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<tr>
<td><strong>Pig Test</strong></td>
<td><strong>Contextual Inquiry</strong></td>
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<td><strong>Contextual Design</strong></td>
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<td><strong>Easy to Use</strong></td>
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<td><strong>Ethics-2</strong></td>
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<td><strong>Contextual Inquiry</strong></td>
<td><strong>Interaction Paradigms</strong></td>
<td><strong>Visionaries</strong></td>
<td><strong>Data</strong></td>
<td><strong>Refined Goals</strong></td>
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Ques: Pig Test

What is “the pig test”?
Ans: Pig Test

When some one talks about “improving the interface”, does the change measurably improve the user’s accomplishment of their goals?
Ques: Problems with ‘Easy to Use’

What are some problems with the phrase “easy to use”?
Ans: Problems with ‘Easy to Use’

• How can we measure “easy to use”?  
• What does it mean?  
• The term means many things to many different people  
• But it is not something we can measure  
• Saying a system is “easy to use” or “not easy to use” does not tell us why users perceive it to be that way  
  - This makes it difficult to replicate successes and avoid similar mistakes
Ques: Mindset for ‘Easy to Use’?

How can you get into the right mindset to think about creating the impression of “easy to use”?
Ans: Mindset for ‘Easy to Use’?

Think about what measurable qualities of the interface or of users’ tasks can be improved to create the impression of a system being “easy to use” and “usable”
Ques: Metrics for Usability

What are some metrics that indicate a system is “easy to use” or “usable”? 
Ans: Metrics for Usability

- Learnability
  - Time required to learn the interface
- Memorable
  - Can users remember how to use the interface?
- Desirability
  - Satisfaction in using interface
- Cognitive Load
  - How much cognitive effort is required
- Physical Exertion
  - Number of physical actions required
  - Strength of action required
What are the refined goals of designing interactive systems?
Ans: Refined Goals

• Discover and understand user’s underlying goals and needs
• Develop models of users, including their goals, behaviors, and context of use
• Design to the data and the models created
• Precisely measure what ways the new system improves the user experience
Ques: Interaction Paradigms

What are the 4 major paradigms of interaction, when were they predominant, and what are their characteristics?
Ans: Interaction Paradigms

• Batch ~mid 1940’s – mid 1960’s
  – instructions prepared separately
  – multiple jobs submitted at once,
  – all jobs run to completion before users see any results
• Conversational ~mid 60’s – mid 90’s
  – command line typing on a terminal for input
  – results written to terminal for output
• Graphical ~mid 80’s to present
  – Graphics to interact with computer
  – Ex: WIMP
• Ubiquitous ~late 90’s to present
  – Actions same with computing devices as with non-computing devices
Who are the visionaries we studied, and what were their visions?
Ans: Visionaries

• Vannevar Bush
  – Memex
  – Linked multiple sources, media
• Ivan Sutherland
  – graphical interface
  – direct manipulation of objects
• Douglas Engelbart
  – NLS, hyperlinks
  – collaboration
• Alan Kay
  – computer as new communication medium
  – GUI
• Mark Weiser
  – ubiquitous computing
What are the overarching goals of Contextual Design?
Ans: CD Goals

• See breadth of data without being overwhelmed
• Use representations that support seeing work practice and system structure as a whole
• Support vision of complete solution
• Make work, system concrete, explicit, sharable
Ques: “Parts” of CD

What are the major “steps” of Contextual Design?
Ans: “Parts” of CD

• Contextual Inquiry
• Design
• Prototype and Evaluate
• Implement
What are the 4 principles of Contextual Inquiry?
Ans: 4 Principles of CI

• Focus
• Context
• Partnership
• Interpretation
Ques: Relationship Models

What are possible relationship models used in Contextual Inquiry?
Ans: Relationship Models

- Guest/Host
- Interviewer/Interviewee
- Master/Apprentice, Partner Master/Apprentice
- Expert
Ques: Recognize Relationship Models

How do you recognize when you’re getting into an Interviewer/Interviewee relationship?
How do you get out?
Ans: Recognize Relationship Models

• Recognizing: You are asking a stock set of questions and getting only short answers back
• Getting back to Master Apprentice: “Can you show me?”
Ques: “Best” Relationship Models

What is the best relationship model for most of a contextual inquiry interview?
Ans: “Best” Relationship Models

Master Apprentice or Partner Master/Apprentice
Ques: Using Different Relationship Models

When do you use different relationship models?
Ans: Using Different Relationship Models

Interview Step
1. Explain project, gain consent
2. Start the “getting acquainted” interview (warm-up)
3. Move to “grand tour” interview
4. Move to contextual interview (work demos)
5. Wrap-up by summarizing and confirming what it is you heard

Relationship Progression
- Interviewer-interviewee
- Master-apprentice (M/A)
- Partner: M/A but more equal power
Ques: Data Types

What are the different types of data we can collect?
Ans: Data Types

• Qualitative
• Quantitative
Ques: Data Levels

What are the different levels of data we can collect?
Ans: Data Levels

- Nominal
- Ordinal
- Interval
- Ratio
Ques: Data Examples

the steps taken by a user to perform a task

types of errors seen by several different users

whether a user had success or failure when trying to perform a task

Qualitative

Quantitative

Likert scale
(Single Ease Question)

Overall, this task was?

Very Difficult
1 2 3 4 5 6
Very Easy
7

0 0 0 0 0 0 0

high and low temperatures for days in January in Kelvin

high and low temps in Feb in Celsius

how long it takes to perform a task (min:sec)

nominal

ordinal

interval

ratio
the steps taken by a user to perform a task

nominal

whether a user had success or failure when trying to perform a task

ordinal

types of errors seen by several different users

interval

Likert scale
(Single Ease Question)

Overall, this task was?

Very
Difficult

Very
Easy

how long it takes to perform a task (min:sec)

ratio

high and low temperatures for days in January in Kelvin

high and low temps in Feb in Celsius

CS464, Spring 2017
Which of these examples are discrete and which are continuous?

Likert scale

(Single Ease Question)

**Overall, this task was?**

<table>
<thead>
<tr>
<th>Very Difficult</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
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- high and low temps in Feb in Celsius: **Interval**  
- high and low temperatures for days in January in Kelvin: **Ratio**  
- how long it takes to perform a task (min:sec): **Ratio**  
- ordinal
Ans: Discrete/Continuous Data

<table>
<thead>
<tr>
<th>Likert scale (Single Ease Question)</th>
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<th>1</th>
<th>2</th>
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<tbody>
<tr>
<td>Overall, this task was?</td>
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- **Discrete**
  - Likert scale
  - high and low temps in Feb in Celsius
  - ordinal

- **Continuous**
  - how long it takes to perform a task (min:sec)
  - high and low temperatures for days in January in Kelvin
  - interval
  - ratio

CS464, Spring 2017
We calculate a 95% confidence interval around the mean of the proportion of sample users who successfully complete a task as $0.7 \pm 0.28$. The sample reflects the actual population.

Which of the following statements is valid?

• There is a 95% **probability** that the population parameter mean value is between 42% and 98%.

• We can say that we are 95% **confident** that the **actual** population task success parameter **mean value** is between 42% and 98%.
Ans: Confidence Intervals

We calculate a 95% confidence interval around the mean of the proportion of sample users who successfully complete a task as $0.7 \pm 0.28$. The sample reflects the actual population.

- We can say that we are 95% confident that the actual population task success parameter mean value is between 42% and 98%.
Ques: Data Claims

We have 2 different widget designs for a controller, and we test them with users who rate them on a 5-point Likert scale (higher numbers indicate a higher rating). A $t$-test indicates the difference between responses for the 2 designs across this group of users is statistically significant. The average rating for design A is 4 and the average rating for design B is 2.

Which are valid claims?

• There is a consistent difference between the responses, and on average design A is more well-liked (rated higher) than design B.
• Design A is twice as good as design B.
• The difference between the 4 and 2 is equal to what a difference between 5 and 3 would be.
Valid:
• There is a consistent difference between the responses, and on average design A is more well-liked (rated higher) than design B.

Invalid:
• Design A is twice as good as design B.
  – this is a ratio data claim
• The difference between the 4 and 2 is equal to what a difference between 5 and 3 would be.
  – this is an interval claim
Ques: IRB-1

An outdoor clothing company sets up remote cameras at the entrance to the Isabelle Glacier trail in the Indian Peaks Wilderness Area. They take pictures of people both beginning and finishing the trail. They are looking to see the kind of clothes such as shorts/long pants, jackets, and hats that people are wearing.

This practice is:

A. Ethical without IRB approval.
B. Ethical with IRB approval.
C. Unethical.
Ans: IRB-1

A. Ethical without IRB approval.

From CITI/SBE, Students in Research:
“Observational studies of public behavior (including television and public Internet chat rooms) do not involve human subjects as defined when there is no intervention or interaction with the subjects and the behavior is not private.”
Ques: IRB-2

We are interested to see if people’s behavior about parking in handicapped parking spots changes if they know they are being observed. We set up an obvious camera that takes a picture whenever a car parks in a handicapped spot. It takes a picture when the car door opens and a person steps out. It also takes a picture of the front license plate so that we can check to see if the owner actually has a handicap permit.

This practice is:

A. Ethical without IRB approval.
B. Ethical with IRB approval.
C. Unethical.
Ans: IRB-2

C. Unethical.

While there is no interaction and a parking lot may be considered a public place, information is gathered (license plate) that can lead to individual identification, and people cannot give consent or opt out. In addition there may be financial or psychological risk to them.
Creating personas: If you collected data from multiple job roles, you should:

A. Create a persona for each of the job roles that you interviewed if they are core to the problem your project focus
B. Create a persona for each of the demographic segmentations of the potential users of the system you are developing
C. Create a persona for each different job title of the users you interview.
D. Create personas for every role irrespective of their importance towards the problem defined in your focus, because more personas are better.
A. Create a persona for each of the job roles that you interviewed if they are core to the problem your project focus
Ques: Persona-2

What is the purpose of building personas?

A. Personas help your team communicate your understanding about users to other stakeholders (management teams, product groups, etc.)
B. Personas bring users "alive" and help others focus on relevant issues
C. Require training in contextual design in order to gain a sense of a typical user of the system under design.
A. Personas help your team communicate your understanding about users to other stakeholders (management teams, product groups, etc.)
B. Personas bring users "alive" and help others focus on relevant issues
Order the appropriate steps to create personas:

(a) Identify representative user goals, roles, and tasks
(b) Check personas
(c) Identify representative users for each persona
(d) Choose personas to write: core roles plus any other relevant roles you identify while walking the models and affinity
(e) Write scenarios
(f) Write the persona
(g) Create a poster with the information on it
Ans: Persona-3

(d) Choose personas to write: core roles plus any other relevant roles you identify while walking the models and affinity
(c) Identify representative users for each persona
(a) Identify representative user goals, roles, and tasks
(f) Write the persona
(e) Write scenarios
(b) Check personas
Ques: Persona-4

Fill in the missing words/phrases from the word/phrase bank. Only use any particular word or phrase once.

Word/phrase bank: excellent, goals, graphical poster, motivations, one representative, pain points, primary responsibilities, primary roles, roles, synthesized, textual, titles, typical, user need characteristics.

A persona is a one-page __________ description of a ________ user. This user is ________ from multiple users who share common job ________, demographics, and _________. The description covers who they are, a little of their background, and key _________. It summarizes their tasks and _________.

CS464, Spring 2017
A persona is a one-page textual description of a typical user. This user is synthesized from multiple users who share common job roles, demographics, and user need characteristics. The description covers who they are, a little of their background, and key goals. It summarizes their tasks and primary roles.
Ques: Persona-5

What are the key concepts of personas as we use them in CS464 (pick from A-G), and how each defined (pick from 1-7)?

A. Role
B. Scenario
C. Goal
D. Persona
E. Motivation
F. Task
G. Lifestyle

1. Primary jobs of the persona/responsibilities
2. Things in their lives that drive the persona
3. A piece of work for which the persona is responsible
4. A particular task performed by the persona; told as a story like it is being observed
5. What the persona is trying to achieve during a scenario
6. A composite typical user drawn from actual data
7. A representative user created from the imagination of the developers
**Ans: Persona-5**

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<tbody>
<tr>
<td>D. Persona</td>
<td>6. A composite typical user drawn from actual data</td>
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<tr>
<td>A. Role</td>
<td>1. Primary jobs of the persona/responsibilities</td>
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<td>C. Goal</td>
<td>5. What the persona is trying to achieve during a scenario</td>
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<tr>
<td>F. Task</td>
<td>3. A piece of work for which the persona is responsible</td>
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<tr>
<td>B. Scenario</td>
<td>4. A particular task performed by the persona; told as a story like it is being observed</td>
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