



University of Palestine  
Faculty of Applied Engineering and Urban Planning  
Software Engineering Department

Date: SAT, 27.12.08 | 9:00-11:30

### Human Computer Interaction Final Exam Model Answer

Course:	Name and ID: ESGD3107   Human Computer Interaction   (HCI) Instructor Name: Mohammad Amin Kuhail		
Exam:	Type: Final Exam.	C/O: Closed Exam.	Location: K303.
	Number of Questions: 4.	Grade: 100 marks.	Dictionary Allowed: No.
	Date : SAT, 27.12.08.	Duration: 2.5 Hrs.	
Student:	Student Name: .....		
	Student ID: .....		

#### 1. Answer the following question:

[ 10 Marks ]

- a. Virtual Reality is considered a two edged sword. While some people find it engaging and practical in applications such as education, others find it socially dangerous. Discuss.

Virtual Reality is defined as the illusion of participation in a synthetic environment rather than external observation of such an environment. Such an engaging participation provides its users with a more comprehensive participation compared to other interaction paradigms. This is due to the fact that users can feel they are a part of the interaction environment . Their brain, eyes, hands, even feet can interact. This combines enjoyment as well as comprehensive interaction. These advantages were used in many practical applications such as fly simulations, and other educational applications. Participants found it a great chance to learn, enjoy, and be involved with what they interact with.

On the other hand, when it comes to teenager video games, a lot of commercial companies compete to maximize their sales. They would invest in the most attractive elements to their games in order to attract their target. Unfortunately, these types of video games often encourage violence, and introversion. This introversion comes from the fact that these teenagers find an environment that contains everything they need; enjoyment, suspense, and action. All that comes without a real cost. Therefore, they get addicted to these games and start to build their own small world away from the real challenges that are waiting for them in life. Such a dangerous and potential problem must be tackled by increasing awareness of those potential victims and by controlling the material that is displayed by the commercial companies that provide virtual reality. The availability for the virtual reality technology in each home for mere fun purposes should be questioned and tackled in research as well.

#### 2. Choose the best answer:

[ 30 Marks : 3 M/Q ]

1. Usability Engineers are people who:
- Are involved in the design of all the interactive aspects of a product.
  - Focus on evaluating products using methods and principles.**
  - Come up with ideas of how to plan and structure interactive products.
  - Do all the above.

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2. Instructing is:
    - a. Interacting with the system as if having a conversation.
    - b. Moving through a virtual environment or a physical space.
    - c. Issuing commands using keyboard and function keys.**
    - d. Interacting with objects in a virtual or physical place.
  3. To help users remember your design.
    - a. Provide them with easy to read manuals.
    - b. Provide them with handy shortcuts for important tasks.
    - c. Design for recognition.**
    - d. None of the above.
  4. Examples of applications that help reduce memory load.
    - a. calendars
    - b. calculators.
    - c. Information visualizations.
    - d. All of the above.**
  5. Hypermirror is a technique that is used to:
    - a. Improve remote collaboration.
    - b. Improve remote communication.
    - c. A+B.**
    - d. Just for fun.
  6. All of the following are advantages of Asynchronous Computer Mediated Communication is **Except for:**
    - a. Flaming**
    - b. Ease of saying things.
    - c. Flexibility of Communication.
    - d. Read and reply anytime.
  7. Users get frustrated with your applications because:
    - a. An application doesn't work as perceived.
    - b. Too many error messages.
    - c. The appearance of an interface is patronizing.
    - d. All of the above.**
  8. All the following are examples of phishing **except for:**
    - a. the criminally fraudulent process of attempting to acquire sensitive information such as usernames, passwords



- b. The act of sending email that falsely claims to be from a legitimate organization
- c. Recommending the user of doing something such as purchasing a book.**
- d. An attempt to trick recipients into responding or clicking immediately, by claiming they will lose something

9. One of the disadvantages of virtual characters is:

- a. They do not fit older users.
- b. They are not trustworthy.**
- c. They go against culture and conventions.
- d. They waste the users time.

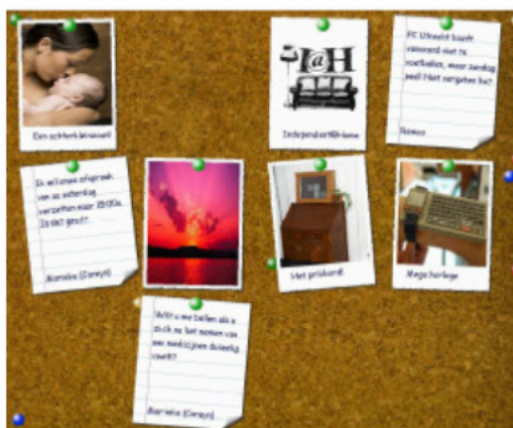
10. Virtual Reality Applications include the following **except for:**

- a. Education.
- b. Simulation.
- c. Training.
- d. E commerce.**

### 3. Design Assessment

[ 20 Marks]

The following design was suggested by a Dutch company for an interactive message and reminder display for the elderly. The first screen shows the main display screen with photos as well as notes. The second screen is a context menu that shows up when the user wishes to delete or print a note or an image.



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### Requirements:

1. Based on what you studied in HCI, evaluate the suggested design.

Obviously there is no correct answer for this question. However, when evaluating this solution, you should consider the following elements:

1. Design Principles (Including visibility, affordance, consistency, feedback, constraints).
2. Usability Principles (Error prevention, Help users recognize and discover error, consistency, aesthetics and minimal design).
3. Recall rather than remember.(mental model, attention, spacing)
4. Affection(How does it appeal to older people).
5. Communication and Collaboration.
6. Use of icons ,colors, etc.

When speaking about these principles briefly you should try to relate them to the target group and how could the designer design for them.

#### 4. Design for a Mobile Phone

[ 40 Marks]

- Arabia, a prestigious hotel based in Saudi Arabia, wishes to introduce a new service to its customers. The new service is rooms booking for mobile phones users. As a SWE student who studied HCI at the University of Palestine, you are asked to design this mobile interface for the Arabia hotel.

Answers are briefed

#### **Requirements:**

1. [ 5 Marks] What software model are you going to use? Why?

There is no sufficient information to help students to decide on a model concretely. Prototyping, or star model could do assuming there is no restrictions on time.

2. [ 5 Marks] What requirements techniques are you using? why?

Different techniques could do. Examples are:

Interviewing with the project client, and potential customers. Paper prototyping, online questioners.

3. [ 5 Marks] How will you then build your interface design? What techniques are you going to use? Why?

Prototyping and iterative enhancement with the involvement of potential customers as well as cohesive assessment by domain experts and hopefully some HCI experts.

4. [ 5 Marks] What issues shall you take into consideration when designing the interface?
  - The information space: You should try your best to use the space available very wisely.
  - Performance: Not much of graphics should be included.



- Navigation: Number of tasks must be minimized. A tiny navigation tree should be visible in all screens.
- Culture.
- Heterogeneity.

5. [ 20 Marks] Provide a sketch of the main interface(s) of the mobile booking system.

Answer for this problem is left to students. However, students are encouraged to view the following link:

<http://yuiblog.com/blog/2007/10/02/challenges-of-interface-design-for-mobile-devices/>

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## **BONUS**

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### **5. Design for Gaza teenagers :**

[ 20 Marks : 4 M/Q]

- A Human rights association, Conscious, wishes to develop an electronic environment for Gaza teenagers that aims at encouraging freedom of speech and mutual respect despite political, religious, and backgrounds.

#### **Requirements:**

1. What are the issues and the challenges? Discuss
2. What kind of environment are you going to make? An online forum? A video game? A website? Or a composite, or your own? Why?
3. What kind of icons, colors, layouts are you going to use? Why?
4. What issues shall you take into consideration when designing the interface?
5. Provide a sketch of the main interface(s) of the system.

Answer for this problem is left to students.