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UNIVERSITY OF PORTSMOUTH

BACHELOR OF SCIENCE (HONS) IN COMPUTING

AUGUST 2005 EXAMINATION

IT359: HUMAN COMPUTER INTERACTION DESIGN

TIME: 3 HOURS

☞ **INSTRUCTIONS:**

- ❑ Read the attached case study carefully before attempting any of the questions.
- ❑ Answer any TWO out of THREE questions.
- ❑ Each question carries 50 marks.
- ❑ Please start every question on a new page.
- ❑ Answers will not be marked if they are illegible.
- ❑ Enter the question numbers (in the order you have attempted) in the boxes provided in the answer script.
- ❑ Write your INDEX NUMBER and MODULE NUMBER on the cover page of the answer script / answer booklet(s).

Scenario

A multi-national Kids & Toys company has decided to use the web as a new marketing medium. The company's products are distributed to 20 countries all over the world and they expect approximately two million transactions per year.

The preliminary analysis for the project has been done and the company has agreed that the new system is to be implemented within half a year; otherwise its competitors will get higher exposure.

The new system should provide a powerful searching function for old and new products. Besides, the web should have an attractive 3Dimensional viewing function for viewing 3D models of new toys. The web should allow the facility for on-line purchasing with secure methods of payment.

The company wants to accept all kinds of electronic payment such as credit cards (e.g. VISA), Online Bill Payment Services (e.g. Paypal) or a Kids & Toys's prepaid account. The system should also have the ability to manipulate the stock database and to complete transactions securely.

The proposed system must be very user-friendly to enable several kinds of users across the country to use the system without any difficulty. The web site should be flexible with high maintainability. It should not have any viewing problems under different web browsers.

In the context of the system discussed above answer any TWO questions.

Question 1: Task Analysis

Identify and describe a task that a user might perform on the system.
(10 marks)

Use the Cognitive Walkthrough Method to evaluate how the task might be performed. (We have not described the details of the interface but you can infer how the task might be performed from your experience of similar online sites). Cognitive Walkthrough evaluates each step of a task in three ways. Identify potential problem areas in the task. (20 marks).

Cognitive Walkthrough has several advantages and disadvantages compared to empirical evaluation. Critically compare Cognitive Walkthrough and Empirical Evaluation
(20 marks).

[50 marks]

Question 2: HCI Methodology

What activities are required in order to design an interactive product?

Evaluate the extent that lifecycle models show the relationships between those activities.
(25 marks)

The term 'design' is often used in different ways by different software professionals. Critically evaluate your understanding of some of the different forms of 'design' used in HCI. Your answer should illustrate the differences by referring to the scenario.
(25 marks)
[50 marks]

Question 3: Evaluation

A verbal protocol could be a useful way of collecting data about the toys selection task. Generate a set of instructions for the users to generate two different types of verbal protocol.
(10 marks)

Identify a 'slip' and give an example of what that sort of error might be like in this system. Identify a 'breakdown' and give an example of what that sort of error might be like in this system
(20 marks).

Critically compare the use of qualitative data and the use of quantitative data in empirical evaluation. In your answer you should provide examples of both types of data, and discuss the benefits they provide to a user interface designer.
(20 marks)

[50 marks]

End of Paper