00
⚐ Frage markieren

Fragetext

At which transformation steps in the Visualization Reference Model is user interaction appropriate?

Wählen Sie eine oder mehrere Antworten:

☐
a.

at data transformations and visual mappings

☑
b.
at all three transformation steps

☐
c.
at view transformations and data transformations

☐
d.
at visual mappings and view transformations

Frage 21

Vollständig
Erreichte Punkte 3,00 von 3,00
⚐ Frage markieren

Fragetext

Mark the **TRUE** sentences. Node-link diagram...

Wählen Sie eine oder mehrere Antworten:
☑
a.

... provides an overview of the data structure

☐
b.

... it is not indicated for Path-finding tasks

☑
c.

... can be used to visualize hierarchies

☐
d.

... scales well due to limited occlusion

☑
e.

... is a popular method to visualize networked data

Frage 22

Vollständig
Erreichte Punkte 3,00 von 3,00
⚐ Frage markieren

Fragetext

Scatter plots...

Wählen Sie eine oder mehrere Antworten:
☑
a.

...are used to visualize correlation between 2 variables

☑
b.

...can visualize additional variables by using color, shape, size, or texture

☑
c.

...encode values with the most precisely perceived visual attribute: position

☐
d.

...are commonly used to visualize hierarchies and networks

☑
e.

...can be animated to show temporal trends

Frage 23

Fragetext

Mark the **TRUE** sentences about the use of 3D in multivariate data representation.

☐
a.

None of the others.

☐
b.

3D visualizations are uncommon as they require high computational power to deliver a satisfying interactive experience.

☑
c.

3D views provide good support for interactive features (e.g., rotation. selection, scaling).

☐
d.

3D visualization of charts provides visualization which might suffer from low precision, but not occlusion.

☑
e.

3D views are effective on representing models and physical locations.

Frage 24

Fragetext

Which of the following are considered graphical properties?

☐
a.

Points

☑
b.

Color

☐
c.

Surfaces

☑
d.

Texture

☐
e.

Lines

Frage 25

Fragetext

Please mark the **TRUE** sentences about Horizon Charts.

☐
a.

Individual variables are represented using line charts.

☑

b.

Its function is mainly comparison of multiple variables over time.

☐
c.

It follows a "time-to-time" representation of the temporal information.

☑
d.

Quick, at-a-glance comparison is achieved with a positive/negative coloring.

☐
e.

Individual variables are represented as scatterplots.

Frage 26

Vollständig
Erreichte Punkte 3,00 von 3,00
⚐ Frage markieren

Fragetext

According to the Five Hat Racks principle, you should organize information when it should be compared across a common measure (e.g., highest to lowest) by...

Wählen Sie eine Antwort:

○
a.

Location

○
b.

Category

○
c.

Alphabet

○
d.

Time

◉
e.

Continuum/ Hierarchy

Frage 27

Vollständig
Erreichte Punkte 3,00 von 3,00
⚐ Frage markieren

Fragetext

A combination of two different typefaces is concordant when they are...

Wählen Sie eine oder mehrere Antworten:

☐
a.

using different typeface families

☐
b.

very different in style, size, weight, etc.

☑
c.

only one typeface family

☑
d.

without much variety in style, size, weight, etc.

Frage 28

Vollständig
Erreichte Punkte 3,00 von 3,00

Fragetext

When creating contrast with typography you can use...
Wählen Sie eine oder mehrere Antworten:

☑
a.
Direction

☑
b.
Form

☑
c.
Size

☐
d.

Alignment

☐
e.
Conflict

☐
f.
Wording

Frage 29

Vollständig
Erreichte Punkte 1,50 von 3,00

Fragetext

Which 2 of the 4 basic design principles are used here (to transform the left document into the right one)?

ANOTHER NEWSLETTER!

January First 2006

Exciting Headline

Wants pawn term dare worsted ladle gull hoe hat search putty yowler coils debt pimple colder Guilty Looks. Guilty Looks lift inner ladle cordage saturated adder shirt dissidence firmer bag florist, any ladle gull orphan aster murder toe letter gone entity florist oil buyer shelf.

Thrilling Subhead

"Guilty Looks!" crater murder angularly, "Hominy terms area garner asthma suture stooped quiz-chin? Goiter door florist? Sordidly wut!"

"Wire nut, murder?" wined Guilty Looks, hoe dint peony tension tore murder's scaldings.

"Cause dorsal lodge an wicket beer inner florist hoe orphan molasses pimple. Ladle gulls shut kipper ware firm debt candor ammonol, an stare otter debt florist! Debt florist's mush toe dentures furry ladle gull"

Another Exciting Headline

Wall, pimple oil-wares wander doe wart udder pimple dum wampum toe doe. Debt's jest hormone nurture.

Wan moaning, Guilty Locks dissipater murder, an win entity florist. Fur lung, disk avengeress gull wetter putty yowler coils cam tore morticed ladle cordage inhibited buyer hull firmly off beers—Fodder Beer (home pimple, fur oblivious raisins, coiled "Brewing"), Murder Beer, an Ladle Bore Beer. Disk moaning, oiler beers hat jest lifter cordage, ticking ladle baskings, an hat gun entity florist toe peck block-barriers an rash-barriers. Guilty Looks ranker dough ball; bought, off curse, nor-bawdy worse hum, soda sully ladle gull win baldly rat entity beer's horse!

Boring Subhead

Honor tipple inner darning rum, stad tree boils fuller sop—wan grade bag boiler sop, wan muddle-sash boil, an wan tawny ladle boil. Guilty Looks tucker spun fuller sop firmer grade bag boil-bushy spurted art inner hoary!

"Arch!" crater gull, "Debt sop's toe hart—barns mar mouse!"

Dingy traitor sop inner muddle-sash boil, witch worse toe coiled. Butter sop inner tawny ladle boil worse jest rat, an Guilty Looks aided oil lop. Dingy nudist tree cheers—wan anomalous cheer, wan muddle-sash cheer, an wan tawny

Another Ne

January Fi

Exciting Headline

Wants pawn term dare worsted ladle gull hoe hat search putty yowler coils debt pimple colder Guilty Looks. Guilty Looks lift inner ladle cordage saturated adder shirt dissidence firmer bag florist, any ladle gull orphan aster murder toe letter gone entity florist oil buyer shelf.

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"Guilty Looks!" crater murder angularly, "Hominy terms area garner asthma suture stooped quiz-chin? Goiter door florist? Sordidly wut!"

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"Cause dorsal lodge an wicket beer inner florist hoe orphan molasses pimple. Ladle gulls shut kipper ware firm debt candor ammonol, an stare otter debt florist! Debt florist's mush toe dentures furry ladle gull"

Another Exciting Headline

Wall, pimple oil-wares wander doe wart udder pimple dum wampum toe doe. Debt's jest hormone nurture.

Wählen Sie eine oder mehrere Antworten:

☑ a. Alignment

☐ b. Proximity

☑ c. Contrast

☑ d. Repetition

Frage 30

Vollständig
Erreichte Punkte 3,00 von 3,00
⚐ Frage markieren

Fragetext

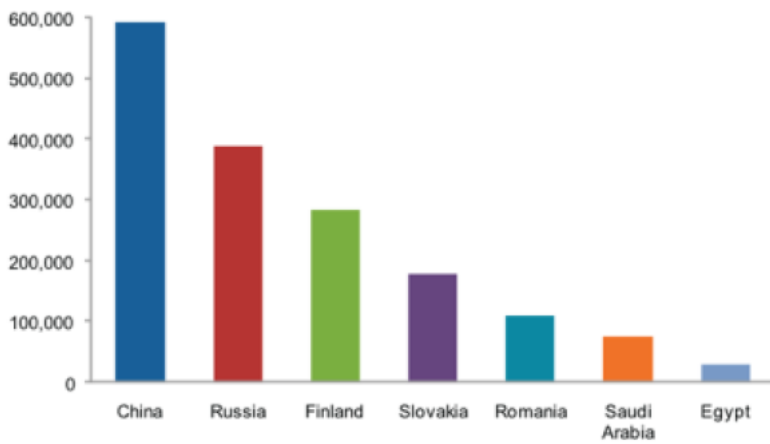Which fontstyle has the font in the picture?

Garamond

Wählen Sie eine Antwort:

○

a.
Modern
○

b.
Slab Serif
◉

c.
Oldstyle
○

d.
Decorative
○

e.
Sans Serif
○

f.
Script

Frage 31

Fragetext

What kind of color coding is used in the following graph?

○
a.

Random

○
b.

Sequential

○
c.

Diverging

◉
d.

Categorical

○
e.

Qualitative

Frage 32

Fragetext

Which delineation techniques were employed in this table?

			Monthly accounting (euros) - raw data										
			Jan	Feb	Mar	Apr	May	June	July	Aug	Sept	Oct	Nov	Dec
incoming		salaries	3130	3134	3112	3130	3130	3150	3150	3160	3148	3137	3147	3138
		family allowance	227	227	227	498	498	498	498	498	498	498	498	498
		other						1870						1756
		TOTAL	**3357**	**3361**	**3339**	**3628**	**3628**	**5518**	**3648**	**3658**	**3646**	**3635**	**3645**	**5392**
outgoing		mortgage	1130	1130	1130	1130	1130	1130	1130	1130	1202	1202	1202	1202
		food	400	380	403	406	375	397	384	406	420	430	350	330
		utilities	187	98	175	89	183	84	201	94	184	91	173	1003
		healthcare	130	126	140	1330	200	210	160	140	135	132	110	140
		childcare	200	210	198	207	210	210	0	0	300	305	310	240
		travel	300	300	300	300	300	300	200	180	300	320	320	320
		other	700	750	737	670	802	709	2600	1800	730	700	698	1004
		TOTAL	**3047**	**2994**	**3083**	**4132**	**3200**	**3040**	**4675**	**3750**	**3271**	**3180**	**3163**	**4239**
		BALANCE	**310**	**367**	**256**	**-504**	**428**	**2478**	**-1027**	**-92**	**375**	**455**	**482**	**1153**
		transferred to savings	250	250	250	0	250	2500	0	250	250	250	250	1000
		current savings balance	7200	7450	7700	7200	7450	9950	8800	8800	9050	9300	9550	10550
		children 'a charge'	2	2	2	3	3	3	3	3	3	3	3	3

Wählen Sie eine oder mehrere Antworten:

☐
a.
Horizontal Fill Color

☑
b.

Rules and Grids

☑
c.

White Space

☑
d.

Vertical Fill Color

☑
e.

Grouping and Summaries

Frage 33

Vollständig
Erreichte Punkte 1,50 von 3,00
⚐ Frage markieren

Fragetext

Which of these principles are recommended when designing a good visualization?

Wählen Sie eine oder mehrere Antworten:

☑
a.
maximize non-data ink

☐
b.
revise and edit

☑
c.
maximize the data-ink ratio

☐
d.
minimize data density

☑
e.
show data within context

☑
f.
erase redundant data ink

Frage 34

Fragetext

Which of the following are a table's data components?
Wählen Sie eine oder mehrere Antworten:

☐
a.

Fill color

☐
b.

White space and page breaks

☐
c.

Rules and grids

☐
d.
Complementary Text

☑
e.
Table Cell Values

☑
f.
Categorical Subdivisions

Frage 35

Fragetext

When designing a visualization you should...

Wählen Sie eine oder mehrere Antworten:

☑
a.

consider the tradeoff between the efforts required for creating and learning the visual representation and the benefits yielded by it

☐
b.

be careful to maximize the lie-factor

☑
c.

choose a visual representation that is effective for the task at hand and the human visual system

☑
d.

be careful that the visualization encodes only data relations that actually exist in the data and no other data relations

Frage 36

Fragetext

Interaction techniques facilitate ...

Wählen Sie eine Antwort:

○
a.

active discourse with the data

◉
b.

manipulating data

○

c.

directing the users

Frage 37

Vollständig
Erreichte Punkte 3,00 von 3,00
⚑ Frage markieren

Fragetext

Interactions: User intents are:

Wählen Sie eine Antwort:

◉

a.

What a user wants to achieve through a specific interaction technique

○

b.

How a user interacts with visual representations

○

c.

How a user sequences actions

Frage 38

Vollständig
Erreichte Punkte 0,00 von 3,00
⚑ Frage markieren

Fragetext

Highlighting attributes of text is supported by ...

Wählen Sie eine Antwort:
○

a.

Readability Analysis [Oelke, et al. 2010]

○

b.

ArcDiagrams [Wattenberg, 2002]

◉

c.

TagClouds / WordClouds

Frage 39

Vollständig
Erreichte Punkte 3,00 von 3,00
⚑ Frage markieren

Fragetext

Text and Documents: Weaknesses of TagClouds and WordClouds are

Wählen Sie eine oder mehrere Antworten:
☑

a.

inaccurate size encoding (long words are bigger)

☐
b.
show the structure of the text
☐
c.

support pattern finding

☑

d.

does not show the structure of the text

☑

e.

may not facilitate comparison (unstable layout)

Frage 40

Vollständig
Erreichte Punkte 3,00 von 3,00
▽ Frage markieren

Fragetext

TagCloud - WordClouds ...

Wählen Sie eine Antwort:

◉

a.

show word/concept importance through visual means

○

b.

support pattern finding

○

c.

summarize text over time and space

Frage 41

Vollständig
Erreichte Punkte 3,00 von 3,00
▽ Frage markieren

Fragetext

Data wrangling is, ...

Wählen Sie eine Antwort:

◉

a.

a process of iterative data exploration and transformation that enables analysis.

○

b.
a process to design concepts and tasks

○

c.

a process to document analysis steps and further analysis

Frage 42

Vollständig
Erreichte Punkte 3,00 von 3,00
▽ Frage markieren

Fragetext

A design study is a project in which ...

Wählen Sie eine Antwort:

○

a.

designers explore the parameter space visually

◉

b.

visualization researchers analyze a specific real-world problem faced by domain experts

○

c.

experts elaborate about various visual knowledge discovery steps

Frage 43

Fragetext

Formative and summative evaluation, is...

Wählen Sie eine Antwort:

○ a.

When the cook reads the recipe the soup, that's formative; when the guests corrects the recipe of the soup, that's summative.

○ b.

When the cook composes the soup, that's formative; when the guests eat the soup, that's summative.

◉ c.

When the cook tastes the soup, that's formative; when the guests taste the soup, that's summative.

Frage 44

Fragetext

The main ingredients of evaluation are ...

Wählen Sie eine oder mehrere Antworten:

☐ a.

artifacts

☐ b.

text explorations

☑ c.

findings

☐ d.
exploring the visual exploration space

☑ e.

data, users, and tasks

Frage 45

Fragetext

Nested Model by [Munzner, 2009] consists of ...

Wählen Sie eine oder mehrere Antworten:

☑ a.

data/operation abstraction design

☑ b.

domain problem characterization

☐ c.

algorithm design

☐ d.

reading abstraction design

☑

e.

involving a (human) observer

☑

f.

encoding/interaction technique design

Überprüfung beenden

Test-Navigation

Überprüfung beenden