# CMSC 434 –Fall 2009
## Prof. Bederson
## Midterm – October 28, 2009
## 100 Points

Answer each question as simply and clearly as possible (while answering the question). Full sentences are not necessary. Less is more.

**0. Write your name on your exam book (0 pts)**

**1. Design Principles (15 pts)**

**(15 pts)** List five design principles from either Norman's "The Design of Everyday Things", or Shneiderman's Eight Golden Rules. For each principle, give a one sentence definition, and a brief example of an interface (real or imagined) that does *not* follow the principle. Include a simple sketch of the poor interface if you feel it will help you describe the situation.

**2. Design process (45 pts)**
   a. **(5 pts)** What are the five main metrics by which usability is measured?

   b. **(16 pts)** List 2 ways to test usability **WITHOUT** users and 2 ways to test usability **WITH** users. For each of these 4 processes, describe one thing that this process is especially well suited to helping you learn. And for each of these 4 processes, briefly describe the essential characteristics of this process (i.e., how it is run).

   That is, for each of 4 processes, describe what it is for and how it works.

   c. **(6 pts)** Structured interviews make sure you get the information you are looking for – give two reasons not to always use them.

d. **(8 pts)** Briefly describe what a "persona" is, and list two reasons for using them.

e. **(4 pts)** List two reasons you should create a low-fidelity prototype before going further in the product creation process.

f. **(6 pts)** For each of the following prototyping techniques, briefly describe what the primary purpose is for the technique and briefly describe how it works:

   o Card sorting
   o Wireframe
   o Wizard of Oz

3. **Design (40 pts)**

   a. **(5 pts)** Describe the term "perpetual intermediate" and how this idea might change how you design an interface.

   b. **(15 pts)** List five Gestalt visual perception principles, and give a very brief example that illustrates the principle.  Feel free to create a sketch if it helps with the description.

   c. **(6 pts)** List two essential differences between the retina and a digital camera's image sensor?

   d. **(6 pts)** The Johnson reading (from GUI Bloopers) said that users are not just novices or experts.  Rather, he said that "users can be placed along three independent knowledge dimensions."  What are those three dimensions.

   e. **(8 pts)** Critique the following interface.  Assume the intended user is yourself. Describe two characteristics that you think are good and two characteristics that you think are bad.  *(This will be printed in black and white, but a color version will be projected on the screen).*

Organize ▼     Open with Acrobat 8 ▼     Print     New folder

Documents
　Allison
　CHI 2010 SC (share)
　Classes
　　HCI - CMSC 434 - 2009 Fall
　　　Handouts (unencrypted)
　　　Misc
　　　Slides
　　　Website
　　zzz - Old Classes
　　　DUIs - Spring 2002
　　　DUIs - Spring 2005
　　　Graphics (CMSC 427) - Spring 1
　　　Graphics (CMSC 427) - Spring 2
　　　HCI - CMSC 434 - 1999 Fall
　　　HCI - CMSC 434 - 2000 Fall
　　　HCI - CMSC 434 - 2008 Spring

02 - johnson - bloopers
02 - norman - POET
03 - norman - emotional design
03 - preece - interaction design
03 - tullis - measuring user experience
05 - druin - search roles
06 - arnowitz - prototyping
07 - ware - visual thinking
08 - lausen - design for democracy
11 - shneiderman - DTUI
12 - hinton - statistics explained
14 - card - readings in info vis
14 - spence - information visualization
Thumbs

03 - preece - interaction design     Date modified: 1/27/2009 5:15 AM     Date created: 10/14/2009 6:10 PM
Adobe Acrobat Document     Size: 6.42 MB